Treatise on diseases of the skin : founded on new researches in pathological anatomy and physiology / by P. Rayer ... ; translated from the French by William B. Dickinson.

Contributors

Rayer, Pierre François Olive, 1793-1867.
Dickinson, William B.
Bristol Medical Library Society
University of Bristol. Library

Publication/Creation

London : John Churchill ..., 1833.

Persistent URL

https://wellcomecollection.org/works/zpkzv9r3

Provider

Special Collections of the University of Bristol Library

License and attribution

This material has been provided by This material has been provided by University of Bristol Library. The original may be consulted at University of Bristol Library. where the originals may be consulted.
This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.

wellcome collection

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

E2d

Sold by
LANCASTER
Bookseller
Broad Street
RISTOL.

E2d

B. M. L.
№ 468



UNIVERSITY OF BRISTOL

MEDICAL
LIBRARY

Store 580562

SHELF

E2d

TREATISE

ON

DISEASES OF THE SKIN;

FOUNDED ON

NEW RESEARCHES IN PATHOLOGICAL ANATOMY AND PHYSIOLOGY.

BY P. RAYER, D.M.P.

CONSULTING PHYSICIAN TO THE DISPENSARIES OF THE PHILANTHROPIC SOCIETY,
PHYSICIAN TO THE CENTRAL BUREAU OF HOSPITALS, ASSOCIATE
OF THE ROYAL ACADEMY OF MEDICINE, &c.

TRANSLATED FROM THE FRENCH

BY WILLIAM B. DICKINSON,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS.

LONDON:

JOHN CHURCHILL,

Medical Bookseller and Publisher,

16, PRINCE'S STREET, SOHO.

1833.

J. AND C. ADLARD, PRINTERS,
BARTHOLOMEW CLOSE.

UNIVERSITY
OF BRISTOL
MEDICINE

TO

JOHN ELLIOTSON, Esq. M.D. F.R.S.

PROFESSOR OF MEDICINE IN THE UNIVERSITY OF LONDON,

PHYSICIAN TO ST. THOMAS'S HOSPITAL,

&c. &c. &c.

THIS TRANSLATION IS INSCRIBED,

AS A TRIBUTE OF ADMIRATION FOR HIS TALENTS,

AND OF GRATITUDE FOR HIS ENCOURAGEMENT OF THE UNDERTAKING,

BY HIS OBLIGED AND OBEDIENT SERVANT,

W. B. DICKINSON.

PREFACE.

HAVING had frequent occasion, in the course of practice, to refer to the writings of our cutaneous nosologists, I was struck by the inaccuracies of their descriptions in many instances, and the scanty information they yielded with respect to the treatment of this class of diseases; and being, in consequence, led to extend my researches among foreign authors, I found the classification of M. Rayer's work so applicable to practice, the description of diseases so full and accurate, and the treatment recommended, founded on rational principles, so successful, that it occurred to me a translation of it could not fail of a favourable reception from the profession at large, and more especially from the junior members of it, as being peculiarly calculated to facilitate the progress of students in an important branch of professional knowledge, which, in the general advance of medical science, has, in England, been strangely neglected. This impression was subsequently confirmed by the high authority of Dr. Elliotson, who, in his Lectures, warmly recommended the pages of M. Rayer to the

attentive consideration of his pupils. To that gentleman, therefore, I communicated my intention of publishing the present translation; and to his approval and encouragement must, in a great measure, be attributed the completion of the undertaking.

In what manner that has been accomplished, I leave to the candour and indulgence of the reader. My chief aim has been to give as close a translation as the perspicuity so desirable in medical works, and the idiomatic difference of the language, would admit.

Aldermanbury Postern;
June, 1833.

INTRODUCTION.

Devoted for several years to the particular study of diseases of the skin, I now publish the result of my researches and observations, in the hope of being useful to students.

The knowledge we at present possess of these diseases can only be ascertained by successive research in numerous works, which few persons can consult with advantage. The study of the nomenclature of diseases of the skin is alone a long and painful undertaking. I have dedicated an etymological and historical article to each denomination composing it, and I have collected the terms in a vocabulary affixed to the end of this work.* This was the more necessary, as the study of the different nomenclatures is ultimately connected with that of descriptive works; and, without this preliminary knowledge, it is quite impossible to comprehend the crowd of dissimilar descriptions consigned in classic works to the same denomination.

In adopting the nomenclature of Willan, which appeared to me indisputably the most accurate, I have made only a small number of indispensable modifications. I have given strict definitions of the technical names used to designate the forms under which cutaneous inflammations shew themselves. (§ 5.) And in the symptomatic descriptions I have avoided the employment of expressions, the meaning of which has not been well determined.

I have been sometimes obliged to recur to words foreign to our modern vocabularies (*eczema*, *ecthyma*, *lichen*, &c.), to designate alterations which no French pathologist has exactly described. Those terms, employed by the Greek and Latin physicians and by several old and much esteemed authors, are become classic in England, Portugal, and in some German Universities. Lastly, they have been applied to diseases, the individuality of which is established by rigorous observation; and this circumstance dispenses with all further explanation. In the course of time it will, no doubt, become necessary completely to remodel the nomenclature of diseases of the skin on an uniform basis, and to dispense with

* The most familiar synonymes, and those usually adopted by English writers, being placed immediately after each term adopted by the author, it has not been thought advisable to swell the bulk of the volume by the introduction of the vocabulary here alluded to.—T.

all Greek, Latin, and Arabic words, &c., the etymological sense of which gives slight or inadequate ideas; but it is of the first importance that pathologists shall agree on the number and external characters of the objects that are to be denominated, that is to say, on the number of morbid peculiarities which the skin may present. At the present time, a complete reform of the nomenclature would only swell our vocabularies needlessly.

It has been impossible for me to establish a synonymy between a crowd of technical words, the import of which, at first ill determined, has since undergone successive modifications. In treating of each disease, I am then obliged to refer to the articles of the vocabulary dedicated to the denominations employed by other authors. If I had adopted a synonymy, it would most frequently have been false, since it would have indicated as identical descriptions too often dissimilar.

The incomplete observations of the Greek physicians on diseases of the skin, are dispersed through their works. There was no thought of disposing the facts collected in a systematic manner till an epoch more nearly approaching our own time, when the elements of this branch of pathology became more numerous and less imperfect. Among those authors who, since the revival of letters, have treated *ex-professo* of diseases of the skin, some, such as S. Hafenreffer,* have connected certain affections, only the analogy of which was striking, such as wounds, ulcers, fistulæ, &c. They have treated of other cutaneous diseases generally in separate chapters, without observing any regularity as to their distribution.

Other pathologists have felt the necessity of arranging the facts which have been collected, but their classifications have been composed according to very different views. Mercurialis† made two principal classes of cutaneous diseases, according as they affected the *head*, or were developed indiscriminately on other regions of the body. This division, often followed as principal or auxiliary, has even been taken into consideration by M. Alibert,‡ in his magnificent work on diseases of the skin. It was common to designate under the name of *tinea* all chronic inflammations of the hairy scalp, and under that of *dartres* all chronic inflammations, and some acute diseases of the face, the trunk, and limbs. I think it unnecessary to insist on the defects of such a classification; among other inconveniences, it has led some authors to make two diseases of the same affection, according as they have observed it on the

* Hafenreffer (Samuel), *πανδοχεῖον αιολόδερμον in quo cutis eique adhærentium partium affectus omnes*, &c., traduntur in 12, Tubingæ, 1630.

† Mercurialis (Hieronymus), *De Morbis Cutaneis*, in 4to. Lugduni, 1633.

‡ Alibert, *Description des Maladies de la Peau, Observées à l' Hospital Saint Louis, et Exposition des Meilleures Méthodes suivies pour leur Traitement*, in folio, Paris, 1806-1818, dix livraisons.

head, or other *regions* of the body. The division of diseases of the skin into affections of the head, and those of other regions, introduced by Mercurialis, was adopted by Turner.* I should add, however, that he proposed as secondary another distinction of diseases of the skin, according as they were produced by *internal* or *external* causes. This etiological consideration became fundamental in the work of Lorry.† The introduction of a similar distinction cannot be considered as an improvement. The etiology of diseases of the skin is too obscure to serve as the basis of their classification. The two subdivisions of the work of Lorry belong as well to Mercurialis or Turner. Like his two predecessors, Lorry divided cutaneous diseases into two classes, according as they appeared common to several regions, or peculiar to some only.

Abandoning so futile a distinction of the diseases of the skin as that depending on their seat on the *head* or *other regions*, and taking no account of the *etiological* division proposed by Turner, and adopted by Lorry, Plenck,‡ adopted the *external characters* of cutaneous diseases for the basis of his classification; this was the first step in the anatomical study of these alterations. He formed fourteen classes: 1. *Maculæ;* 2. *Pustulæ;* 3. *Vesiculæ*; 4. *Bullæ;* 5. *Papulæ;* 6. *Crustæ;* 7. *Squamæ;* 8. *Callositates;* 9. *Excrescentiæ;* 10. *Ulcera;* 11. *Vulnera;* 12. *Insecta Cutanea;* 13. *Morbi Unguium;* 14. *Morbi Capillorum.* This classification, much superior to all that had been published previously, was not exempt, however, from some serious imperfections. *Crusts* and *ulcers* (classes 10. and 6.) are never primary alterations; they always succeed to pustules, vesicles, bullæ, *tubercles*, or sometimes even to squamous diseases. The study of crustæ cannot be separated from that of the alterations that produce them; and to prove this, it will suffice to remark, that Plenck ranges the crusts which succeed to variolous pustules in one class, (*crustæ*,) and the pustules in another, (*pustulæ;*) that elephantiasis is classed among the *papulæ*, while the fissures which supervene in its course are found in the *rhagades*, *away* from the first alteration which produces them. However, the original idea of this classification was good. Willan has taken it for the foundation of his work, dividing it into seven orders: *Papulæ*, *Squamæ*, *Exanthemata*, *Bullæ*, *Vesiculæ*, *Pustulæ*, *Tuberculæ Maculæ*. In general, the diseases which compose each of these orders have the most striking analogy. Nevertheless, it would have been better not to have connected ichthyosis with lepra and psoriasis, (squamæ;) purpura hæmorrhagica ought not to be placed in the exanthemata by the side of rubeola: it

* Turner (D.), *A Treatise of Diseases incident to the Skin*, in 8vo. London, 1736.

† Lorry, *Tractatus de Morbis Cutaneis*, in 4to. Parisus, 1777.

‡ Plenck (Jos. Jacob), *Doctrina de Morbis Cutaneis*. 12mo. 3d ed. Lovani, 1796.

was not at all necessary to make two diseases of pemphigus and pompholix; and it was at least useless to place the aphthæ of the mucous membrane among the diseases of the skin; psora ought not to have been placed in the *pustulæ:* the order of *tuberculæ* formed by the capricious assemblage of furuncle, carbuncle, of two pustulous inflammations, (cuperosa, mentagra) of lupus, (dartre rongeante,) and of elephantiasis, requires at this time numerous changes; lastly, the alterations of the hair, nails, the diseases of the parts of the skin which produce them, and several other affections of the teguments which we shall point out, were not comprised in this classification. It has been copied faithfully by Bateman,* in his Synopsis, and by M. Gomez,† in his systematic table of diseases on the skin.

While Willan was perfecting in England the classification of Plenck, Chiarugi,‡ in Italy, was reproducing it, and stripping it, so to speak, of all its advantages. To show this, it will suffice to remark that, after having given pretty exact definitions of *pustules, papulæ, phlyctenæ*, Chiarugi classed impetigo and herpes among the papulæ, and lepra in the pustulæ.

If the classifications of Plenck and Willan, founded on the external characters of the diseases of the skin, had the undoubted advantage of rendering the descriptions more exact, they had also the disadvantage of separating diseases, which by their nature ought to be connected, (*syphilitic diseases,*) and of uniting some others which had better have been placed in different orders, (*lepra, ichthyosis, rubeola*, and *purpura hæmorrhagica.*)

Mr. Plumbe has pointed out these imperfections,§ and has himself published a classification of the diseases of the skin, based on anatomical knowledge of the parts affected, and on their presumed nature. In the first section he comprehends *those diseases which owe their distinctive signs to the peculiarities which the skin offers in certain regions of the body*, (acne, sycosis, porrigo;) these are the diseases of the head, according to Mercurialis and Lorry. The second section consists of diseases which depend *on defect of tone in the skin*, (purpura, pemphigus, ecthyma, rupia;) one of these alterations belongs to hæmorrhages, and the other three to inflammations. Several diseases, commonly symptomatic of a derangement of the digestive organs, and which are *characterized by active*

* Bateman, *A Practical Synopsis of Cutaneous Diseases*, in 8vo. 5th edition. London, 1819.

† Gomez (B. A.) *Ensoio Dermosographico, o Succincta e Systematica Descripçao das Doenças Cutaneas, &c. con Indicacao dos respectivos Remedios Aconselhados*, in 4to. Lisbon, 1820.

‡ Chiarugi (Vincenz) *Delle Malattie Cutanee Sordide, in Genere e in Specie Trattato Teorico-pratico*, 2 vol. seconda ediz. Firenze, 1807.

§ Plumbe (Samuel), *A Practical Treatise on Diseases of the Skin*, in 8vo. London, 1824.

inflammation, form a third section, (porrigo *favosa*, *P. larvalis*, strophulus, lichen, urticaria, herpes, furuncle.) Some diseases characterized by *chronic inflammation of the vessels which produce the epidermis, constitute the elements of a fourth class*: (lepra, psoriasis, pityriasis, pelagra, ichthyosis,) these are the *squamæ* of Willan; with a physiological explanation certainly not applicable to ichthyosis. Lastly, a fifth section embraces those diseases which are most dissimilar, or of a *mixed character*, according to the expression of Mr. Plumbe, (*aphthæ*, *eczema*, *elephantiasis*, *erythema*, *roseola*, *venereal eruptions*, *&c.*) There is certainly some appearance of ingenuity in this classification, but with the same candour I must declare that it seems to me very inferior to that of Willan.

Some modern pathologists have divided the diseases of the skin into two principal sections, according as they assume an *acute* or a *chronic* form. This classification, adopted by Retz,* in a very incomplete and superficial work; and again by M. Derien,† who proposed as an improvement the distinction of diseases into *essential* and *symptomatic*, has been published by Jos. Frank,‡ with all the improvements of which it is susceptible.

The fundamental defect of the classification of J. Frank has been the attempt to make two diseases of the same affection, according as its progress and development is slow or rapid. Thus, acute urticaria is placed in the first class, under the name of *urticaria*, and chronic urticaria in the second, under that of *urticatio*. Acute pemphigus is described in the first section under the name of *bullæ*, and in another, chronic pemphigus figures under that of *pemphigus*.

On the other hand, we may advance, against the opinion of Frank, that erythema, strophulus, herpes, ecthyma, mucous tinea, &c. are not constantly chronic diseases, and that furuncle is not always acute. The subdivision of *acute* (*exanthemata*) and of *chronic* diseases (*impetigines*,) into idiopathic and symptomatic, cannot be employed in a classification of the sub-orders, for most of the diseases of the skin being at times idiopathic and symptomatic, their history would be parcelled out and divided among different orders. Yet it is but justice to acknowledge that this division becomes really useful when it is applied to each disease in particular.

Lastly, some pathologists have published mixed classifications.

* Retz, *Des Maladies de la Peau et de Celles de l'Esprit*, in 8vo. 2 edit. Paris, 1790.

† Derien (Jacques), *Essai d'une Table Synoptique des Maladies de la Peau*, in 4to. Paris, 1804.

‡ Frank (Joseph), *Praxeo Medicæ Universæ Præcepta. de Morbis Cutis*, in 8vo. Jaurini, 1821.

Mr. Wilson* admits, 1°, febrile cutaneous eruptions; 2°, inflammations distinguished as simple and constitutional; 3°, papulous, vesiculous, and squamous eruptions; 4°, eruptions proper to infants, &c. Want of unity is the least of the inconveniences of this distribution.

To resume: of all the classifications of diseases of the skin, the most accurate, and the most methodical, at the present time, is that of Willan. I have taken it as the point from which to set out; with this difference, however, that Willan confines himself to the consideration of the external appearances of cutaneous diseases, while I have taken as my basis the conformation, structure, and phenomena of these alterations. By studying them thus, under an *anatomical* and *physiological* view, it becomes easier to appreciate their nature, often left undetermined by Willan, and avoid some false relations, which disparage his classification.

I have admitted among the number of diseases of the skin those only which have fallen under my own observation. I have been careful to establish their individuality by cases, whenever it has appeared necessary to do so. I have banished to the *vocabulary*† some unintelligible or incomplete descriptions transmitted to us by the ancients, (*epinyctide, phyma, vitiligo, &c.*) I have at the same time consigned to it a critical history of some other affections which are said to be peculiar to some countries, and which are probably diseases known in France under other names, or by false descriptions made to reconcile dissimilar facts. (*Rade-syge, pelagra, frambæsia, carate, mal de la rosa, bouton d'Alep, &c.*)

I deem it useless to enter into long details of the classification I have adopted. The reader will easily acquire a general idea of it by throwing his eye over the table which I have given. (§ 2.)

Most of the older pathologists who have written *ex professo* on diseases of the skin, have not given any cases of them; it is felt, however, how necessary they are to establish certain particulars of general descriptions. I warn pupils also, that among the cases published there are a great number the titles of which are false. Some entitled *elephantiasis*, are really cases of lepra; others published under the name of *impetigo*, are cases of psoriasis. Many of these cases are obscure, because expressions have been employed in their description the sense of which is undetermined, or rather, because the most opposite terms have been used indiscriminately to designate the same alteration. One speaks of a *tubercle*, while he means *a crust;* another indicates a *squamous*

* Wilson (J.) *A Familiar Treatise on Cutaneous Diseases*, in 8vo. London, 1814.

† The vocabulary has been omitted for rensons before stated; and the loss of these terms may be easily sustained, as they are now become almost obsolete; they may be found in the medical dictionaries.—T.

plate, under the name of *pustule*, *&c.* In truth, these cases cannot be consulted with advantage until after a very extensive knowledge of diseases of the skin has been acquired. These writings, then, may be considered as a means of exercising our diagnosis.

I ought to add, that among the observations already published on diseases of the skin, there are fortunately a great many which are not only exempt from these grave objections, but which ought to be considered as models, on account of the minute exactitude of their descriptive details. Most of these have been collected by the authors of much esteemed monographs, from whom I have borrowed them. There are other cases which I have thought ought to be looked upon as it were in the light of new observations, showing that identical alterations have been described under very different denominations. Lastly, I have given some cases abstractedly, that they may be totally disengaged from old hypotheses or trivial remarks. Most of these cases recall therapeutic experiments, the repetition of which is still of use under better determined conditions.

The other cases given in this work have been observed in the course of my own practice at the fourth dispensary, at the consultations of the central bureau, or in hospitals during the provisional duties I have been called upon to fulfil; these cases are distributed in the different chapters of this work. I have enlarged upon some points of them which have appeared to me obscure, as well as on some diseases, which, by their frequency or gravity, present an equally great interest to the therapeutist.

If the disagreement of nomenclatures and classifications has been an obstacle to the progress of our knowledge of diseases of the skin, the imperfection of general descriptions has been still more felt. Most of the symptomatic sketches transmitted by the Greek, Latin, and Arabian physicians, were enigmatical, on account of their extreme conciseness; their translators, by false interpretations, have rendered them still more obscure. New observations have since been added to them from time to time, as they have been made; but such disorder has reigned in this collection, that it has now become indispensable to search carefully among this crowd of descriptions for those which are true, so as to distinguish them from others which are made to connect dissimilar facts, or which are formed by the fanciful assemblage of symptoms borrowed from two or three different diseases.

In making this analytical study, one cannot help acknowledging that Willan is, of all who have written on diseases of the skin, the one whose descriptions are most constantly correct. Under this view, his works are very superior to those of our modern classifiers, whose treatises contain a certain number of those false descriptions of which I am about to speak. I point out several with the more

freedom, having myself had the great misfortune to follow them.* Read attentively the description of the *squamous dartre*; examine comparatively the different cases of it which have been published, and you cannot fail to observe that the description has been made up of some symptoms of lepra, some of psoriasis, *lichen agrius*, and chronic eczema. Proceeding in the same manner, you will find, in the *crustaceous dartre*, the elementary symptoms of ecthyma, rupia, and impetigo. In the description of lepra, a confused picture of the elephantiasis of the Greeks and Arabs; in the *phlyctenoid dartre*, a confusion of the symptoms of zona and pemphigus; and in *erythemoid dartre*, a mixture of the symptoms of urticaria and erythema, &c.

I have thought proper to enter into brief generalities only of the different classes of phlegmasiæ, because these appearances have always something vague. I have preceded the description of each disease by a definition. I have given as faithfully as I have been able the symptoms in the order of their appearance. I have made known the terminations, and have indicated the mechanism† by means of which certain forms of phlegmasiæ are transformed into others usually more intractable. I have pointed out the most frequent complications of cutaneous diseases. In treating of each of them in particular, I have made known the accidental forms of phlegmasia which appear most frequently in its course. I have not at all spoken of the complication of acute diseases of the skin with continued fevers, the existence of which, as morbid individualities, I do not admit;‡ but I have given some cases of cutaneous phlegmasiæ, complicated with intermittent fever, on the seat and nature of which I have offered an opinion participated in by some distinguished practitioners.§ I have shown how, in some instances, certain diseases of the skin appear to alternate with inflammation of the viscera or their membranes, and how people have been led to suppose that the former are converted into obstructions and internal engorgements, when the latter, becoming more intense, cause the disappearance of an affection of the skin.

Up to the present time but a very small number of anatomical researches have been made on diseases of the skin. Among the authors who have seen and pointed out the importance of them, there are some who have given them a false direction, in pointing their attention principally to internal lesions of the lungs, digestive organs, and uterus, which have taken place accidentally in individuals attacked by chronic diseases of the teguments; but that

* *Dictionnaire de Médecine*, en 18 vols., art. *Dartre*.

† The author's own expression has been retained. The idea wished to be conveyed by the term *mechanism*, I apprehend to be, *the mode of transition* of a disease from one form to another.—T.

‡ Art. Fièvre, *du Dictionnaire de Médecine*, en 18 vols.

§ Art Fièvre Intermittente, *Dictionnaire de Médecine*, en 18 vols.

these observations have been of some utility, is shown by their having proved, by numerous examinations of the body, that these internal lesions more frequently coincide with inflammations of the skin, than several other affections which may be equally complicated with them. New anatomical researches on the structure of the alterations of the teguments have furnished me with valuable characters for the distinction of various forms of phlegmasiæ; and I have given, in the history of rubeola, erysipelas, variola, tinea favosa, purpura hemorrhagica, onyxis, ichthyosis, &c., some anatomical details which have not perhaps been hitherto published with equal accuracy.

The chemical analysis of the morbid humours, liquid or dried, secreted by the diseased skin, furnishes characters only of a secondary interest. Although it is not generally proper to neglect any kind of investigation, we ought at the same time to consider, that it is not in the crucible we are to look for the characters proper to distinguish the diseases of the teguments from one another.

Some authors have endeavoured to make their descriptions of these diseases more striking by the aid of coloured figures: the two most beautiful collections of this sort are, without exception, those of Willan and Bateman,* and of Alibert.† Most of these plates exhibit, however, only one of the stages of the inflammation which they are intended to represent. Thus it happens, that some disease described as *pustulous* has been exhibited in the *squamous* state; that some other also, placed among the *pustulæ*, has been represented in the *tuberculous* state; that others, lastly, have been only drawn in the state of *crusts*, a secondary character, and common to several very different forms of *phlegmasiæ*. These faults I have endeavoured to avoid in arranging the plates of this work. The primary forms of the inflammations of the skin, and the alterations which succeed them, have been represented carefully after nature, or the best engravings that have been published.

Figures of the natural size, in which the head, trunk, limbs, or whole body, are represented, would be out of place in an elementary work; while, on the other hand, they would have only the trifling advantage of exhibiting the same alterations in a greater number of points: a hundred pustules, or twenty tubercles of cuperosa, for example, scattered over the face of a woman, with a design of the head and bust given, and additions more or less elegant, do not yield a juster idea of the pustulous form of this affection, and of the tubercles by which it sometimes terminates, than does a piece of skin on which these alterations are shewn. Lastly, some papulæ of prurigo or lichen, a few squamous plates of lepra or

* Bateman (Th.) *Delineations of Cutaneous Diseases*. 4to. London, 1817.
† Alibert. *Op. cit.*

psoriasis, &c. suffice to make known the character of these diseases, without its being necessary to represent all the regions of the body upon which they have been observed.

The etiology of diseases of the skin has been the subject of more hypothesis than positive research. Some of these affections are contagious, and are transmitted by means of particular agents, known under the names of virus or miasmata. Among these contagious diseases there are some, such as variola, rubeola, scarlatina, with which man is only affected once during life; while the first attack of itch, or syphilitic disease, does not exempt the individual from a new infection.

The number of diseases of the skin susceptible of being transmitted by inoculation, is not yet decidedly ascertained. Some inoculators have tried the action of crusts; others of secreted humours; and have obtained, in appearance at least, different results.

A multitude of chronic inflammations are produced by uncleanliness, or other agents, which directly irritate the skin; and it is to this want of cleanliness in the inferior classes of the people, that Willan attributes the frequency of cutaneous diseases in London: he also expresses a wish that the public baths might become more accessible to the lower orders. In France, the desires of the profession have been met by the active philanthropy of the administration of hospitals of Paris, who have placed within reach of the poor, privileges, to the possession of which the rich alone aspire in other countries. The number of gratuitous baths which are given at the hospitals of St. Louis and La Charité, is truly prodigious: in 1822 it amounted to 127,752, for the out-patients only of the hospital of St. Louis.

There are other causes which appear to act at first on the internal organs, and in particular on those of digestion and innervation, and which thus produce, in a sympathetic manner, the development of diseases of the skin. Lastly, certain agents have, very probably, an influence on the teguments only after having been carried into the circulation; it is thus that the discoloration of the skin in icterus, and the dark tint which follows the long continued internal use of the nitrate of silver, is produced. Other alterations of the skin, perhaps, take place in like manner.

The opinion, pretty general among persons affected with chronic and intractable diseases of the skin, that these affections are kept up in consequence of the acrimony of the blood, defects of the humours, &c. seems to derive strength from some circumstances, such as the development of many cutaneous diseases without appreciable causes, their being hereditary, their resistance of treatment apparently the most rational, their frequent recurrence, &c. but this hypothesis is not proved by any positive fact. It would be even difficult at this day to decide this question of

hurmourism by experiments, notwithstanding the recent progress of animal chemistry.

The mucous and serous membranes, and organs of a more or less complete texture, offer also numerous examples of intractable chronic diseases, developed without assignable causes; and if the theory of alteration in the blood is to be applied to all cases the etiology of which is obscure or unknown, it would not be necessary to confine it to one single tissue; and, if it has been too easily admitted that the blood is altered in almost all chronic diseases of the skin, it is well proved that it is so in jaundice and in carbuncle; and it is probable its composition is modified in rubeola, variola, and in some cases of purpura hemorrhagica, &c.

Some cutaneous diseases are almost constantly congenital, as ichthyosis, *nævi;* others are observed especially in infants and adults; there are some, lastly, most common in old age.

Nightmen, and individuals who live constantly in an atmosphere charged with sulphureous exhalations, are rarely affected with chronic diseases of the skin, while other professions seem to predispose to their development. A superficial study of this influence of professions on the state of the skin had led to the supposition that they were capable of producing particular diseases. Eczema of the hand has been described under the name of *grocer's itch*, and psoriasis of the dorsum of the hand, under that of *baker's itch*.

The influence of climate, seasons, and ages, more marked and better ascertained than that of professions, impresses on the disease modifications which it is necessary to study; but they have unfortunately been made the ground of nosological distinctions. A crowd of complex denominations, among which it will suffice to cite pemphigus *of the Indies*, of *Brazil* and *Switzerland*, lichen of *the Tropics*, lepra of *the Arabs*, of the *Greeks*, and of the *Jews;* the sweating disease of *Picardy*, &c., the roseola of *summer* and of *autumn*, eruptions of the *spring*, &c., roseola of *infants*, prurigo *senilis*, pemphigus *infantilis*, &c., record, even in the present day, how much this influence has been exaggerated.

The differential diagnosis of cutaneous diseases has not yet been treated with all the perspicuity desirable in *ex professo* treatises published on these affections. This great omission has become also the source of many errors. Bateman would not have described eczema of the ear under the name of *porrigo*, if he had devoted a separate paragraph to the differential diagnosis of the two diseases. He would not have admitted porrigo *furfurans*, if he had examined the characters which distinguish this pretended *porrigo* from psoriasis or lichen *agrius* of the hairy scalp. Other pathologists would not have described under the name of *tinea furfuracea* a disease of the scalp, which they have afterwards designated under the name *squamous dartre*, when developed on other regions of the body. I am the more led to insist on the

differential diagnosis of diseases of the skin, that it is a certain mode of ascertaining the individuality of each of them. One of the principal advantages of the classification which I have adopted is, besides this, to smooth the difficulties of diagnosis; thus rendering more easy the knowledge of an infinity of diseases but little studied by pupils.

The antiphlogistic regimen is applicable to many inflammations of the skin; a steady regular life, habitual cleanliness, and care in clothing, a regimen composed of white meats, fresh vegetables, juicy and ripe fruits, contribute powerfully to assist the effects of therapeutic means.

Milk diet, followed with perseverance by persons afflicted with severe and old inflammations of the teguments, has sometimes produced a cure where pharmaceutic preparations apparently the most judicious have failed to do so. Veal, pullet, and frog-broths, are employed under the same circumstances; they may easily be substituted for those of the tortoise and viper, which are proved in the present day to possess none of the specious advantages which superstition and credulity had attributed to them. A number of circumstances dependent on age, temperament, previous or concomitant diseases, and particular conditions under which the sick are placed, sometimes require the tonic regimen to be substituted for the antiphlogistic, which is, nevertheless, of more general application.

If the therapeutic department of diseases of the skin has still many obscure points, and the results of numerous researches made by authors appear sometimes contradictory, it is because there have been few experiments made in which the direct effects of the remedies have been clearly shewn, and they have been almost always limited to indicating the curative, or distant effects. In fact, to announce that a patient affected by *dartres,* that is to say, acute or chronic inflammation of the skin, has been cured by taking dulcamara, *rhus radicans,* tincture of cantharides, or whey, or after having been bled once or oftener, and not to make known the form, extent, or degree of these inflammations of the skin, the state of the principal organs, and numerous other circumstances attendant on each individual case; is to publish a series of observations very nearly deprived of all their interest. To say, in a vague manner, that such or such a remedy has sometimes succeeded in diseases of the skin, and that it has failed in cases precisely similar, without entering into the conditions which have influenced such opposite results, is to give us to understand that chance presides over therapeutical experiments. Lastly, to boast of the curative effects of a remedy, and to support this assertion by incomplete observations only, in which we see this agent constantly associated with other medicaments, more or less energetic, shews but little familiarity with the art of making experiments.

I have avoided, so far as I have been able, these different rocks, but there is still much to be done in this respect. There are much greater difficulties in making accurate experiments in chronic than in acute affections of the skin. They terminate sometimes in a spontaneous manner, after having been for a long time intractable to a host of therapeutic means; and we feel that this circumstance makes it difficult to prove the share any remedy employed for several months has had in their cure. In giving a history of each disease, I have indicated the treatment which appears to me the most proper in its different stages, and the modifications that certain accidental lesions may require. I have also added some critical observations on other less useful or more dangerous measures.

Sound theory and clinical observation daily show the advantages of external medications in the treatment of cutaneous diseases. It is true, that patients have the greatest prejudice against these kind of remedies, to which they often prefer the most insignificant *tisanes*, or medicines the energetic actions of which render them more or less dangerous. Nevertheless, for some years, practitioners, more and more convinced of the advantage of acting directly on the affected organ, have successfully enlarged the circle of external medicaments.

1°. Local bleeding is now frequently employed in the treatment of acute diseases of the skin. It is generally useful in erysipelas, scarlatina, variola, rubeola, &c. The advantage of bloodletting in chronic inflammation is less marked, and still less appreciated. However, local bleeding, by leeches or cupping, has produced, under my own observation, very marked effects in diseases which had been treated at different times by stimulating medicines. I have obtained great advantage from its use in eczema, impetigo, psoriasis *guttata*, tinea *mucosa*, lichen, *local* prurigo, herpes *phlyctenoides*, &c. In acute and chronic inflammations of the skin, bloodletting may be employed in young, strong, and well-constituted individuals, and at all times when the inflammation is general, or accompanied by painful sensations.

When it is considered that most chronic diseases of the skin owe their origin to uncleanliness, and that acute inflammations are almost universally accompanied by augmentation of the bodily heat, but little surprise should be excited at the happy effects obtained by the use of simple baths, or those of the decoction of bran, by emollients, gelatinous or oily baths, mucilaginous lotions, emollient cataplasms, &c. To be beneficial, these baths should be temperate; for the continued use of hot baths rarely agrees when the skin is inflamed. Soft and river-water baths, in particular, are advantageous in a great number of acute and chronic inflammations, rendered permanent by their nature, form, or long continuance. I have made several experiments on the administration of fresh narcotic baths in the treatment of chronic and painful

inflammation of the teguments, the results of which have appeared to me very favourable. Sea baths have been considered by Willan as very efficacious in many chronic inflammations of the skin. We know that, at the beautiful hospital at Margate, very frequent recourse is had to this therapeutic agent. At Paris, the alkaline bath, the composition of which approaches to a certain degree that of the sea-water bath, is employed under analogous circumstances.

I have endeavoured to indicate the conditions under which the application of baths and aqueous vapour may be usefully prescribed. It is sufficient to remark in this place, that they are to be used principally to subdue certain inflammations of the skin, to cause the fall of scales and crusts, to stimulate the circulation on those parts of the integuments upon which they are directed, and to stimulate certain chronic inflammations. They are useful also under many other conditions, as MM. Attumonelli,* Assalini,† Rapou,‡ &c., have made known, with many details. I have also tried to determine the cases in which dry fumigations are especially applicable.

The fumigating apparatus, invented by Glauber§ and Lalouette,‖ revived with some improvements by M. Galès,¶ has been brought to great perfection by M. d'Arcet.** It is after the design of this able chemist that the apparatus constructed at the Hospital St. Louis has been executed, under the immediate direction of M. Pêligot, whose name brings to mind a host of important improvements introduced into the government of our hospitals. We can now, by means of these ingenious inventions, direct local fumigations on the face, arms, genitals, &c., without placing the patient in an atmosphere charged with the medicamental substances.

Fumigations have also been used in the treatment of cutaneous diseases, by Messrs. Clarke†† and Wallace‡‡ in England, and by

* Attumonelli, *Memoire sur les Eaux Minérales de Naples et les Bains de Vapeurs*. Paris, 1804.

† Assalini (Paul), *Recherches Medicales sur les Bains de Vapeurs et sur les Fumigations des Substances Ammoniacales, de Soufre, et de Mercure*, (in Italian,) 4to. Naples, 1820.

‡ Rapou, *Traité de la Méthode Fumigatoire*, 2 vols. 8vo. Paris, 1823.

§ Glauber (Jean Rudolph), *Furni Novi Philosophici, sive Descriptio Artis Distillatoriæ Novæ*, 12mo. Amstelædami, 1823.

‖ Lalouette (P.), *Nouvelle Méthode de Traiter les Maladies Vénériennes par la Fumigation*. Paris, 1776.

¶ Galès *Mémoire et Rapport sur les Fumigations Sulphureuses Appliquées au Traitement des Affections Cutanées*, 8vo. Paris, 1816.

** *Description des Appareils à Fumigations, etablis sur les Dessins de M. d'Arcet, à l'Hôpital St. Louis*, en 1813, 4to. Paris, 1818.

†† Clarke (Arthur), *An Essay on Diseases of the Skin, containing Practical Observations on Sulphureous Fumigations, &c.* 12mo. London, 1821.

‡‡ Wallace (W.) *Observations on Sulphureous Fumigations, &c.* 8vo. Dublin, 1820.

M. Decarro* in Germany, who have published some very interesting observations on their effects.

2°. Sulphureous preparations enjoyed for a long time a merited reputation in the treatment of skin diseases. Natûral or artificial mineral baths, and the waters of Barèges, Cauterets, Plombières, d'Enghien, and Aix in Savoy, of Bade and Leuk in Switzerland, &c., have been recommended in psora, cuperosa, mentagra, chloasma, &c. Sulphureous fumigations have been employed under the same circumstances, but their efficacy has certainly been exaggerated. They not only irritate the skin, as all sulphureous preparations do, but they may produce syncope, suffocation, &c.; this points out the danger of their use with children, old persons, pregnant women, &c. The fumes of sulphur, administered according to the process of M. Ballard, are considerably less irritating than fumigations of sulphureous acid gas.† Sulphur ointments and lotions possess analogous properties; their energy may be modified by the addition of other substances of more or less activity, or which only add to their negative qualities.

3°. The injurious effects of the salts and oxydes of lead have been exaggerated by the unenlightened partizans of the humoral physiology. These remedies‡ are often useful in certain inflammations of the skin accompanied by morbid secretion. Preparations of zinc are used in similar cases. The results of the first observations made on the use of lead,§ carbon,‖ and the oxyde of manganese, in the treatment of cutaneous diseases, announced as most favourable, have appeared by later experiments very equivocal. Mercurial lotions, fumigations, and baths, are not only employed with success in syphilitic, but also in some other chronic inflammations of the skin.¶ The proto-chloruret or deutoxyd of mercury enter into the composition of almost all anti-herpetic ointments prescribed in our formularies. Acidulated, saline, and alkaline lotions, liniments with the addition of prussic acid,** have been recommended in some chronic diseases of the skin, such as impetigo, cuperosa, &c.; but these experiments require to be repeated under better determined conditions.

* Decarro (T.) *Observations sur les Fumigations Sulphureuses.* Vienna, 1819.

† Sulphur fumes may be directed to any particular part by means of the simple apparatus used for cinnabar fumigations of the throat, &c.—T.

‡ Goulard, *Traité sur les Effects des Préparations de Plomb. &c.* Montpelier, 1766.

§ Weinhold, *Der Graphit als ein neu Endecktes, &c.* i. e. *Plumbagine proposed as a newly discovered remedy against Dartres,* 8vo. Leipsick, 1808.

‖ Griois (F. B.), *Considerations sur l'Utilité de la Poudre de Charbon de Bois dans la Traitement de la Teigne, de la Gale, et de quelques autres Affections Cutanées,* 4to. Paris, anno xii.

¶ Caffé, *Avantages des Bains Mercuriels dans la Traitement des Maladies Vénériennes et Cutanées,* 4to. Paris, 1815.

** Thomson (A. T.), *On the Employment of Prussic Acid externally, &c.* Medical and Physical Journal, Feb. 1822.

Success has sometimes been obtained by stimulating certain inflammations of the skin, developed in scrofulous habits, by means of hydriodated ointments. Combining iodine with mercury has been found advantageous in the treatment of tuberculous and ulcerated syphiloid disease. The combined action of these two very powerful agents should be narrowly watched.

A long time since, it was proposed to transform chronic into acute inflammations of the skin, to accelerate their progress and cure. With this view, they were treated, by turns, by cataplasms of wall-pepper, letterwort, the juice of euphorbia lathyris, cantharides, by blisters, stibial ointments, acid, or acidulous lotions, &c.

Vesicatories, employed by Ambrose Paré in cuperosa, have been also used by several other pathologists, in lepra, lupus, psoriasis, &c. The numerous experiments of M. Alibert, on the action of the nitrate of silver, and of chlorine, show that they have often had the effect of superficially cauterizing the skin when affected by chronic and intractable inflammation,* but they equally prove that this stimulating method not employed with caution, may be followed by an aggravation of the inflammation it was meant to subdue, and sometimes by indelible cicatrices. Lastly, disorganizing inflammations have sometimes been attacked with the greatest success by cauterizations made with the nitrate of mercury.†

Vesicatories and cauteries have been recommended as derivatives, in numerous chronic and local diseases of the skin; they are always injurious in general phlegmasiæ of the tegument.

Such a number of internal medicines have been employed in the treatment of cutaneous diseases, and the mode of action of many of them so little known, and so variable, according to the circumstances under which they have been administered, that I have been somewhat embarrassed how to class them.

1°. Some possess only negative qualities; these are aqueous drinks, such as decoctions of barley, millet, liquorice, lemonades, &c.

2°. Others, such as saline purgatives, calomel, and the different acids, appear to act by causing a temporary revulsion towards the alimentary canal. Not only has each of these medicines an action peculiar to itself, but some persons have supposed that they may be absorbed, and consecutively produce various effects on the skin. In support of this opinion, the peculiar action of the sulphuric acid exercises on ulcerated eczema and lichen *agrius*, and the not less remarkable effect of calomel in some other cutaneous diseases, has been cited.

* Guillemineau (L. C.), *De l'Emploi du Nitrate d'Argent Fondu, dans le Traitement Externe de quelques Maladies*, 4to. Paris, 1826.

† Godart, *De l'Emploi du Nitrate Acide de Mercure*, 4to. Paris, 1826.

3°. Some remedies have an *especial* and salutary influence over several diseases of the skin. Thus, mercurial preparations are *specifics*, that is to say, they are generally better adapted to the treatment of syphilitic eruptions than any other medicamental substances. But it is very uncertain whether the preparations of gold,* carbon, and ammonia,† enjoy the same advantage; it is still less certain whether the scabiosa, burdoc, sorrel, hyssop, sarsaparilla, soap-wort, dulcamara,§ *rhus radicans*,‖ elm-bark, tooth-wort, garden and horse radish, &c., or lime-water, have any general action against those chronic diseases of the skin which are commonly designated under the name of *dartres*. It appears evident that these medicines have been more frequently employed than others, because they have more generally been successful. My task is to make a judicious choice of these medicaments, by taking account of the properties possessed by them, according to the most recent analyses, by studying the conditions under which each of them has presented peculiar advantages, and to confirm these researches by new experiments; an immense undertaking, which I have not been able to execute in all its details.

Preparations of antimony and sulphur have been prescribed in a great number of diseases of the skin. They are most frequently administered in combination with other more or less active medicines. I shall mention the most useful of these compositions, in treating of the diseases in which they have been more particularly employed. The deplorable resistance which some chronic diseases of the skin offer to external applications, has given rise to some bold experiments on the internal use of the tincture of cantharides and arsenical preparations. The tincture advised by Avicenna and Mead, in the treatment of elephantiasis of the Greeks, is now most frequently employed by some pathologists against lepra, psoriasis, and several other chronic affections of the skin. The arsenical preparations recommended in elephantiasis of the Greeks by the Indians, and in intermittent fever by the English practitioners, have been accordingly introduced in the treatment of chronic diseases of the skin by Willan and Bateman, by M. Otto, and Mr. Thomas Girdlestone.¶ The *Asiatic pills*, and the solutions of

* Niel (T. G.), *Recherches et Observations sur les Preparations d'Or*, 8vo. Paris, 1821.

† Peyrilhe, *Réméde Nouveau contre les Maladies Vénériennes, tiré du Règne Animal*, or, *Essai sur la Vertu des Alcalis Volatiles*, 4to. Paris, 1774.

‡ Carrère (T. B. Fr.), *Traité des Propriétés Usages et Effects de la Douce-mère, ou Solanum Scandens, dans la Traitement de plusieurs Maladies, et surtout des Maladies Dartreuses*, 8vo. Paris, 1718.

§ Dufrènoy (Andr.), *Des Caractères, du Traitement, et de la Cure des Dartres par l'Usage du Rhus Radicans*, 8vo. Paris, an. viii.

‖ Detharding (G. Ch.), *De Aquæ Calcis Vivæ usu Interno Salutari, in Specie in Morbis Exanthematicis Chronicis*, 4to. Rostochii, 1746.

¶ *London Medical and Physical Journal*, Feb. 1806.

Pearson and Fowler, are the arsenical preparations most frequently used.

I have been careful to mention, in the course of this work, and in particular in treating of lepra and psoriasis, the precautions that are necessary to avoid converting these energetic agents into real poisons; but I think it also proper to observe, that if it has been proved that these medicines have cured, in a few weeks or months, affections of the skin which have resisted a host of other remedies, it is also known that patients have taken, without success, a hundred and fifty doses of tincture of cantharides, (of ten, fifteen, twenty, thirty, and sixty drops each); and that others have found no benefit from the use of Fowler's solution and the Asiatic pills, continued for more than four months. It cannot be denied, however, that whatever may be the ability of the practitioner who administers such active remedies, it occasionally happens that the digestive organs become insidiously affected by chronic inflammations, which take place at more or less distant periods; for, if the salutary action of these remedies does not take its effect on the skin till after several months of their use, may not the mucous membrane of the digestive organs become altered in a slow and gradual manner, without producing appreciable external symptoms? For my own part, I ardently hope that experiments of another description, put to the same test, may cause these violent remedies to be superseded by external medicines, more rational, more immediate in their effects, and less dangerous.

With the view of facilitating the researches of students who are willing to make an especial study of cutaneous diseases, I have indicated the most esteemed monographs published on each of them, and the chapters of the treatises *ex professo* in which they have been most accurately described. Lastly, I have collected, at the end of the work, many formulæ frequently employed in diseases of the skin, and of which mention has been made in giving the cases.*

In concluding this Introduction, I feel it due to offer my thanks to several intelligent and indefatigable students, who have assisted me in my researches. I ought particularly to acknowledge the assistance of MM. Guersent, jun., F. Ameline, and Fourneaux, formerly an *elève interne* of the hospitals, and now practising at Caen.

The plates of this work have been designed by M. Prêtre, a very able artist; they have been faithfully represented by MM. Forestier and Langlois, whose zeal and kindness I have pleasure in acknowledging.

Paris; 15th October, 1826.

* The most useful of these have been given at the foot of the pages in which mention of them is made.—T.

CLASSIFICATION.

SECTION I.

DISEASES OF THE SKIN.

CHAPTER I.
Inflammations of the Skin.

1°. *Exanthematous:* Rubeola, roseola, scarlatina, urticaria, erythema, erysipelas.
2°. *Bullous:* Vesication, ampullæ, pemphigus, rupia, zona.
3°. *Vesiculous:* Herpes, psora, eczema, miliaria.
4°. *Pustulous:* Varicella, variola, vaccina, vaccinella, ecthyma, cuperosa, mentagra, impetigo, tinea, artificial pustules.
5°. *Furunculous:* Hordeolum, furuncle, anthrax.
6°. *Papulous:* Strophulus, lichen, prurigo.
7°. *Tuberculous:* Lupus, cancer, elephantiasis of the Greeks.
8°. *Squamous:* Lepra, psoriasis, pityriasis.
9°. *Linear:* Fissures.
10°. *Gangrenous:* Malign pustule, carbuncle of the plague.
11°. *Multiform:* Burns, frost-bite, syphilitic eruptions.

CHAPTER II.
Cutaneous and Subcutaneous Congestions and Hæmorrhages.

Cyanosis, vibices, petechiæ, purpura hemorrhagica, ecchymosis, dermatorrhagia.

CHAPTER III.
Neuroses of the Skin.

Exaltation, diminution, abolition of the sensibility of the skin, without appreciable alteration in the texture of this membrane.

CHAPTER IV.
Alterations in the Colour of the Skin.

Decoloration
- Leucopathia
  - Partial
  - General
- Chlorosis

Accidental Colorations
- Ephelis, lentigo, chloasma, meladermis, icterus, *nævus maculosus*, bronze tint produced by the internal use of lunar caustic.

CHAPTER V.
Morbid Secretions.

Ephidrosis, acne,* folliculous tumours.

* This is the acne *punctata* of Bateman; the French term, *tannes*, is hardly to be rendered into English; *grub*, I believe, is the vulgar term for this affection.—T.

CHAPTER VI.

Defects of Conformation and Texture; Hypertrophics, and Accidental Productions. — Distention of the skin; cicatrices, vegetations, nævus hematodes, subcutaneous vascular tumours; warts, pearly granulations; corns, ichthyosis, horny appendages.

SECTION II.

ALTERATIONS OF THE APPENDAGES OF THE SKIN.

CHAPTER I.

Alterations of the Nails, and of the Skin which produces them. — Onyxis; increased growth of the nails; spots, change of colour, fall, desquamation, reproduction, &c. of the nails.

CHAPTER II.

Alterations of the Hair, and of the Follicles which produce it. — Inflammation of the bulbs of the hair; accidental colorations, canities; alopecia; matting of the hair; plica; accidental pilous tissue.

SECTION III.

FOREIGN BODIES OBSERVED ON THE SURFACE, OR IN THE SUBSTANCE OF THE SKIN.

Inanimate. — Dirt, dirt of the scalp of new-born children; inorganic matters, artificial colorations.

Animate. — *Pediculus humanus corporis; P. capitis, P. pubis; pulex irritans, P. penétrans; acarus scabiei; œstrus; gordius.*

SECTION IV.

DISEASES PRIMARILY FOREIGN TO THE SKIN, BUT WHICH SOMETIMES PRODUCE PECULIAR ALTERATIONS IN THIS MEMBRANE.

Elephantiasis of the Arabs.

ABBREVIATIONS.

C. Causes.	A.R. Anatomical Researches.
D. Diagnosis.	S. Symptoms.
P. Prognosis.	T. Treatment.

A TREATISE,

&c.

SECTION I.

DISEASES OF THE SKIN.

CHAPTER I.

INFLAMMATIONS OF THE SKIN.

§ 1. The skin and its appendages are subject to numerous diseases, which may be naturally divided into two principal classes, according as they primarily affect the skin itself, or its appendages.

§ 2. The skin may be the seat of wounds, acute or chronic inflammations, congestions, neuroses, morbid colorations, discolorations and secretions, defects of conformation and alterations of texture. The appendages of the skin, that is, the nails and hair, also sometimes present anormal dispositions, consecutive to divers alterations of the parts of the skin which produce these appendices. Besides this, animals may be produced, live, and propagate on the surface, or in the substance of the skin.

§ 3. The following table exhibits at the same time the names of the principal alterations of the skin and its appendages, and the order in which they will be successively described. Wounds of the skin being entirely within the domain of surgery, will not be treated of in this work. I should have equally abstained from speaking of some other diseases quite foreign to the skin, at least at their outset, if their real seat had been more generally known, and they had not still been the subject of pretty sharp discussion.

§ 4. Under the term *inflammations of the skin*, I designate all diseases characterised at their outset by accumulation of

blood at a particular point or region, or over the whole surface of this membrane, whether this alteration be followed by complete resolution, by desquamation, morbid secretion, ulceration, induration, or any other change in the organization of the part affected.

§ 5. Inflammations of the skin, far more numerous than those of other membranes, present themselves, both at their outset and in their course, under various modifications; these may, however, be reduced to nine principal forms:

1° *Exanthemata,* characterised by a general red tint of the skin, or distinct red, or reddish patches, scattered over its surface, terminating by resolution, delitescence,* or desquamation. (Pl. i.)

2° *Bullæ,* or small aqueous, transparent tumours, formed by an effusion of serosity between the epidermis and the inflamed reticular body. (Pl. ii.)

3° *Vesiculæ,* or small serous, transparent elevations, differing from bullæ only by their smaller dimensions, are formed by a small drop of serosity deposited between the epidermis and reticular body. These small drops may be absorbed or effused on the surface of the skin, in consequence of rupture of the raised epidermis. They are sometimes succeeded by superficial excoriations, or by small, thin, lamellated crusts. (Pl. iii.)

4° *Pustulæ,* or *purulent* elevations, formed by the effusion of pus, or a morbid humour not serous, between the epidermis and inflamed reticular body. These humours ordinarily dry more slowly than the preceding, under the form of hard thick crusts, which sometimes conceal deep excoriations or ulcerations. (Pl. iv. v.)

5° *Papulæ:* these are solid resistant† elevations, accompanied by itching, and commonly terminate by resolution or desquamation, more rarely by ulceration. (Pl. vi.)

6° *Tuberculæ,* small, solid, circumscribed, indurated, resis-

* By delitescence, which is not strictly an English term, although it has been introduced by some writers, is meant the sudden disappearance of an inflammation, or even a collection of matter, from one region, without its appearing on any other, or giving rise to the development of any internal affection; it is thus distinguished from metastasis.

† Resistant, again, is not an English term, although its meaning is obvious, (the possession of resistibility); and so with several other words, as flavescent, &c., but which may be conveniently introduced in describing the characters of tumours and other alterations of the skin.

tant tumours, larger than papulæ, and terminating by partial suppuration or ulceration. (Pl. vii.)

7° *Furunculi:* solid tumours, more voluminous than tubercles, caused by inflammation of the cellular processes or elongations entering into the areolæ of the dermis.

8° *Squamæ:* these consist of the altered lamina or lamellæ of the epidermis, produced by the inflamed reticular body, and are continually being detached from the surface of the skin. (Pl. viii.)

9° *Fissuræ,* or lineal cracks of small depth, and which seldom extend through the whole thickness of the skin.

§ 6. All inflammations of the skin, except those called *gangrenous,* the original form of which is but little known, necessarily depend on one or more of these primary alterations, the external characters of which are easily recognised and determined.

By taking these primary alterations as the basis of the classification of phlegmasiæ of the skin, it appears that the distinctive traits of each class may be more readily seized on than they could have been, had I adopted any other distribution. According to this fundamental consideration, inflammations of the skin, distinct from, or approaching each other in their primary forms, have been thus subdivided:

INFLAMMATIONS.

1° *Exanthematous:*—Rubeola, roseola, scarlatina, urticaria, erythema, erysipelas.

2° *Bullous:* Vesicatoriæ, ampullæ, pemphigus, rupia, zona.

3° *Vesiculous:* Herpes, psora, eczema, miliaria.

4° *Pustulous:* Varicella, variola, vaccina, vaccinella, ecthyma, cuperosa, mentagra, impetigo, tinea, artificial pustules.

5° *Furunculous:* Hordeolum, furuncle, anthrax.

6° *Papulous:* Strophulus, lichen, prurigo.

7° *Tuberculous:* Lupus, cancer, elephantiasis of the Greeks.

8° *Squamous:* Lepra, psoriasis, pityriasis.

9° *Lineal:* Fissures.

10° *Gangrenous:* Malign pustule, bubo of the plague.

11° *Multiform:* Burns, frostbite, syphilitic eruptions.

§ 7. *Ulcers* are not enumerated in this classification. They never constitute a primary alteration. They always succeed to subcutaneous abscesses, or to vesiculous, pustulous, or

tuberculous inflammations, &c. The study of ulcers cannot be separated from that of the different inflammations which produce them.

§ 8. All inflammations of the skin affect more or less the reticular body of this membrane; some attack the dermis itself, the sebaceous follicles, the bulbs of the hair, the interareolary cellular tissue of the dermis, and even the subcutaneous cellular tissue.

§ 9. The three morbid phenomena which are said to characterise inflammation, *pain*, *heat*, and *swelling*, present in phlegmasiæ of the skin numerous shades and varieties, which we shall make known when considering the characters of the different groups, or when treating individually of each of the diseases composing them. I shall confine myself, in this place, to stating that *itching*, *pricking*, *shooting*, *smarting*, *burning*, *erosion*, *tension*, &c. are so many forms under which *pain* of the skin may show itself; that several phlegmasiæ are accompanied by violent and intolerable itching, while others excite it only in a slight degree; that morbid heat may be absent, slight or intense, mild or acrid, and sharp, &c.; that *tumefaction* of the skin, very apparent in some inflammations, (*erysipelas*, *variola*, *anthrax*, &c.) is imperceptible in roseola, some varieties of erythema, &c.

§ 10. The functions of the skin are always more or less disordered in inflammations. Cutaneous perspiration may be suspended, diminished, or augmented; the secretions of the sebaceous follicles, those of the epidermis, the sensation of touch, and the hair and nails, may also offer more or less remarkable alterations.

§ 11. Several phlegmasiæ are developed indiscriminately on all parts of the body, (*erythema*, *erysipelas*, *eczema*, &c.;) some affect, particularly or exclusively, certain regions (*couperosa*, *mentagra*, *tinea*, &c.); others, lastly, almost always affect the whole surface of the skin, (*rubeola scarlatina*, &c.)

§ 12. Of the inflammations of the skin, some have constantly an *acute* or *chronic* form; others, according as the causes which produce them are temporary or permanent, may assume either of these forms.

§ 13. All *acute* and intense phlegmasiæ of the skin cause an acceleration in the motion of the blood. Frequency of the pulse also often precedes the appearance of the heat, and even of the inflammatory alteration of the skin; but, in this case, the cutaneous affection is preceded by gastric, intesti-

nal, bronchial, or vesical inflammations, &c. *Chronic* inflammations, on the contrary, are often developed on the skin without causing the slightest derangement of the principal functions.

§ 14. *Acute* and *chronic* cutaneous inflammations sometimes coincide with phlegmasiæ of the mucous membranes; these are often *cause* or *effect* to the former. But, in the study of these complex cases, it is frequently difficult to determine which affection is primary or secondary.

§ 15. The mucous membranes at times present the same form of phlegmasiæ as the skin; the difference of structure, however, which exists in the organization of these two divisions of the cutaneous system necessarily causes, in development and frequency, different inflammatory forms on their surfaces. Besides this, the peculiar appearance characteristic of each phlegmasiæ, easily observed on the skin, are obscured or lost on the mucous membrane.

§ 16. The causes of phlegmasiæ of the skin are sometimes evident, more frequently obscure, or altogether impenetrable. They act either directly on the tegument, or indirectly through the medium of some other organ. The contact of physical or chemical irritants, that of vaccine, variolous, or syphilitic virus; the sympathetic influence of phlegmasia of the mucous membrane, particularly that of the digestive organs in the acute or chronic form, are the most general and least doubtful causes of cutaneous inflammations.

§ 17. To establish the diagnosis of an inflammation of the skin, it is requisite, in the first place, by an attentive inspection, to endeavour to ascertain its *primary form*, that is, to determine whether it has the characters of an *exanthematous*, *bullous*, *vesiculous*, *pustulous inflammation*, &c.; with this view, we can but compare its symptoms and progress with those of the phlegmasiæ which come under the same generic form. In a particular case the diagnosis may be more or less difficult, according as the primary form of the inflammation is intact, or more or less altered; according as it is destroyed or replaced by other *consecutive* alterations; lastly, according as the disease is simple or complicated with other cutaneous inflammations, characterised by the same or some other primary form. At all times, the knowledge of the alterations *consecutive* to the different primary forms of phlegmasiæ will necessarily assist in the detection of these latter. They are often to be found also intact in the vicinity of those points of the skin the earliest affected. Although several forms of

phlegmasiæ may exist simultaneously on the same region, or on the same individual, one particular form will always predominate, to which the others will be connected incidentally, constituting complications more or less serious.

Inflammations of the skin being occasionally associated with diseases of the mucous membrane, of the viscera, &c. the diagnosis, to be complete, should equally recognise the presence or absence of these affections.

§ 18. It is frequently difficult to prognosticate what will be the progress and termination of some cutaneous inflammations; while the duration and successive changes of others, as well as their curability or incurability, are easily calculated.

§ 19. In the treatment of inflammations of the skin, it is always necessary to moderate or subdue the irritation, primary or secondary, of the integuments. A severe regimen, the use of aqueous drinks, and the external application of water, are powerful means in the treatment of these diseases. Acute inflammations frequently require nothing more to keep them within certain limits than the antiphlogistic treatment and regimen; the malady left to prey on itself, so to speak, the cure naturally follows. But whenever these inflammations appear to have a tendency to spread extensively over the skin, the subcutaneous cellular tissue, or other organs, venesection will be required once or oftener, or blood may be drawn from near the inflamed part by the application of leeches, repeated if necessary.

§ 20. Occasionally it is necessary to cause an internal irritation, to arrest certain grave and intractable phlegmasiæ of the skin. If the digestive organs be perfectly healthy, it is on them that we act with this view. This derivative method, which requires great vigilance on the part of the practitioner, is generally pleasing to the patient, because it requires a less regular and rigorous mode of living than the strict antiphlogistic plan.

§ 21. Many inflammations, primarily chronic, or become so, often continue stationary in despite of the antiphlogistic, or derivative method. We must then have recourse to the local use of astringents and excitants, as the means of changing the mode of irritation. This treatment is usually followed by a temporary exasperation of the symptoms, at the end of which a complete cure is sometimes obtained. We should not carry this treatment beyond certain limits, however, or the malady becomes aggravated, and assumes a graver character.

§ 22. The frequency of cases in which the disappearance of the cutaneous affection has been observed to coincide with the development or progress of an internal inflammation, shows the danger of suddenly suppressing the external inflammation. Some cutaneous phlegmasiæ seem to have a more necessary course (that is, they have to go through certain changes or stages, before any progress is made towards a cure), than the phlegmasiæ of the mucous membrane. The delitescence of diseases of the skin is the more dangerous because often followed by metastasis on organs, the irritation of which is attended by much more serious consequences than the progress of the affection which we are endeavouring to cure.

§ 23. On the other hand, some diseases of the viscera exert such an influence over inflammations of the skin, and there exists so intimate a relation between them, that if the latter are injudiciously subdued, it does not fail to aggravate the former.* It is from this reason that all cutaneous affections which supervene during the course, or towards the decline of an internal phlegmasia, should be encouraged, if not too intense, and provided the internal disease advances towards a cure, or becomes less grave, as the affection of the skin is developed. The practice of producing and maintaining artificial inflammations, which the therapeutist sometimes adopts, on certain regions of the body, is founded on analogous observations.

EXANTHEMATOUS INFLAMMATIONS.

Syn.—*Exanthemata : Rashes.* Willan, *Exanthematica.*

§ 24. Under the term *exanthematous*, I designate several inflammations of the skin, characterised at their outset, and in their highest degree of development, by a morbid accumulation of blood in a given part or region, or over the whole surface of this membrane. These phlegmasiæ terminate by resolution, delitescence, or desquamation.

This group comprehends rubeola, roseola, scarlatina, urticaria, erythema, and erysipelas.

§ 25. The common and generic character of these inflammations is a *red tint* of the skin affected.

* Raymond, *Maladies qu'il est Dangereux de Guérir.* 8vo. Paris, 1816. "Chap. I. De quelques incommodités de la peau, ou de quelques éruptions cutanées."

The sanguineous injection, very slight in roseola and rubeola, often temporary in urticaria, and more intense in erythema and erysipelas, is seated principally in the mucous body of the skin; but in erysipelas, urticaria, and scarlatina, it sometimes extends to the subcutaneous cellular tissue.

This class of cutaneous affections has, in general, a very evident connexion with inflammations of the gastro-pulmonary mucous membrane. The study of some of them even is only interesting on account of these important complications.

The *premonitory* symptoms which precede the invasion of several of the exanthemata, viz. slight shivering, soon followed by burning heat of the skin, frequency of the pulse, redness of the edges and point of the tongue, thirst more or less ardent, disgust of animal food, difficulty of deglutition, cough and bronchial rattle, &c., also evince the frequency of the association of inflammation of the skin with that of the mucous membrane.* There is sometimes even a pretty strong relation between the intenseness of the two affections. At other times, the development of exanthematous inflammation is retarded by the high degree of the gastro-intestinal or pulmonary phlegmasia. Other lesions may also coincide with these complications, rendering them more or less grave, according to the importance of the organs affected.

§ 26. These inflammations have commonly an *acute* and *continuous* progress, and their duration does not usually extend beyond two or three weeks. They sometimes, however, assume an intermittent type. Indeed, they are the only cutaneous inflammations susceptible of being re-produced in paroxysms having real intermissions. In this case, when not consecutive to intermittent fever, they are usually developed during the exacerbation of an inflammation of the digestive organs. Gastro-enteritis, particularly, has a very marked influence on the development of urticaria and intermittent erythema.

§ 27. (c.) Two of the exanthemata (scarlatina, rubeola,) are contagious, but the agent endowing them with this property is unknown. The causes of other exanthemata, obvious when acting directly on the skin, are often obscure or indiscoverable, when acting only through the medium of some other organs.

§ 28. (d.) The exanthemata, the distinctive characters of which we have described, (§ 4.) cannot be confounded with

* Talma, *Dissert: sur la Maladies Eruptives.* 4to. Paris, 1819. 251.

any other kind of inflammation of the tegument. The red tint produced by the effusion of blood into the subcutaneous cellular tissue or skin, differs so much from that of the exanthemata, that we are at a loss to conceive how two such observant men as Willan and Bateman could see any resemblance between petechiæ, purpura hæmorrhagica, and the exanthemata. In the latter the red tint is obscure, and the diagnosis more difficult in negroes than in whites.

Exanthemata are sometimes complicated with other, and particularly with papulous, vesiculous, and bullous inflammations of the skin. Thus, intense erysipelas abandoned to itself is frequently surmounted by bullæ similar to those of pemphigus. In this point of view, it seems to form an intermediate link between exanthematous and bullous inflammations.

To determine the other affections which may be associated with the exanthemata, is one of the most interesting points in their diagnosis; for it is of much importance to distinguish between these complex and the more simple cases, before entering into general descriptions of cutaneous phlegmasiæ.

§ 29. (P.) The prognosis of exanthematous inflammations is less favourable the greater their extent; when partial, if the face is the part attacked; when complicated with more or less serious lesions; and as the subject of them is more or less advanced in age, &c.

§ 30. (T.) The exanthemata require the antiphlogistic treatment and diet. When caused by miasmatic poisoning, this treatment must be followed with more reserve. We must not expect to cut them short by repeated bleeding, as has been advised by some pathologists. It is important also to keep in mind, that inflammations of the gastro-pulmonary mucus membrane present a prominent feature in exanthematous diseases of the skin, and that it is to this, above all other complications, that the attention of the practitioner should be directed. The moment symptoms of these internal phlogosis are observed, they should be narrowly watched, and, if intense, subdued; treating them nearly as if the cutaneous affection was not present. These gastro-pulmonary inflammations sometimes survive that of the skin. They require more cautious treatment during convalescence, as a careless regimen or injudicious medicine may aggravate them, and so become the cause of a more or less grave relapse.

§ 31. The propriety of the antiphlogistic plan in the treatment of the exanthemata is so well established, that no person

would be now inclined to follow the recommendation of Morgenstern and Conradi, who advise phosphorus to be used to cause and favour the development of some of them.

RUBEOLA.*

Rubeola: Measles. Willan, *Morbilli.*

§ 32. Rubeola is a contagious inflammation, affecting at the same time the gastro-pulmonary mucous membrane and the skin. Accompanied by fever, coryza, flow of tears and cough at its onset, it is announced externally by small, red, distinct, circular spots, not prominent, resembling flea-bites, separated by interstices, in which the skin preserves its natural colour, forming afterwards little *crossings*, and followed by desquamation about the seventh or eighth day from the invasion of the disease.

§ 33. In its most common form (*rubeola vulgaris*, Willan), rubeola begins by alternate shivering and heat, by anxiety, lassitude and prostration, and by a sensation of pain or weight across the forehead and eyes, accompanied by a heaviness or disposition to sleep. Soon the pulse becomes accelerated, the skin hot, the surface of the tongue white, while its point and edges are of a bright red. Thirst is felt, nausea and sometimes vomiting supervenes, and the epigastrium is at times painful. The second day of the invasion these symptoms are more highly developed; the eyes appear red and watery; the patient sneezes frequently and experiences an itching in the nasal fossæ, accompanied by an exudation of limpid mucus from the nose. The throat is a little painful, and cough more or less violent is observed; and in very young children stupor, or even temporary convulsions, are added to these phenomena. On the third day, the intenseness of these symptoms is always increased; the eyes become more sensible and inflamed; the eye-lids and their edges appear rather tumid; dry and frequent cough, dyspnœa, and a feeling of constriction across the chest, precede the appearance of the exanthema, which usually declares itself on the fourth day from the development of the first symptoms; this may correspond with the tenth, eleventh, twelfth, or fourteenth day of infection.

§ 34. The small, red, distinct circular spots, resembling flea-bites, appear at first on the forehead, chin, nose, cheeks, and round the mouth, extending successively in the course

* Roux (Gaspard) *Traité sur la Rougeole.* 8vo. Paris, 1807.

of a day or two to the neck, chest and limbs. This eruption is almost always accompanied by itching and great heat of the skin. Most of these small round spots are soon succeeded by larger ones, which are not defined exactly, but approach nearly the form of a *crescent* or semi-circle. Both kinds of spots are in the substance of the skin, and do not yield to the finger any sensation of an unequal or prominent surface. The semi-circular seem formed by the union of several of the smaller spots. They are separated from each other by intervals, in which the skin retains its natural tint. The colour of these spots is not so vivid as that of the skin in scarlatina. On the face, the red tint of rubeola is at its *summum* about the fifth day. On the sixth, the spots begin to die away and disappear, while those situated on other regions become of a deeper colour, and more numerous.

On the fourth day of invasion, we sometimes distinguish on the uvula and velum palati, small spots of an obscure red, similar to those on the skin. On the fifth day they become confluent. This slight inflammation occasions to the patient a feeling of dryness and roughness in the pharynx, and aggravates the hoarseness which existed in the earlier days of the disease.

When the eruption is perfected, the frequency of the pulse, the heat, thirst, redness of the eyes, coryza, sore throat, &c. are all considerably diminished in intenseness, and sometimes even entirely disappear. The dyspnœa and cough alone remain in some individuals; the nausea and vomiting usually cease about the fourth day; the heat, oppression, and watchfulness, disappear towards the sixth.

The third or fourth day of the eruption, that is, the seventh or eighth of the invasion, the spots of rubeola begin to grow pale in the same order as they appeared, and then they assume a pale yellow tint. When the redness has disappeared, the epidermis becomes detached in small furfuraceous lamellæ. The dry and wrinkled skin becomes the seat of a very disagreeable itching till the tenth or twelfth day. Sometimes, however, the desquamation is not at all, or scarcely, perceptible, at least, on some regions of the body. At this period, the symptoms of gastro-intestinal inflammation gradually diminish. In graver cases they are prolonged during convalescence. It may be accompanied by obstinate diarrhœa, or ophthalmia, by furuncles, and by inflammation of the subcutaneous lymphatic glands.

§ 35. In children who have a fine delicate skin, the erup-

tion sometimes appears partially on the third day. It does not show itself before the fifth in individuals who have a thick brown skin. Its progress is occasionally prematurely arrested by exposure to cold, or by the injudicious employment of purgatives. This retrocession of the eruption is frequently attended by intestinal pains, diarrhœa, difficult respiration, delirium, &c. Under favourable circumstances the eruption appears on the arms a few hours after it is seen on the face; or, it may not extend at all to the limbs, which may not present a single spot on their whole surface. In new-born infants, papulous eruptions like strophulus; in patients of various ages, small vesicles, similar to those of eczema; the bullæ of pemphigus, petechiæ, (*rubeola rigricans,* Willan,) the pustules of variola, natural or inoculated, epistoxis, acute inflammation of the eyelids, cerebral affections more or less grave, gastro-pulmonary inflammations, such as gastro-enteritis, cæco-colitis, croup, bronchitis, pneumonia, &c. by being associated with the eruption of rubeola, impress on this disease numerous symptomatic characters, examples of which we must look for in particular cases.

§ 36. During the progress of convalescence, different inflammatory alterations are sometimes observed to be accidentally developed on the skin. These are sometimes pustules, similar to those of ecthyma, seen on the back, groins, and lower extremities; sometimes phlyzaceous pustules are scattered over the feet, legs, thighs, and scrotum; at other times, chronic inflammation of the eyelids and their edges, or vesiculous inflammation of the pavilion of the ear, or chronic phlegmasiæ of the subcutaneous glands and vessels take place; or bronchitis, cæco-colitis, pneumonia, pleurisy, &c. may supervene.

§ 37. (A. R.) Vogel supposed the epidermis to be the seat of rubeola. This erroneous opinion did not attract many followers. More accurate anatomical investigations have shewn the gastro-pulmonary mucous membrane and the reticular body of the skin to be more especially affected in this disease, and their tissues are always found more or less injected in subjects who fall victims to it. The traces of gastro-pulmonary inflammation found in persons dying of rubeola, are the same as those met with at the close of the same phlegmasiæ when unaccompanied by this exanthema. Laennec presumes that the distressing orthopnæa sometimes remarked in children after rubeola, is the result of idiopathic œdema of the lungs. I have never been able to verify this conjecture; but I have

seen this great difficulty of respiration produced by a very intense pseudo-membranous bronchitis.

§ 38. (c.) Rubeola is contagious, and produced by some agent of an unknown character. This cause is specific, and does not act, in general, more than once on the same individual. Some persons, however, may have frequent communication with those affected with rubeola, and still not be attacked themselves by the contagion. Nevertheless, the number of persons who seem to be proof against this disease, is considerably less than that of individuals in whom variola never declares itself. Measles attacks all ages, and is developed in all climates. It is most commonly met with in young children. Vogel and others assert that infants have presented traces of it at their birth. It more frequently prevails at the end of winter and beginning of spring, than at any other season. It is nearly always epidemic, and is communicated by contact or infection. According to Home, it may also be produced by inoculation of the blood of persons affected with it.*

§ 39. (d.) Rubeola exhibits characters sufficiently distinct from scarlatina, roseola, miliaria, urticaria, petechiæ, &c. when its symptoms are compared with those of these different diseases. However, redness and tumefaction of the cheeks, when very great, may obscure or mask the particular form of the exanthema on these parts, but still it is to be observed more distinctly on other regions. Measles differs from roseola not alone in the form of the exanthema, but also by the gastro-intestinal inflammation which accompanies it. Most of those cases entitled *rubeola without catarrh,* and mentioned in some treatises, are really nothing more than cases of roseola or erythema. The presence of the exanthema prevents the disease from being confounded with pulmonary catarrh. Those pretended cases of *measles without eruption* would more properly be entitled to the name of *catarrh without measles;* for, even supposing that the gastro-pulmonary inflammations that are observed during epidemics of measles, to be produced by the specific cause of this latter, still they present no peculiar characters distinguishing them from ordinary phlegmasiæ of the air and digestive passages, or anything to authorize us to consider them as varieties of rubeola. I must add, that in the study of rubeola, it is of the first importance to ascertain the extent and intenseness of the internal inflammations accompanying the exanthema, and, in particular, the degree of the

* *Vide* Cases.

gastro-pulmonary phlegmasiæ. Attentive exploration of the organs of digestion and respiration, is one of the indispensable elements of the diagnosis.

§ 40. (P.) Epidemics of rubeola are in general mild in temperate climates and seasons; they are more frequently fatal in hot and very cold countries. The same town however may, at different epochs, be the theatre of a benign or malignant epidemic. That of 1570, observed by Sydenham, was benign; while the one of 1574, on the contrary, was remarkable for the frequency and the complication with the exanthema, of fatal peripneumonides. In every case, the younger the patient, the graver the prognosis. The premonitory symptoms of the eruption are usually more marked in infants, particularly during dentition. The disease is dangerous in pregnant or recently delivered women, in pusillanimous individuals, and in those who have been long the subjects of chronic affections of the digestive or respiratory organs. But we should bear in mind that it is not the exanthema which compromises life. The gravity of the disease depends on the intenseness of the internal phlegmasiæ which accompany or succeed it. The appearance of the eruption before the third day, the sudden disappearance, or leaden hue of the spots, the development of petechiæ, great dyspnœa are alarming symptoms. They frequently are indicative of bronchitis and pneumonia, the existence of which may be early ascertained by auscultation, and percussion of the chest. The coincidence of other cutaneous inflammations, above all of variola, renders the prognosis unfavourable. Affections of the brain and its membranes, angina laryngea, and pseudo-membranous bronchitis, may also occasion death, which usually takes place about the eighth or ninth day of invasion.

The favourable signs are, regularity in the progress of the disease; the gastro-pulmonary inflammation, and febrile action being slight; general moisture of the skin after the development of the exanthema; the equal distribution of the spots over the face, trunk, limbs, &c.

§ 41. (T.) When the accompanying gastropulmonary inflammation is but slight, rubeola runs easily and regularly through its course, and the treatment is most simple. To place the patient in a mild temperature; to protect him sufficiently from cold, without keeping him inconveniently hot; to keep him on spare diet, and administer tepid and slightly diaphoretic drinks; to prescribe some smooth mucilaginous potion for the cough when troublesome, or the inspiration of an emol-

lient vapour, which will at the same time diminish the coryza and sore throat; and lastly, to screen the eyes from a too vivid light, are, in general, all that is necessary to be done in this affection.

All inflammations which may precede, accompany, or follow rubeola when intense, are to be treated as if the exanthema was not present. The application of leeches to the epigastrium or anterior part of the neck, in concomitant cases of gastro-enteritis or laryngitis, or bleeding from the arm, if peripneumony prevails, is observed, even in children, to be followed by great amelioration of the symptoms, or by the development of the eruption when it has not yet declared itself, or has suddenly disappeared. Bleeding may be indifferently employed in all stages of the disease. The presence of the menstrual flux should not prevent the opening of a vein, when oppression and cough require it. In very young children the application of leeches to the superior part of the chest is commonly preferable to general bleeding, and should be repeated as often as the symptoms indicate it. In children under five years of age phlebotomy is not indicated, unless in cases of sudden oppression and suffocation, or of very intense peripneumony.

The oppression, anxiety, palpitation, &c. observed on the third, fourth, or fifth day of rubeola, require blood-letting only when these symptoms depend on acute pneumonia or bronchitis, which may be determined by auscultation and percussion. In all other cases bleeding may be injurious, by rendering the eruption more tardy, and convalescence protracted. Less active practitioners, who abstain from employing these means, usually see the oppressive and difficult respiration relieved by the appearance of the exanthema. This *oppressed respiration* is common to several phlegmasiæ produced by miasmatic poisoning, and must not ordinarily be looked upon as indicating blood-letting.* I should add, that general or local bleeding, carried to syncope by Rhazes, employed with more caution by Mead, Selle, &c. has not so marked a beneficial influence on the gastro-pulmonary inflam-

* The author here remarks, that "the citation of cases will give a more perfect idea, than any general description can, of the different varieties of rubeola." However just this observation, still, in the translation of a work which has been rendered into English on account of its superior classification, and scientific description of cutaneous diseases in general, it has been thought that the utility of transcribing cases would not compensate for the additional expense and bulk which so doing would have entailed on the book.—T.

mation of measles, as on phlegmasiæ of the same organs produced by cold or other causes.

If the eruption suddenly disappears, it must be determined whether this is caused by the development, or sudden increase of some internal inflammation, or whether it has been produced by the impression of cold. If the former, the inflammation should be at once subdued; if the latter, we should place the patient in a tepid or vapour bath. In either case, sometimes sinapisms or blisters are applied to the legs; but these means should never be employed when there is much fever, without previously practising blood-letting. They are more generally useful in the complication of measles with pleurisy, after bleeding has been had recourse to once or oftener.

When the spots of rubeola are pale or livid, the pulse weak, and the skin cool, tonics, such as bark, camphor, &c. are generally advised, suspending their use when a suitable reaction has been obtained. This treatment seems to me applicable to a very few cases only, after the abuse of blood-letting, or considerable hæmorrhage. Most frequently the pale or livid spots, petechiæ, prostration, and all the symptoms of adynamia, are the evident result of very intense thoracic and abdominal inflammation, in which case the antiphlogistic treatment is more sure and rational, although it is most usually avoided.

§ 42. The practice of aspersion with cold water should generally be avoided, even though the frame be robust and capable of reaction. Emetics appear to me equally objectionable. Administered the second or third day of the disease, they sometimes diminish the symptoms produced by inflammation of the bronchiæ, but they augment the irritation of the stomach and bowels. Recourse may be had to them, perhaps, after bleeding, in the complication of croup with measles. Opiates and anodynes are rarely useful. Opium even sometimes produces increase of heat and watchfulness.

During convalescence spontaneous temporary diarrhœa often favours the cure of thoracic inflammation. Some practitioners advise this proceeding of nature to be imitated by means of purgatives; but much tact is required to know when to stop these derivative gastro-intestinal irritations. It is dangerous to provoke them by too exciting medicines or diet; and, in leaving them to themselves when they exist, we are often exposed to the mortification of seeing our patient perish, from the effects of very obstinate chronic cæco-colites.

§ 43. The complications of rubeola with inflammation of

the gastro-pulmonary tissue, with pneumonia, and pleurisy, may themselves also be allied with more or less grave affections of the brain or its membranes.

§ 44. Rubeola may be also complicated with other cutaneous inflammations, with erysipelas, pemphigus, scarlatina, variola, &c.

§ 45. F. Home* maintained that inoculation of the blood which exudes from the spots of rubeola superficially scarified, was capable of giving rise to the development of this disease. This experiment, repeated by Themmen and Tellegen, on five children, was only followed by slight local inflammation, which the punctures alone would evidently produce. If the children inoculated by Home (Cases VIII. and IX.) contracted measles, it was probably by infection, or by the mere contact with the others affected by it. The extreme conciseness with which Home reports his cases, renders them in other respects inconclusive. The eruption of the inoculated children not being described, admits of a doubt whether they really contracted measles. I quote these incomplete cases to justify my doubts, and with the hope that the experiment may be repeated, devoid of all uncertainty.

CASE VIII. *Inoculated rubeola.* An infant of seven months, who had an abundant eruption on the head, and a running behind the ears, was inoculated by Home, on the 21st March, 1758. The seventh day from the operation the child sickened, had slight fever, sneezing, and coughed six or seven times. On the 29th the eruption first appeared, and had dried on the 3d of April. The infant shortly recovered.

CASE IX. *Inoculated rubeola.* An infant eighteen months old, of very delicate complexion, was inoculated. After the usual premonitory symptoms, *on the sixth* day the cough and sneezing became more frequent, and several spots appeared in the morning, but only for a time. On *the seventh,* the spots were numerous on the sides and thighs, and were almost confluent. On *the eighth* day purging supervened. On *the ninth,* this symptom had ceased, the spots were gone, and the patient got well.

* F. Home, *Medical Facts and Experiments.* 8vo. London, 1758.

ROSEOLA.*

Syn.—*Roseola.* Willan, *Rose-rash.*

§ 46. The study of the slight and superficial inflammation which, after Willan, I call roseola, possesses any interest only because the disease has been frequently confounded with rubeola and scarlatina. This it was that gave rise to the opinion of some physicians, that the recurrence of measles and scarlatina is frequent.

§ 47. Roseola is a non-contagious, acute exanthema, characterised by rose-coloured patches of divers figures, not prominent, and less strongly marked than those of erythema.

§ 48. (c.) Roseola is confined to neither age nor sex; but it usually attacks children. (*R. infantilis*, Willan.) It is seen at all seasons of the year, but more particularly in summer, (*R. æstiva*, W.) or autumn, (*R. autumnalis.*) It often coincides with slight gastro-intestinal inflammation. It is at times developed after the inoculation of variola, (*R. variolosa*, W.) or towards the ninth or tenth day of regular vaccination (*R. vaccina*, W.) Lastly, it may shew itself during the accession of intermittent fever, or may accompany paroxysms of gastro-intestinal irritations, &c. The causes capable of producing these different maladies have also been reckoned among those of roseola.

§ 49. When roseola is consecutive to gastro-enteritis, it may be preceded for a few days by more or less fever. This disease may extend over the whole surface of the body, or may be confined to certain regions. When partial, it usually appears on the neck, face, and lower limbs. When it afterwards becomes general, it extends over the rest of the body in a day or two.

It shews itself, 1° under the form of small, distinct, but not prominent patches, larger and more irregular than those of rubeola, and separated by numerous intervals, in which the skin preserves its natural colour. 2° under the form of circular, or oval rose-coloured spots, which gradually enlarge till they acquire six or eight lines in diameter. 3° under that of rings, (*R. annulata*, W.), of a rose-colour, with central areas of the natural tint of the skin. These rings are at first of one or two lines diameter, and increase progressively in size, leaving in the centre an uncoloured space. These spots do

* Orlov. (A. J.) *Programma de Rubeolarum et Morbillorum Discrimine.* Kœnisberg, 1785. 4to. Seiler, *Diss. de Morbillos inter et Rubeolas differentia verâ.* 4to. Wettenberg, 1805, Heino, *Journal de Med. de Hufland*, 1812.

not present at first the rose-colour from which the disease derives its name. They are primarily of a brilliant red, but soon assume the deep rose-tint proper to them. On the second day, the exanthema is still bright; is accompanied by slight itching, but with no feeling of smarting, as exists in urticaria. It then becomes less vivid in colour, and may disappear completely by the third day. However, the deeper coloured spots may remain visible till the fourth or fifth day. The duration of the disease never extends beyond this period, at least, when not composed of several successive eruptions.

§ 50. This fugacious inflammation of the skin is often connected with gastro-enteritis, which may either precede, accompany it, or continue after it has disappeared. It may be complicated with vaccina, variola, or exanthematous pharyngeal angina. The sudden disappearance of roseola sometimes coincides with the exacerbation of an internal inflammation, the intenseness of which usually decreases on the reappearance of the eruption.

§ 51. (D.) This disease has been confounded by some pathologists with measles, erythema, scarlatina, and urticaria, from which it should be distinguished. 1° rubeola is contagious, roseola is not. The rose-coloured spots of roseola are larger, more irregular and varied in form, than those of measles. In rubeola, the eruption, usually preceded and accompanied by a gastro-bronchitis, takes place regularly the fourth day of a febrile affection; it is prolonged till the seventh or eighth, and during convalescence gastro-pulmonary inflammations, more or less severe, frequently supervene. In roseola the eruption appears without any obvious cause, or it may seem to depend on the existence of some other cutaneous inflammation, or on phlogosis of the gastro-pulmonary mucous membrane; it rarely endures beyond the fourth or fifth day, and is attended by no danger. 2° In spotted erythema, the inflammation is of a deeper hue and more strongly marked; sometimes extends to the subcutaneous cellular tissue, or degenerates into a chronic affection, a double circumstance never observed in roseola. Again, erythema is at times characterised by one, two, three, or four very extensive patches, while in roseola they are always numerous, and scattered over nearly the whole surface of the body. 3° The tint of scarlatina is much brighter, and more permanent and uniform than that of roseola. In scarlatina the redness disappears on pressure, and takes place again from the circumference towards the centre of the finger-

print, when the pressure is removed; while in roseola, the morbid coloration collects indiscriminately upon all the points which had been subjected to pressure. Scarlatina besides, is followed by desquamation, a phenomenon which is never, or rarely seen after roseola. 4° The spots of urticaria are prominent, temporary, and attended by smarting, or sharp itching, characters not seen in roseola.

§ 52. (P.) The exanthema of roseola is not in itself the least dangerous. When it occurs in the course of acute gastro-enteritis, its appearance, on the contrary, is nearly always followed by a diminution in the severity of the symptoms. This natural revulsion has been considered by some authors as a salutary effort of nature to render the intestinal affection less grave. But there is no foundation for supposing that variola and vaccina are more benign when their development is preceded or attended by that of roseola; my observations, at least, induce me to think differently.

§ 53. (T.) Roseola, and the inflammations of the skin, and mucous membrane which accompany it, should be opposed by antiphlogistic diet and treatment. Tepid baths at 27° or 28° R.,* and diluent drinks, usually effect, in three or four days, the cure of roseola consecutive to slight gastro-intestinal inflammation. When it supervenes after inoculation of vaccina or variola, it disappears spontaneously, and requires no other treatment than what is included in that of these diseases. General or local bleeding is required in very few cases, and only when roseola coincides with intense phlegmasiæ of the cellular tissue, pharynx, stomach, or intestines.

§ 54. The description of *roseola variolosa* (anomalous roseate eruption,) by Dezentoux and Valentia,† and that of *roseola vaccina*, by Pearson,‡ present some rather important peculiarities, which it would be difficult to mix up with a general description of roseola. The complications of roseola with gastro-enteritis and pharyngitis have been feebly and generally described in cases published under the names of *roseola æstiva* and *roseola autumnalis*.

* From 93° to 95° Farenheit.

† Dezoteux et Valentia, *Traité Historique et Pratique de l'Inoculation*. 8vo.

‡ Pearson, *Observations concerning Eruptions, &c.* London Philosophical Magazine, January 1800.

SCARLATINA.*

Syn.—*Scarlatina.* Willan, *Scarlet fever.*

§ 55. Scarlatina is a contagious inflammation, affecting at the same time the mucous membrane of the mouth, pharynx, amygdalæ and stomach, and the skin, at times extending to the subcutaneous cellular tissue. About the second day of the disease the whole surface of the body presents little red *points*, which are soon superseded by large patches of a deep *scarlet colour*, serrated at their edges, which become confluent, and terminate by desquamation towards the fifth or sixth day.

§ 56. (s.) This exanthema and the accompanying inflammation of the larynx and stomach, may be more or less intense, or complicated with lesions more or less serious. These various conditions are the source of numerous symptomatic phenomena, which may be conveniently considered under three principal forms.

1° In the first, (*scarlatina simplex*, Willan,) the precursory symptoms of the exanthema are, general weakness, nausea, and temporary shiverings, succeeded by heat and considerable thirst. On the second day of the invasion, which corresponds to the fifth or sixth of infection, the little *points* at first of a light-red, then becoming deeper, appear in great numbers on the face, neck, and chest, separated by interstices, in which the skin preserves its natural tint. In the course of twenty-four hours, like spots are observed over the whole body, as well as on the lips, tongue, palate, and pharynx. On the third day, most of the interstices which had been left are succeeded by large dotted patches, serrated at their edges. The eruption extends over the cheeks, limbs, and around the fingers, and assumes the scarlet hue characteristic of it. Some accidental papules are ordinarily developed, at the same time, on the hands, chest, and limbs. The skin, much hotter than in other exanthemata, is burning, pruriginous, tense, dry, and tender under the touch. It is smooth where the inflammation consists of simple sanguineous injection, but on some points it is rugous, like goose-skin, owing to the accidental development of papulous or vesiculous elevations.

On the trunk, the exanthema of scarlatina, rarely general, forms several large patches, arborescent, dotted, and varying much in form and appearance. On the groins and buttocks,

* Withering *on the Scarlet Fever and Sore Throat.* London, 1779.—Willan, *A Treatise on Scarlatina.* London, 1815. 4to.

and in the folds of the joints, the scarlet is deeper in colour and more permanent than on other regions. This eruption, not so bright in the morning as during the night, always becomes of a deeper tint in the evening, particularly on the third and fourth days. The general appearance then is, to use Huxham's words, as if the body had been rubbed over with raspberry juice, or red paint. On the fifth day the exanthema begins to grow pale, the interstices between the patches get larger, and the scarlet colour becomes less vivid. About this time slight desquamation takes place on the neck, temples, and chest. By the sixth, the characters of the eruption are beginning to be indistinct. On the eighth and ninth days, large epidermic lamellæ become detached from the surface of the hands, feet, and different regions of the body.

During the eruption the pulse is commonly full and frequent; the tongue is covered with a creamy coat, through which we can sometimes distinguish the red colour of the papillæ. The edges of this organ are of a more or less vivid red colour. The pharynx presents an erythematous tint, and the amygdalæ are slightly tumid. The face is bloated; the eyes are sometimes red, brilliant, and humid. Sleep is disturbed, or troubled by dreams. These general symptoms continue more or less intensely for from three to seven days. The inflammation of the pharynx subsides at the same time as that of the skin. The tongue sheds its epidermis, and its surface is of a bright-red colour, which we should avoid the error of attributing to inflammation of the stomach.

§ 57. 2° The fever and exanthema may be more considerable, the inflammation of the throat also more intense, terminating by a creamy or pultaceous exudation, (*scarlatina anginosa*, W.)* A rough sensation of stiffness in the muscles of the neck and inferior maxilla often comes on at the commencement of this second form of the disease. On the second day the pharynx is inflamed, the voice harsh, deglutition difficult and painful; the mucous membrane of the mouth and pharynx is of a vivid red, like the external exanthema; the swelling of the amygdalæ is frequently very considerable. A few days after the invasion, and very often the following day, the anterior pillars of the velum palati, the amygdalæ and pharynx, pour out a thick, viscid fluid, or throw off flakes of

* G. Pistollet, *Dissert sur la Scarlatine Anginense que a régné Epidémiquement à Langres, en* 1801. 8vo. Paris.—Lanthiez, *Dissert sur la Scarlatine qui a régné Epidémiquement à Baralle, en* 1819. 4to. Paris.

a pultaceous matter, greyish or yellowish, white, or caseous, analogous to that remarked in some amygdalites. These exudations varying in colour and consistence, are often detached in masses, or in very distinct crusts resembling pieces of hog-skin; they sometimes are soft, and may be furrowed with a hard body, and they may be raised by the fingers without giving pain. These pultaceous or caseous productions are reproduced the day after removal; they often extend to the lateral parts of the pharynx, and occasionally as far as the œsophagus. I do not know that they have ever been observed, after death, in the larynx or trachea. Planchon has called them *aphthous dirt* or *crusts*. Fothergill and Huxham looked upon them as *ulcers* or *eschars*. When the tonsils are inordinately swelled and bleed, these exudations are sometimes brown or black, and have then more the aspect of certain ulcers; the breath often contracts a fœtid odour, particularly when scarlatina is complicated with gastro-intestinal inflammation. On examining it with more attention, we find that this white, greyish, or black pultaceous matter, is easily detached from the surface of the amygdalæ and mucous membrane of the pharynx, but never in laminæ, as in *coriaceous* angina. The inflamed parts, when cleansed by means of drinks and gargles, show no loss of substance nor ulceration, a two-fold circumstance which takes place in gangrenous angina. During the second, third, and fourth days, scarlatina *anginosa* is commonly attended by symptoms of gastro-enteritis, and more rarely by those of coryza, inflammation of the larynx, and of the bronchia. The tongue is of a bright-red, there is nausea, vomiting, diarrhœa, or constipation; cough without expectoration; sneezing, guttural voice; full, frequent, vibrating, and hard pulse; nasal hæmorrhage. The functional derangement of the respiratory organs is, generally, less intense than in rubeola. All the symptoms are aggravated towards evening. The eruption does not usually appear so early as in the simple form of the disease. It is frequently not observed till the third day, and does not so constantly extend over the whole body. It consists of patches of a scarlet or vinous tint, distributed over the back, flanks, neck, chest, and limbs. It is sometimes entirely effaced the day after its appearance, and is again developed at a period more or less short. Most commonly, this variety of cutaneous inflammation is attended with very marked tumefaction of the subcutaneous cellular tissue, particularly of the face and fingers, the flexion and extension of

which is very difficult. Lastly, the entire duration of the exanthema is longer than in simple scarlet fever, and its mode of desquamation not so regular.

§ 58. 3° Scarlatina sometimes presents itself under a still more frightful form. This is occasioned by the simultaneous or successive inflammation of the pharynx, skin, stomach, intestines, larynx, and brain. (*Scarlatina maligna.* W.) It comes on like scarlatina anginosa, and in the course of two or three days is characterised by symptoms of extreme gravity. The appearance of the exanthema is tardy, its colour feeble and livid, mixed with petechiæ, and its duration is uncertain. It may disappear and reappear several times. The pulse is small and irregular, the teeth and tongue are covered with brown or black crusts, the eyes are greatly injected and sight confused, the cheeks are of a deep-red colour; there exists also deafness and delirium in adults; coma and agitation in children; fœtid breath, difficult laborious respiration, increased by the thick viscid mucosities deposited in the pharynx; deglutition is difficult or impossible, with constriction of the jaws, and a blackish exudation on the surface of the amygdalæ and neighbouring parts. A continual coma, difficulty of respiration, abundant diarrhœa, and formation of numerous petechiæ, announce approaching death. The few patients who survive these sufferings are then attacked by inflammations of the air-passages and digestive organs, which remain after the cure of the exanthema. Gangrenous eschars are often found over the trochanters and sacrum; they are followed by extensive ulcerations, the difficult cure of which lengthens convalescence. When associated with chronic cæcocolitis, these ulcerations are always dangerous, and sometimes fatal.

§ 59. Whatever the form of scarlatina, the exanthema may be complicated with other inflammations of the skin. On the fourth or fifth day of the eruption, small, semi-globular, vesicles often appear on the temples, scalp, neck, chest, and shoulders, containing a pearly transparent fluid. This liquid is soon absorbed, or else effused on the surface of the skin, after the rupture of the epidermis. The complication of scarlet fever with measles, erysipelas, &c., or with pustulous inflammations, is more rare. During convalescence, and eight or ten days after the disappearance of the exanthema, œdema of the face or lower limbs is frequently observed. This dropsy occurs more particularly during winter, and in children after

exposure to cold.* It is announced by a feeling of lassitude, languor, low spirits, and distaste for food; by insomnolency, and scarcity of urine, which is brown or blackish. Then, the face, feet, legs, and subsequently the whole of the subcutaneous cellular tissue, become infiltrated with serosity. Ophthalmies, otitis, bronchitis, enteritis, inflammations of the testicle and parotid glands, in adults; engorgements of the submaxillary and inguinal glands, &c., in children, are also observed, as the sequelæ of scarlatina.

§ 60. (R. A.) When death takes place shortly after the invasion of scarlatina, the reticular body of the skin appears strewed with red or livid spots, or almost entirely injected. No sanguineous injection is distinguished on the inner surface of the dermis. When the patient dies during the period of desquamation, large epidermic lamellæ are detached from the surface of the skin. This membrane putrifies more rapidly in this case than when its tissue has not been the seat of inflammation. This character is common to several exanthemata, and, above all, to erysipelas. The mouth, nasal fossæ, and pharynx, frequently present the redness and alterations proper to *creamy* angina, the leading characters of which have been already indicated. (§ 57.)

When death has been preceded by delirium, coma, or by functional derangement of the digestive or respiratory apparatus, the vessels of the brain are found more or less gorged with blood, the meninges injected or inflamed, and the cerebral ventricles filled with serosity, or unequivocal traces of inflammation are observed in the stomach, intestines, larynx, trachea, bronchia, or lungs. Lastly, serous effusions are sometimes met with in the subcutaneous and intermuscular cellular tissue, &c.; but of all these lesions none are so truly characteristic of scarlatina as those of the skin, pharynx, and stomach.

§ 61. (C.) Scarlatina is contagious, but to a less degree than measles. It principally affects infancy, youth, and more rarely, adult age. It attacks the same individual but once. In two thousand cases, Willan met with but one in which it occurred in the same person twice.† This disease almost

* Vieusseux, *De l'Anasarque à la suite de la Scarlatine.* (*Journ. Med. Chir. Pharm.* 12mo. Vendêm. an x.—Meglin, *Mémoire sur l'Anasarque à la suite de la Fièvre Scarlatine.* (*Journ. Med. Chirur.* Jan. 1811.)

† Bateman says that Dr. Willan, among two thousand cases, never saw the recurrence of the disease, under any of its forms. That it does occasionally recur in individuals is now fully proved, although in what proportion of cases is

always prevails epidemically, and most frequently towards the equinoxes. It is observed during winter, and in atmospheric vicissitudes, or when the temperature is cold, and the air humid and cloudy; and, in other seasons of the year, following abundant rains which have been quickly succeeded by great heat.

All individuals are not in the same degree apt to contract scarlet fever; and all conditions are not equally favourable to its development. Women contract it more easily than men; and some persons, having been exposed in vain for many days to the contagion of the disease, have afterwards had it from merely coming into contact with individuals who have visited those affected by it.

§ 62. (D.) Scarlatina differs from measles, in its premonitory symptoms, by the scarlet tint of its eruption, and by the accompanying inflammation of the pharynx. In rubeola, the patient experiences, three or four days before the eruption, fulness of the head, dry and harsh cough, and the eyes fill with tears. In scarlatina the eyes are ardent and inflamed, and the patient complains of more or less acute pain in the throat. Rubeola is seen, the fourth day of invasion, at first on the upper part of the trunk, extending gradually to the other regions. The exanthema of scarlet fever appears about the second day over the whole body. Rubeola exhibits on the skin little red, distinct, circular or crescent-shaped spots; scarlatina consists of large patches with uneven edges, of a *crab-red* colour, general, and nearly uniform. Rubeola most frequently leaves behind it bronchitis and gastro-enteritis, while scarlatina is most usually succeeded by anasarca. During convalescence, desquamation is much more considerable in scarlet fever than in measles. Scarlatina differs also essentially from roseola, erysipelas, and erythema, as will be seen by consulting the descriptions of these diseases. The accidental development of vesicles can hardly obscure the diagnosis. They are few, and occupy certain regions only in this malady; while, in miliaria, they are scattered over the whole surface of the body. Lastly, the existence of a scarlet exanthema of the skin is sufficient to establish an evident distinction between scarlatina, and the creamy or pultaceous angina of the pharynx, remarked in some epidemics of scarlatina, and designated by Johnson, Withering, and P. Frank, &c.,

not so satisfactorily ascertained. These cases, like those of recurrence of measles, &c., must be looked upon as exceptions to the general rule.—T.

under the improper name of *scarlet fever without eruption.* In this disease, as in measles, the most important part of the diagnosis is to determine the extent and intenseness of the phlegmasiæ attending the exanthema.

§ 63. (P.) Simple scarlatina, in a person who has not recently suffered from disease, is without danger. It is the pharyngeal and gastro-intestinal phlegmasiæ which may precede and accompany the exanthema, the pulmonary and cerebral inflammations which aggravate it at different stages of its development, and the dropsies which sometimes succeed it, alone, that render the prognosis more or less unfavourable, according to their intenseness.

§ 64. (T.) The rules laid down for the treatment of rubeola may be applied to that of scarlatina. We should then combat, by all appropriate measures, the phlegmasiæ which precede, accompany, or follow the eruption, without interfering in its progress.

In the *simple* form, if the irritation of the throat, eyes, pharynx, or stomach, is but slight, it will not be necessary to draw blood. The action of a mild and uniform temperature will expedite the termination of the eruption. Spare diet, pediluvia, diluent and cooling drinks, such as infusion of violets, wild poppies, &c., agreeably acidulated, should be recommended. In scarlatina *anginosa,* bleeding from the arm or foot, the application of leeches to the neck or epigastrium, mild sinapisms to the feet, emollient cataplasms to the throat, mucilaginous drinks, &c., are usually indicated. In scarlatina *maligna,* or, to use a more accurate expression, scarlatina complicated with intense inflammation of the pharynx, stomach, intestines, and bronchia, cerebral congestion, or arachnitis, &c., the antiphlogistic measures should be more active, according to the gravity of these different affections. At the onset, they require bleeding from the foot,* and the application of leeches to the neck, epigastrium, and parts to which the inflammation extends. But we must not carry these bleedings so far as in themselves to become dangerous. Judgment is requisite here, as well as in the treatment of other inflammations. As in rubeola, we may have to recall the eruption by means of baths and rubefacients, when it disappears in consequence of the impression of cold and humidity, and to fix it, so to speak, by the use of blisters, when

* There exists rather a prejudice against this practice in England, although it is extremely beneficial in many affections of the head. I have seen it remove obstinate headach, which almost all other measures had failed to relieve.

it disappears and reappears alternately. However, if this irregular course of the exanthema is connected with paroxysms of an internal irritation, as it commonly is, the better way to render the eruption permanent is to subdue the internal phlegmasia.

During convalescence, all necessary precaution should be taken to prevent the formation of anasarca. Above all, the patient should be protected from cold. Tepid baths should be administered, and slight friction exercised, either by dry warm flannels, or cloths impregnated with some aromatic vapour. If dropsy supervenes, we should first determine whether it is the result of inflammation of the cellular tissue, or the consequence of disease of the respiratory organs. In hydrophlegmasiæ of the cellular tissue, attended with pains in the joints, hot skin, full and hard pulse, general and local bleeding must be had recourse to. When anasarca depends on chronic inflammation of the lungs, it is against this affection that our efforts must be directed.

§ 65. Emetics and purgatives always appear to me objectionable in the treatment of scarlatina. Chlorine, administered in the dose of two drachms to eight ounces of water, in the space of twelve hours, recommended by Mr. Bathwaite as a specific remedy, is a dangerous agent, and opposed to the knowledge we have of the inflammatory alterations which accompany the exanthema. Sponging with cold water the surface of the body, and particularly the epigastrium, is sometimes useful when the inflammation and morbid heat of the skin are very intense. I have never ventured to employ ablution in so general a manner as is recommended by Bateman, Withering, Currie, &c.: even when the skin is *burning* and *dry*, Bateman advises the whole surface of the body to be washed with cold water, or vinegar and water. "We do not possess," says he, "any agent, I do not except even bloodletting, which acts on the functions of the animal economy with so much efficacy, certainty, or promptitude, as the application of cold water to the skin, during the great heat of scarlatina. I have had, in a great number of cases, the satisfaction of seeing the symptoms immediately ameliorated, and a sudden change produced in the physiognomy of the patient, by the application of cold lotions to the skin."* When we have recourse to this active

* "We are possessed of no physical agent, as far as my experience has taught me, (not excepting even the use of bloodletting in acute inflammation,) by which the functions of the animal economy are controlled with so much certainty, safety, and promptitude, as by the application of cold water to the skin, under the

measure, so much praised by the English practitioners, it will be better to confine ourselves to applying linen or sponges, saturated with cold water, upon the epigastrium, and frequently changing them. Prompt relief is thus, sometimes, procured. The pulse is diminished in frequency, thirst is lessened, and the tongue becomes humid; if a fresh exacerbation declares itself, we may generally oppose it by the same means. In most cases, however, the application of leeches appears to me preferable. For it is impossible to deny that, although lotions may have their advantages, they are liable also to be very injurious, if bloodletting is neglected when the phlegmasiæ accompanying the exanthema require it to be practised.* I am aware, too, that several enlightened practitioners deprecate the use of cold lotions and aspersions in a disease, the convalescence of which is so frequently attended by anasarca. This, in fact, is supposed to be caused by the inflammation of the skin having been suppressed by the impression of cold and moisture; and, until new experiments prove this supposition to be incorrect, it will be as well to be very cautious in the use of cold aspersion.

§ 66. Dr. Hahnemaun† having asserted that, during an epidemic of scarlatina, infants and adults to whom he had administered the belladonna had been preserved from this disease, and that it had cured many individuals attacked by it, several French and other practitioners, MM. Meglui, Berndt, Muhrbeck, Behr, &c. &c., took upon themselves to verify this assertion, in favour of which they reported fresh cases. M. Berndt advises two grains of the extract of belladonna to be dissolved in an ounce of cinnamon-water, and, during the continuance of the epidemic, two drops of this

augmented heat of scarlatina, and of some other fevers.....It is, in fact, the only *sudorific* and *anodyne* which will not disappoint the expectation of the practitioner under these circumstances." I have had the satisfaction, in numerous instances, of witnessing the immediate improvement of the symptoms, and the rapid change in the countenance of the patient, produced by washing the skin. *Invariably*, in the course of a few minutes, the pulse has been diminished in frequency, the thirst has abated, the tongue has become moist, a general free perspiration has broken forth, the skin has become soft and cool, and the eyes have brightened; and these indications of relief have been speedily followed by a calm and refreshing sleep."—BATEMAN.

* This practice should not lead us to neglect that of bloodletting, when required; neither does Bateman, I apprehend, mean it to supersede this operation, as then it would become dangerous; while, under proper restrictions, (frequently premising bloodletting), it is extremely beneficial.

† Hahnemaun (Samuel), *Hailung und Verhuetung des Scherlachfiebers.* Nuremberg, 8vo. 1801.—Martini (Ernest), *Notice sur l'Emploie de la Belladone contre la Scarlatine*, l'inserée dans les *Arch. Gen. de Med.* tom. v. p. 264 8vo. Paris.

UNIVERSITY OF BRISTOL MEDICINE

solution to be given morning and evening to infants one year old, and to older children two drops or more, according to their age. These experiments should be repeated; for, although isolation may be the best preventive from scarlatina and all contagious diseases, it is not always that it can be put in practice. At all events, in an epidemic of long duration, the daily use of belladonna may be had recourse to without inconvenience. It is enough to hint, that the effects of so powerful a medicine, given even in small doses, should be vigilantly looked to.

§ 67. To give a general idea of all the symptoms, more or less grave, which may be presented in scarlatina, it is as well to divide them into three principal groups, (*S. simplex*, *S. anginosa*, *S. maligna;*) but it should be remarked that the characters of two of these have been founded on facts the analogy of which is far from being complete. For instance, *malignant* scarlatina may derive its character from arachnitis, or intense gastro-enteritis, being present, or from both these affections at the same time, or from the existence of any other visceral inflammation. On the other hand, scarlatina is always more or less *anginous;* at least, this name cannot be denied to those cases in which either amygdalitis, or creamy pharyngeal angina exist, simply, or complicated with gastro-enteritis. Observation alone can rectify these defects, inseparable from general description.

URTICARIA.*

Syn.—*Urticaria: Nettlerash.* Willan, *Purpura urticata; Febris urticata.*

§ 68. Urticaria is a non-contagious exanthematous inflammation, characterised by prominent spots, paler or redder than the surrounding skin, rarely permanent, being reproduced by access, or becoming aggravated in paroxysms. These inflamed spots are the seat of a smarting, or itching, similar to that caused by urtication.

§ 69. (c.) The application to the skin of the leaves of the *urtica dioïca* or of the *urtica ureus*, and also, according to Réaumur, the contact of the fine hairs of some species of caterpillars, may give rise to the development of *urticaria.*

But under this name, or that of *nettle fever*, is usually

* Kock, *Prog. de Febra Urticata.* Lips. 1792.—Heberden, *Of the Nettle-rash.* Medical Transactions, 8vo. London, vol. ii. page 173.

designated an inflammation of the skin, having absolutely the same appearance, externally, as the exanthema produced by the sting of nettles, but from which it differs, in always being allied to some internal affection of more or less consequence.

This symptomatic urticaria prevails more particularly during summer, especially in women, and sanguine, nervous individuals. It often supervenes on indigestion produced by shell fish, muscles,* by mushrooms, the spawn of certain fishes, crabfish, &c. The abuse of the pleasures of the table, the injudicious use of irritating medicines, prolonged moral affections, domestic troubles, dentition, &c. and everything which irritates directly or indirectly the digestive organs, are the common causes of urticaria. It sometimes appears during intermittent fever.

§ 70. (s.) When urticaria coincides with gastro-intestinal inflammation, it may be preceded, for several days, by fever (*Urticaria febrilis*, W.) shivering, cephalalgia, epigastric pain, cramp of the lower extremities, by anxiety, nausea, &c. It then ordinarily shews itself during an exacerbation, which comes on in the evening or during the night. Urticaria is most frequently remittent or intermittent.

At the onset, the patient complains of a general itching, which is soon followed by the appearance of the exanthema. The prominent spots which characterise it are first seen on the superior or lower limbs, and from thence extend over the different regions of the body. The forms and dimensions of the patches are very varied, and have been minutely described by Willan, who extended his nomenclature by giving to each variety a particular denomination. Urticaria shews itself, 1°, under the form of white, or pale-red spots, whitish in the centre, irregular and prominent, surrounded by an areola of a vivid red or crimson colour. These patches may be circular, or longitudinal, like those produced by flagellation. When they are numerous, they sometimes unite so as to present large surfaces, and assume very irregular forms; (*U. conferta*, W.) 2°. Under the form of deep, isolated patches, not so prominent as the preceding, and separated by large interstices in which the skin preserves its natural tint; (*U. subcutanea*, W.) Lastly, these patches may rapidly become very exten-

* Moebring, (P. H. G.) *Epist. quæ Mytulorum quorumdum Zenenum et ab eo natas Papulas Cuticulares, illust.* 4to. Bremæ, 1742.—Gruner, Prog. de Febre Urticata a caneris flaviatilibus et fragaria vescæ fructu, 1774.

sive and prominent; (*U. tuberosa*, W.) The skin appears swollen externally, as in *U. conferta*, and the subcutaneous cellular tissue itself inflamed, as in *U. subcutanea*.

The exanthematous prominent spots of urticaria are the seat of an acute itching, smarting and formication, which has been correctly compared to the sensation produced by the stinging of nettles. This feeling is often augmented during the night, or when the affected parts are exposed to the air. It becomes insupportable when the eruption is developed on the scrotum.

When urticaria is idiopathic, the eruption disappears after some hours' duration, without leaving any traces on the skin. When caused by indigestion from eating muscles, shell-fish, &c., it usually altogether disappears, on the removal of the cause which has excited it. On the other hand, it may continue its attacks for weeks, or even months, at more or less distant epochs, when the development of the eruption has been caused by ague, or by paroxysms or gastro-intestinal inflammation. In this case, urticaria may be exhibited under the biquotidian, quotidian, or tertian type, as the cases collected by Messrs Godard, Golfin, and Planchon prove, which are inserted in the *Journal de Médecine* for 1759 and 1762, and in the LV volume of the *Journal of M. de Sedillot*.

The spots of urticaria are followed by desquamation in rare cases only, when this exanthema has been very intense, long continued, and neglected.

§ 71. (D.) When nettlerash consists only of some white, prominent spots, surrounded by large areolæ, it may be confounded with spotted erythema, were it not for the peculiar smarting sensation, the stinging and itching, which accompanies the former. It is not so easy to distinguish urticaria from roseola. However, the latter does not usually come on in fits; its spots are never white, prominent, or accompanied by the itching so truly characteristic of nettlerash. Urticaria differs from scarlatina and rubeola in many respects. It is still more easy to discriminate between it and the inflamed, isolated, persistive papulæ or tubercles, caused by the stings of certain insects, which are also attended by acute itching. Lastly, there is so little analogy between the exanthema of urticaria and the *vesicles* of miliary fever, or *bullæ* of pemphigus, that I am at a loss to conceive how it can be supposed possible to confound diseases so dissimilar.

§ 72. (P.) Urticaria is not in itself dangerous; but it may coincide with indigestion, fever, or internal inflammations of

a more or less serious nature, &c. These maladies sometimes prove fatal; but the eruption which accompanies them is not at all accessory to this termination. The disappearance of the exanthema may coincide with the development and progress of a gastro-enteritis or hydrocephalus, without our being authorized to conclude, with P. Frank, that these grave diseases result from a retrocession of the urticaria. Again, although some gastro-intestinal inflammations seem to be relieved by the devolopment of nettlerash, many become aggravated in consequence of this cutaneous inflammation.

§ 73. (T.) Idiopathic urticaria is generally treated successfully by alcoholic lotions, or aspersion with cold acidulated water. These may be employed also in the treatment of symptomatic urticaria, to allay the itching and painful smarting which attend the eruption.

When urticaria is the indirect result of temporary and accidental irritation of the digestive organs, or when it appears during indigestion caused by eating muscles, shellfish, &c., emetics should be had recourse to for the expulsion of the offending substances. Under other circumstances, emetics and purgatives are injurious. In recommending generally, tartar emetic, ipecacuanha, cascarilla, cinchona, &c., Bateman has evidently overlooked the frequent coincidence of urticaria with gastro-intestinal inflammation. Instead of imitating the injudicious practice of this author, we should first ascertain whether the development of this eruption has not been favoured by the habitual use of some particular drink or aliment, which it will be important to suspend. In fact, many patients have experienced a prompt mitigation, followed by a complete cure, on abstaining from the use of spirituous liquors, spiced aliments, and submitting to a mild moderate regimen. When urticaria is accompanied by more acute gastro-intestinal inflammation appearing in the paroxysms of this affection, local bloodletting from the epigastrium and margin of the anus, diluent drinks, emollient injections, tepid baths, and more or less severe diet, fulfil in this case a double indication. When nettlerash is intermittent, depending on ague, the exanthema does not require any particular treatment; it yields, with the fever which has produced it, to preparations of cinchona. If a third complication should present itself, that of gastro-enteritis, for example, the latter must be subdued before proceeding to the administration of the bark.

§ 74. Cases published by Messrs Godard, Golfin, and

Plauchon, shew the influence that gastro-intestinal inflammations and intermittent fever have on the production of this exanthema. I will not criticise the theoretical and practical views of these authors, as few persons partake of them at this day; but several incorrect phrases which they have used may be remarked on. One of them designates the *prominent spots* of urticaria, under the names of *flat exanthema, ampullæ, small pustules;* another employs as synonymous the terms *pustules* and *exanthematic eruption;* lastly, the third uses indiscriminately the terms *pustulous eruption, ampullæ,* &c. This want of accuracy in the relation of cases throws a vagueness over general descriptions, renders them false, and sometimes unintelligible.

ERYTHEMA.*

Syn.—*Erythema,* Willan. *Inflammatory Blush. Herpes Erythemöides.*

§ 75. Erythema is a non-contagious exanthema, characterized by red patches, varying from some lines to several inches in diameter, or by a general red tint of the skin. Erythema is the incipient stage of numerous phlegmatiæ of the skin; but, when permanent, it constitutes a distinct morbid state.

§ 76. (c.) The repeated friction of two contiguous surfaces of the body, in individuals of much *embonpoint,* sometimes gives rise to the development of this disease beneath the breasts, in the axillæ, groins, and superior parts of the thighs; the contact of fluor albus, of the gonorrhœal and dysenteric fluxes, that of the urine and fœcal matter *(E. intertrigo);* the application of caloric *(E. combustio),* or its abstraction *(E. pernio);* long-continued walking or riding; decumbency constantly on the same part *(E. paratrima);* the puncture of a needle or an insect *(E. a punctură);* morbid distention of the skin from œdema or anasarca; the neighbourhood of a pustulous or vesiculous inflammation; the existence of a wound or ulcer; are all occasional causes of this superficial phlegmatia *(E. idiopathica).* In infants it is often *symptomatic* of gastro-intestinal irritation.

§ 77. (s.) *Idiopathic* erythema, very seldom attended by fever, or general morbid phenomena, is characterised by one or more red spots, not prominent, the dimensions and forms

* Secourt-Cantilly, *Essais sur l'Erythème et l'Erysipèle,* 4to. Paris, 1804.

of which are very varied. It is developed indiscriminately on all regions of the body. Its appearance may be sudden, or slow and gradual, according as the cause is more or less active. When erythema is acute, it may occasion a pretty smart itching. It usually terminates by resolution in the space of a few hours, or a week at farthest. In the latter case, a slight furfuraceous desquamation takes place from the seat of the eruption. When the epidermis of erythematous spots is accidentally destroyed by friction, or any other cause, as in the *E. intertrigo* of new-born infants, or in that which is sometimes developed on the groins and upper part of the thighs of women having much embonpoint and neglectful of cleanliness, a seropurulent humour, of a faint disagreeable odour, oozes for some days from the surface of the inflamed skin.

§ 78. *Symptomatic* erythema may appear on any region of the body, but is most frequently observed on the face, neck, arms, and chest, in the course of a great many phlegmasiæ, more especially during the paroxysms of acute gastro-enteritis. The morbid phenomena pointed out by some pathologists as precursory of this inflammation are foreign to it, they belong to the various lesions which have provoked its development. It is from not having made this simple observation, that Willan and Bateman have placed among the characters of erythema, symptoms of gastro-intestinal irritation. The form, extent, and morbid shade of redness proper to this exanthema, have been studied and engraved by these two authors with the minutest exactitude, which I should not blame, if they had paid the same scrupulous attention to the examination of the organs, the inflammation of which had excited that of the tegument.

At times (*E. fugax*, Bateman,) symptomatic erythema presents itself under the form of superficial and irregular patches, with increase of the normal heat of the skin, and which disappear, without any sensible desquamation, a short time after their formation. Sometimes (*E. marginatum*, B.) these patches are round, of an animated red, more inflamed towards their circumference, which is well marked, and slightly papulous; they disappear, like the others, after a few days' duration. Lastly, the papulous form may be less obscure (*E. papulatum*, B.); the spots irregular, of a deeper red, and the surface continues unequal and papulous for thirty-six or forty-eight hours. These three varieties of erythema exist without any very remarkable tumefaction of the affected skin. Not so the two

following (*E. tuberculatum*, *E. nodosum*, B.) In one, the inflammatory and symptomatic patches are large, irregular, highly inflamed, prominent, and do not disappear in less than about a week. In the other they are equally large, inflamed, and prominent; but they assume a peculiar oval form, and remain at least nine or ten days before terminating in resolution.

To these varieties of symptomatic erythema, which exhibit so many shades of one of the forms of exanthematous inflammation of the skin, I shall add another, which I have several times observed. This is *general erythema*, which few authors have mentioned, and which has been described under the name of erysipelas, by those who have observed it in its highest degree only. In this variety, the inflammatory redness of the skin is always superficial, without any appreciable swelling of this membrane, or of the subcutaneous cellular tissue, or any development of bullæ or phlyctena on the surface. This red tint of the integuments, unequally distributed over the different regions of the body, sometimes scarcely differs from their natural tint. The skin is dry, with more or less increase of heat. The duration of this variety of erythema is ordinarily about a week. General erythema may be permanent, intermittent, or appear temporarily during the paroxysms of gastro-enteritis, or acute visceral inflammation. It often vanishes in death, and sometimes atits approach. In convalescence, fall of the epidermis, and sometimes of the hair, usually takes place; phenomena which are not frequently observed till one or two weeks after the disappearance of the redness of the skin.

§ 79. *Chronic* erythema is an apyretic, and, at times, very obstinate affection of the skin, for which reason it has been vulgarly named *taches de feu* (fire-spot.) It sometimes coincides with the pustulous inflammation of the face known under the name of *cuperosa*, but still more frequently succeeds it. This variety, subject to habitual returns, presents a red tint, which grows pale under the pressure of the finger. It is accompanied by itching, and a feeling of ardor and tension. There is also a chronic erythema, of the permanent *redness* of the nates of new-born children and those at the breast, produced and kept up by the constant contact of the urine or fæces, and by neglect of cleanliness in the linen.

§ 80. (D.) I shall not dwell on the diagnosis of erythema. It suffices to place its principal characters in opposition to those of other exanthemata, particularly roseola, urticaria,

and erysipelas, to exhibit its distinctive properties. The frequent development of chronic erythema in cuperosa does not justify P. Frank in uniting and confounding two distinct diseases in the same description. The fact is, erythema is an exanthematous inflammation, and cuperosa is characterised by pustules. It is of consequence also, by an attentive examination of the different organs, to discriminate between idiopathic erythema of the nates, margin of the anus, scrotum, and lower limbs of new-born children, produced by mismanagement, and that which often coincides with cœcocolitis acute or chronic, and which has the same external characters. Lastly, similar *rashes* developed on the nates and genital parts of infants, may be regarded as syphilitic by a superficial observer. At this day, however, examples of such errors are happily rare.

§ 81. (P.) Bateman has published erroneous ideas on erythema. What he calls the danger of this disease, should be referred entirely to the internal lesions with which it is generally found associated, and of which he has mistaken the seat and nature. There is no danger attendant on this slight inflammation of the skin. In a few cases only, the points of the skin which have been the seat of erythema, preserve for sometime an increased sensibility.

§ 82. (T.) *Acute* erythema ought to be combated by antiphlogistic measures, whatever its form; when general, bloodletting must be practised. Idiopathic erythema may be cured in a few days by the application of cold lotions frequently renewed, by the employment of tepid baths and emollient ablutions. The pain and morbid secretion of *E. intertrigo* of infants may be diminished by sprinkling the inflamed skin over with powder of the lycopodium. Erythema, produced by distention of the skin in œdema and anasarca, should be treated by emollient lotions and the usual means resorted to in dropsies. Chronic erythema yields to the continued use of tepid baths; but at a particular stage a quicker and surer cure is obtained by the employment of resolvents. Lastly, the lesions which precede or accompany the development of symptomatic erythema, require appropriate treatment. Local bleeding from the epigastrium in gastro-enteritis, from the margin of the anus, and over the arch of the colon, in concomitant cœcocolitis, is freqently of great efficiency.

§ 83. The history of erythema has been scattered through different works on pathology. One of its varieties has been described as a particular disease, by many authors who have

written *ex professo* on the diseases of infants. Another variety has been set down among the *dartres*, in a modern work on *Diseases of the Skin;* a third has been confounded with erysipelas, &c. These varieties all belong, either to *acute* or *chronic*, *idiopathic* or *symptomatic* erythema, and each presents peculiar curative indications.

§ 84. Alibert has published, under the name of *dartre erythémoide*, a case of *erythema*, which, according to its symptoms, has more analogy with a case reported by M. Rapon;* he, however, has not given the treatment.

ERYSIPELAS.†

Syn.—*Erysipelas*, Willan. Syn.—*St. Anthony's Fire.*

§ 85. Erysipelas is a non-contagious exanthematous inflammation, confined to some particular region of the body, characterised by a deep-red tint and tumefaction of the skin, and swelling of the subcutaneous cellular tissue. Erysipelas may terminate by resolution, delitescence, desquamation, suppuration, or gangrene.

§ 86. (c.) The name of *idiopathic erysipelas* has been given to that which is developed under the influence of numerous and various causes, all acting immediately on the skin, of which it will suffice to enumerate,—want of cleanliness, severe and long-continued friction, intense heat, the contact of venomous plants and certain insects, or the humours which escape from them; the application of irritating substances or rancid ointments, punctures made with instruments impregnated with animal fluids in a state of putrefaction; continued wounds of the tegument, slight operations, inoculation of vaccine or variolous lymph, &c. In contradistinction, what is called *sympathetic erysipelas*, is the indirect result of morbid agents, whose action is primarily manifested on other organs connected with the skin by more or less intimate relations. The following have been mentioned as causes of erysipelas. Everything tending to excite inflammation in the stomach or intestines; gross food, putrefied viands, highly spiced condiments, abuse of fermented liquors, all excesses of the table, certain acrid and crude vegetables, such as onions, garlic, &c. To these may be added, morbid actions of the

* Rapon, *Traité de la Méthode Fumigatoire;* tom. ii. p. 27.
† Renauldiu (L. J.) *Dissert. sur l'Erysipile.* 8vo. Paris, 1802.

nervous system, caused by acute affections of the mind, profound grief, violent passion, &c.

Some practitioners have supposed that erysipelas is transmissible from one individual to another, by contagion. This error, recently revived by Weathered and Dr. Wells, owes its rise to several persons exposed to the same influences having been successively or simultaneously attacked by this disease. It is more frequent in spring and autumn than at any other season, and may be habitual or periodical, that is, it may appear at certain more or less distant epochs. Erysipelas prevails most among the female sex, and in those individuals who have a fine skin easily susceptible of external impressions.

§ 87. (s.) Whenever erysipelas has been produced by causes acting through other organs than the skin, particularly through the stomach and intestinal canal, there have been observed, previously to the development of this phlegmasia, several morbid phenomena, looked upon by authors as *precursory signs* of erysipelas, but which are nothing more than symptoms of gastro-intestinal irritation: pain in the epigastrium, nausea, bitter taste, constipation, dirty tongue, lassitude, general uneasiness, temporary shiverings, hardness and frequency of the pulse, &c. Towards the second or third day of this febril state, the existence of which cannot be overlooked, the morbid alterations proper to erysipelas declare themselves. The different modifications which the age of the patient, the extent, intenseness, and depth of the inflammation produce in the disease; its various terminations, and the sympathetic disorders it gives rise to, have been pointed out by pathologists, as *shades*, *degrees*, *species*, or *complications* of this morbid state of the skin. We have adopted as fundamental the three following varieties, according to the anatomical disposition of the parts: *simple*, *phlegmonous*, and *œdematous* erysipelas.

1°. *Simple erysipelas, the true or legitimate of authors.** In its most simple form erysipelas is known by the following characters: slight tumefaction, irregularly circumscribed, of some part of the integuments, generally those of the face and breasts, redness of the skin, more or less vivid, bordering somewhat on a yellow or livid tint, (disappearing under the pressure of the finger, but returning on the removal of it); sharp, shooting pain in the part affected, accompanied by

* Mariande (B. M. B.) *Essai sur l'Eryseple.* 4to. Paris, 1811.

itching and a sense of acrid burning heat. These symptoms, as well as the attendant febrile action, increase in intenseness till the third or fourth day; for about the same period they continue to exist in the same degree. In this stage, small miliary vesicles, like those of eczema, are developed on the inflamed skin, (E. *miliaria* of authors;) these are filled with serosity; frequently, when the inflammation is intense, bullæ or phlyctenæ appear on several points of the erysipelatous part (*E. phlyctenoides*). These bullæ, isolated or confluent, at times resemble in size the ampullæ produced by vesicatories or burns, and may be as large as a pigeon's egg. They burst soon after their appearance, most frequently about the fifth or sixth day of the disease. The humour they contain dries on the skin, forming hard flavescent crusts, which afterwards become brown or blackish. Some of these are several lines in thickness, and compress and irritate the inflamed reticular body.

Resolution is the most favourable termination of this inflammation. We may expect it to terminate in this way, when the symptoms, after continuing at their height for three or four days, begin to diminish in intenseness. We know resolution has taken place, when the redness, pain, heat, and tumefaction, are dissipated; when the epidermis falls off in scales, the crusts become detached, and but a slight thickening remains, which soon disappears. Erysipelas is, of all phlegmasiæ of the tegument, that which has the greatest tendency to terminate by *delitescense*. This sudden removal of erysipelas is followed, either by its appearance on some other region of the body (*ambulant* or *erratic E.*), or by the development of inflammation in a more or less important organ, (*metastatic E.*) Thus we have seen the phlogosis first manifested on the face, then successively on the foot or thigh; again appear momentarily on the face; then succeeded by an intestinal inflammation; and this again, by fatal inflammation of the brain on its membranes.

The general morbid phenomena commonly observed in phlegmasiæ, viz. fever, heat, insomnolency, gastric pain, attend the course and progress of erysipelas, more marked as the inflammation increases, and diminishing in the same ratio as the latter. It is about the seventh or eighth day that this amendment is usually observed, announcing the approach of the resolution of the disease. This termination is sometimes preceded by sediment in the urine, by alvine evacuations, or slight hæmorrhage.

2°. *Phlegmonous erysipelas.** Any part of the skin or subcutaneous cellular tissue, may be the seat of this form of the disease. However, the limbs are most frequently attacked. The numerous shades of this phlegmasia may be divided into three principal degrees, founded on its intenseness and that of the morbid phenomena. *First degree.* At the onset there is anxiety, followed by a pricking and redness of the skin about to become the seat of the disease; then a feeling of heat in the inflamed part, shining, red and vivid tint of the skin, diminishing towards the circumference of the eruption, and disappearing momentarily under the pressure of the finger. The compressed skin regains both its surface and morbid colour more slowly than in simple erysipelas; the affected tegument, raised up by the tumefaction of the subcutaneous cellular tissue, forms a large, hard, solid tumour; the pain and heat become pungent and burning; the lymphatic glands inflame, and a pretty sharp febrile action takes place. If towards the fifth or sixth day, the skin is observed to be less red and tense, and covered with furfuraceous scales, and the subcutaneous cellular tissue to regain its natural state, phlegmonous erysipelas will terminate by resolution. If, on the contrary, the pain becomes pulsatory, we shall not fail to remark signs of suppuration. The abscesses, opened spontaneously or by incision, give exit to pus of a good character, and cicatrise in a few days. *Second degree.* In this case the disease occupies a larger extent; the redness, heat, suffering, and fever, are more acute. From the sixth to the ninth day, if the disease is left to itself, purulent abscesses form beneath the skin, and even between the muscles. On their opening, gangrenous masses of cellular tissue are discharged along with the suppurative matter; sinuses, ulcerations, and fistulous canals are established, furnishing an ichorous fœtid pus. Sometimes the skin, denuded and attenuated, becomes of a grayish colour, and the edges of the ulcerations turn inwards. The mucous membrane of the stomach and intestines sympathetically inflame, and the patient often succumbs, sinking under diarrhœa, and the abundant suppuration of the subcutaneous cellular tissue. *Third degree.* The symptoms are still more intense from the first. In the course of two or three days the inflammation acquires its highest degree; the skin, tense, shining, and brilliant, is of a vivid red, and only

* Patissier, Essai sur l'Erysipèle Phlegmoneux. 4to. Paris, 1815.—Olivet, De l'Erysipèle Phlegmoneux. 4 to. Paris, 1820.

retains for an instant the impression made by the finger. This inflammation provokes that of the most important organs, and the internal affections are increased in number and aggravated. The pulse is hard and frequent; great pain, agitation, insomnolency, delirium, and thirst exist, and the fever increases towards evening. About the fifth or sixth day, the skin assumes a violet tint, loses its sensibility, softens, and is covered with phlyctenæ, filled with a reddish serosity. Sloughs are now formed (*carbunculous, gangrenous E.* of authors,) and at the same time several suppurative boils. In the more fortunate cases the sloughs are detached, and the wound cicatrizes after a more or less considerable time. Most frequently the patient dies from inflammation of the stomach or intestines, the brain or its membranes, death being preceded by the following phenomena: the tongue having a yellowish, greenish, brownish, or even blackish coat, at first humid, then dry and acrid; fuliginous state of the gums and teeth, fœtid breath; hard and frequent pulse; slow and tardy answering of questions put; vertigo, dreams, taciturn delirium, subsultus tendinum, and coma, the precursor of death.

3°. *Œdematous erysipelas.* In this variety, the tumour formed by the skin and subcutaneous cellular tissue rises and extends progressively. Instead of the tension of phlegmonous erysipelas, it offers the resistance of œdema or emphysema; the skin is shining and brilliant, and, when pressed upon by the finger, it retains the impression for a very long time. Bullæ are rarely incidental; and when they are developed, they are usually smaller and less elevated than in simple and phlegmonous erysipelas. They appear from the third to the fifth day, reckoning from the formation of the tumour. They break, and are succeeded by thin, coloured crusts, bearing some remblance to those of confluent small-pox. Of all the terminations of this variety, gangrene is the one most to be dreaded; this is announced by acute pain, red and shining skin, sometimes assuming a livid or leaden hue. The genitals in women, the scrotum in men, and the infiltrated limbs of hydropic persons, are the most usual seats of œdematous erysipelas, which is frequently a consequence of scarifying the skin and cellular tissue, when distended by morbid accumulation of serosity.

§ 88. The different organization of the skin and subcutaneous cellular tissue of the divers regions of the body, renders them more or less apt to be affected by some one of the

morbid states which we are about to describe, and gives rise to modifications, the knowledge of which is important.

1°. *Erysipelas of the face* is, without doubt, the most frequent of all. It commences in the cheeks, eyelids, or lips, and extends, with more or less rapidity, over the half, or more often over the whole, of the face. The lax tissue of the eyelids is tumefied, and as if œdematous; the eyelids closed, the eyes full of tears; the nose is swollen, and nostrils dry; the lips are bloated, and ears red and shining; an abundance of saliva flows from the mouth, which is opened with difficulty; sometimes the inflammation is propagated to the nasal fossæ, pharynx, and even to the cavity of the tympanum. Often, while the epidermis is detached in furfuraceous scales at some points, the phlogosis is kept up in other parts, particularly on the nose and forehead; lastly, erysipelas of the face is, of all varieties, the most subject to delitescence. This troublesome termination is usually preceded or followed by inflammation of the brain and its membranes, the existence of which is announced by profound lethargic heaviness, musing, or furious delirium.

2°. *Erysipelas of the hairy scalp*, possesses almost all the characters of phlegmonous erysipelas. Punctures, contusions, contused wounds, incision of the tegument, are its most common causes. It usually shows itself in the neighbourhood of the point of irritation; but sometimes on the opposite side of the head, from the sixth to the tenth day after the solution of the continuity of the part.

At first there is dull, then acute pain of the head; an œdematous inflammation of the tegument of the cranium, yielding a soft or doughy feel to the touch. The skin, of a pale red, becomes white, and pits under the pressure of the finger, preserving for a long time its impression, regaining very slowly its former colour and surface. The slightest contact renews or increases the suffering, which is attended by more or less considerable febrile action; the tension of the integuments towards the occiput, and the swelling of the pavilion of the ear, render it sometimes nearly impossible to lie on the back or side. If this inflammation is left to itself, the brain becomes affected, irregular shiverings supervene, and the patient falls into a comatose state: the skin, inflamed and attenuated, breaks, and gives issue to a great deal of pus and gangrenous masses of cellular tissue, and of the occipito-frontal aponeurosis. The gangrene hardly ever affects the skin of the cranium, which, according to the judicious remark

of M. Dupuytren, is provided with vessels independent of those which are distributed in the subepicranian laminous tissue. In a few days, new collections of suppurative matter are formed in the most dependent parts, near the erysipelatous abscesses, and fresh masses of cellular tissue and aponeurosis are detached; the suppuration is abundant and fœtid, and the bones of the cranium are frequently denuded: lastly, delirium, diarrhœa, and several other symptoms of cerebral and gastro-intestinal inflammation, announce that the brain and digestive organs are deeply affected at the close of this disease, in itself so dangerous.

3°. *Erysipelas of the breasts,* in women, often presents all the characters of phlegmonous erysipelas in the highest degree. The impression of cold upon these secretory organs a short time after delivery, and the violent irritation from obstinately suckling during a first lying-in, are the most frequent causes of this affection.

4°. *Erysipelas of the umbilical region,* has been principally observed in new-born infants,* in hospitals and houses for foundlings; it sometimes extends to the hypogastric regions and genitals. Gangrene is a frequent termination of this inflammation, which, abandoned to itself, is often fatal. Its development is attributable to violent pulling at the umbilical cord, to bad management, or the insalubrity of some establishments where new-born children are assembled.

5°. *Erysipelas of the scrotum,* and *of the prepuce,* often terminates in gangrene soon after its invasion.

6°. *Erysipelas of the limbs,*† is in general less dangerous than that of the trunk, at least, when it does not affect the whole of the limb; most frequently it is confined to the leg. When developed in the neighbourhood of a joint, it not unfrequently causes inflammation of the synovial membrane. If the irritation extends to the subcutaneous cellular tissue, the dimensions of the part may be singularly enlarged. We have seen the arm acquire nearly the volume of the thigh.

7°. After having indicated the principal peculiarities which erysipelas offers on different regions of the body, we come to the consideration of *general erysipelas.* M. Rénauldin reports having observed a case of it in a woman about fifty years of age. The whole of the skin of the trunk and limbs

* Dugès, *Recherches sur la Maladies des Enfans Nouveau-nés.* 4to. Paris, page 19.

† Letalenet (J. B. F.) *Dissert. sur l'Erysipèle Phlegmoneux des Membres.* 4to. Paris. 1854.

was slightly tumefied, and presented a very intense erysipelatous redness; the face was the part least effected. The patient, who felt as if devoured by flames, was promptly cured by the use of aperients, and frequently repeated tepid baths.

§ 89. (A. R.) The precise seat of simple erysipelas has been the subject of research with several anatomists. It appears that this inflammation affects not only the vascular layer of the skin, but that it extends through the whole thickness of this membrane. The mildest erysipelas even, is always accompanied by inflammation of the subcutaneous cellular tissue. According to M. Ribes, the small veins of the integuments are principally affected, in erysipelas, and the ramusculi of the minute arteries, in a less degree, the lymphatic vessels being still less affected than either the veins or arteries. The inflammatory redness is particularly remarkable on the inner tunic of the capillary veins, which are filled by pus. When erysipelas terminates in gangrene, the sides of these vessels are black, and are torn with the greatest facility. However, these dispositions of the capillaries are not at all constant, for, in several cases which I have dissected, I have not found the least trace of inflammation in these vessels.

Besides these morbid dispositions of the skin, in phlegmonous erysipelas, we meet with the following alterations: pus collects in one or two places, or is infiltrated in the cellular tissue, which in other points is bathed in a sanguinolent serosity. The skin, the subcutaneous cellular tissue, the aponeuroses, periosteum, and superficial bones, may mortify from the effects of this inflammation. It is often attended by several other alterations proper to phlegmasiæ of the brain, stomach, and intestines, constituting one of the most frequent and grave complications of this exanthema.

§ 90. (D.) The inflammation of measles is too general, and too superficial to be mistaken for erysipelas. Scarlatina, even when it does not occupy the whole surface of the skin, differs from erysipelas in being contagious, and always attended by more or less sore throat. The scarlet tint also is very different from the deep-red colour of erysipelas. In erythema, the inflammation, more superficial than in erysipelas, is often seen under the form of spots. Erysipelas, on the contrary, forms a circumscribed tumour of some dimensions, at times having bullæ or vesicles upon it, and always accompanied by tumefaction of the subcutaneous cellular tissue.

Numerous characters distinguish erysipelas from bullous

diseases, and, in particular, from pemphigus. It appears to us impossible to confound this exanthema with phlegmon, furuncle, or anthrax, the descriptions of which may be consulted.

§ 91. (P.) Simple idiopathic erysipelas is not a disease of much moment, unless the skin is inflamed to a considerable extent. The prognosis is not so favourable when this inflammation is developed under the influence of causes acting primarily on the brain or digestive organs. Phlegmonous and œdematous erysipelas are generally attended with more danger; so is erysipelas of the face, scalp, and parietes of the abdomen, which is frequently connected with cerebral and gastric phlegmasiæ. Pleurisy, peripneumony, and sometimes even rheumatism and gout, have been known to be relieved by erysipelas supervening a short time after their invasion; but, at other times, the development of this exanthema, under similar circumstances, has increased the number and intenseness of the morbid phenomena. Regarding erysipelas as a happy effort of nature, in the first case, must we not admit that it has an injurious tendency in the second? The sudden and spontaneous disappearance of erysipelas is always an occurrence of a serious character. It is often caused by the accidental development, or by the progress of another inflammation, more extensive, more intense, or affecting organs more important to life.

§ 92. (T.) When the cause which produces *slight erysipelas* acts directly on the skin, lotions of cold water, or of decoction of althea or elder, or a solution of gum arabic, &c. kept constantly applied, diminishes the sensation of tension which accompanies this morbid state. Greasy applications are always noxious, becoming rancid as soon as they are put in contact with a burning and inflamed skin. These local means, diluent drinks, and antiphlogistic regimen, conduce to a speedy recovery. If the phlogosis is more intense and extensive, and attended by general inflammatory symptoms, such as ardent universal heat, dryness of the mouth and tongue, frequency, hardness, and elevation of the pulse, &c., a vein in the arm, or the saphena, should be immediately opened, and constant ablution of the inflamed part with cold water should be practised. Local bleeding at a certain distance from the inflamed parts, assists and increases the happy effect of general bloodletting, which it may be necessary to repeat. After the employment of the lancet, pediluvia, sinapisms, and blisters, frequently operate a useful determination of blood towards

the lower extremities. In erysipelas of the face, barley-water acidulated with vinegar, lemonade, whey, or some other antiphlogistic drink, should be prescribed.

When simple erysipelas has been preceded by symptoms of inflammation of the stomach or intestines, when it is one of the secondary results of the irritation of these viscera, local bleeding from the epigastrium must be had recourse to. Resolvents must be employed with much caution. In this symptomatic erysipelas, the application to the inflamed skin of cloths soaked in acidulated solutions of lead, copper, &c. has been observed to be followed by the sudden disappearance of the erysipelas, and the development of inflammation in the brain or its membranes.

Simple *ambulatory* erysipelas, presents a peculiar indication. It is necessary to *fix it* by the application of a blister to the place it occupies, or the one on which it was primarily situated, combating, at the same time, inflammation of the viscera or their membranes, if its disappearance has occasioned it.

Intermittent erysipelas, is a very rare disease. Whatever type it assumes, it yields rapidly to the use of cinchona or sulphate of quinine, as prescribed in ague.

In *Phlegmonous erysipelas* of the limbs, after employing the lancet once or oftener, a number of leeches should be applied near the limits of the inflammation, in proportion to its extent and intenseness. To encourage the bleeding, and diminish local irritation, the patient should be placed in a warm bath, and the affected part afterwards covered with emollient and narcotic cataplasms. By these means we often prevent the inflammation from terminating in suppuration and gangrene. If, notwithstanding these measures, or from their being neglected at the proper time, or not carried to a sufficient extent, abscesses form, they should be opened as soon as fluctuation can be distinguished, so as to prevent the formation of purulent ulcers, excoriations of the skin, &c. If gangrene shews itself on one or several points of a limb affected extensively by phlegmonous erysipelas; if the brain, stomach, or intestines become the seat of sympathetic lesions more or less grave, divide the inflamed skin freely, repeat the bloodletting, and subdue the inflammation, particularly if gangrene is not yet established. Tonics, antiseptics, cordials, and the decoctions of cinchona, polygola, &c. aggravate the lesions of the brain and digestive organs. Incisions and bleeding will alone arrest the progress of the local affection, which excites and maintains the sympathetic lesions.

In some cases, it is in vain to endeavour to subdue erysipelas of the scalp, by bleeding, diluents, and emollient and resolvent applications. A crucial incision, dividing at the same time the cellular tissue and occipito-frontal aponeurosis, will alone relieve the painful strangulation, occasioned by the raising up and tension of this fibrous membrane. Lint should be placed between the lips of the wound to prevent their reunion, which should not be allowed till the tumefaction has completely subsided. The patient usually experiences relief in the course of twenty-four hours after the incision. We have seen grave symptoms, such as delirium and other characteristics of cerebral irritation, disappear in the same lapse of time. The tegument of the cranium soon becomes less sensitive to the touch, and covered by small scurfy scales. This desquamation is sometimes attended by falling off of the hair. If œdema precedes the inflammation of the skin, *œdematous erysipelas* requires the treatment appropriate for this dropsy; if, on the contrary, the morbid accumulation of serosity in the subcutaneous cellular tissue is manifested at the same time as the exanthema, the treatment of phlegmonous erysipelas is applicable to this latter species.

§ 93. Since Desault, most French pathologists recommend the administration of an emetic at the outset of erysipelas. It produces a salutary effect when this affection has followed wounds of the head, but is dangerous when gastro-enteritis exists, the morbid phenomena of which have been designated collectively under the names of *bilious plethora, intestinal* or *gastric irritation, bilious fever,* &c., though in these cases it has been more especially recommended. Messrs. Patissier and Olivet have published several cases, from the clinic of M. Dupuytren, in favour of the use of blisters applied *loco dolenti,* in phlegmonous erysipelas. I prefer, to this bold practice, confining myself to the employment of bloodletting, general and local. This most surely prevents phlegmonous erysipelas terminating in suppuration and gangrene.

§ 94. The advantages of bloodletting in simple and phlegmonous erysipelas are proved by the practice; but, to be beneficial, this treatment should be carried to a large extent at the commencement of the disease. Employed with too much reserve, or at a period too distant from the invasion of the malady, it prevents neither the ulterior progress of the inflammation of the skin and subcutaneous cellular tissue, nor the fatal termination of the gastro-intestinal and cerebral

phlegmasiæ which precede the development of the erysipelas, or supervene during its course.

BULLOUS INFLAMMATIONS.

Syn.—*Bullæ*, Willan. *Blebs, Phlyctænæ.*

§ 95. Bullous inflammations of the skin are characterised at their outset, or subsequently, by *Bullæ*, *i. e.* by small aqueous transparent tumours, formed by a serous or seropurulent humour, effused between the epidermis and inflamed reticular body.

§ 96. Bullæ are accidentally developed in several phlegmasiæ of the skin, particularly in burns and erysipelas. Some other inflammations are constantly seen under this form: these are, ampullæ, vesication, pemphigus, rupia, and zona.

Among these diseases, there are but three to which pathologists have unanimously accorded the bullous form, (ampulla, vesication, and pemphigus.) Rupia is ranged among the *vesiculæ* by Bateman; yet this pathologist allows that rupia is characterised at its commencement by large vesicles or small bullæ *(little vesications.)* As *bullæ* and *vesicles* really differ from each other only in size, I prefer classing rupia among the bullous inflammations; this malady more nearly approaching to zona and pemphigus, than psora, miliaria, and the other vesiculous diseases. Willan and Bateman place zona also among the *vesiculæ*. It is true that this inflammation at first shews itself under the form of vesicles. But some of them very soon become true bullæ, and these again are very marked when zona has arrived at its complete development. Zona is then a *vesiculo-bullous* disease, which seems destined to form an intermediate link between the bullous and vesiculous classes, in either of which it may with equal propriety be placed.

§ 97. (s.) A more or less vivid erythematous spot always precedes the formation of bullæ. The time they take in arriving at their full development is very variable. Their formation may be almost instantaneous, or they may be developed in a slow and progressive manner. They most frequently contain a serous transparent *humour*, but it is sometimes seropurulent or sanguinolent. It may remain accumulated for a long time under the epidermis, where it is hard and resisting, such as on the palms of the hands, soles of the feet, &c., or it may be quickly effused on the surface of the skin,

when the bullæ are situated on the eyelids, cheeks, lips, &c. This humour often dries under the form of crusts, more or less solid and thick. The skin under these crusts is either covered by a new epidermis, or becomes the seat of an ulceration more or less deep, the cure of which may require several weeks.

§ 98. (c.) Bullæ are sometimes produced directly by the application of cantharides or of hot water to the skin, or by distention of this membrane, as in certain œdema. Bullæ always indicate a higher degree of irritation than that productive of erythema. None of the bullous inflammations are contagious. The causes of zona, rupia, and pemphigus, are most frequently obscure, those of ampullæ and vesication are easily detected.

§ 99. (d.) Bullous inflammations cannot be confounded with the exanthemata. (§ 24.) They have, on the contrary, much analogy, in an anatomical point of view, with vesiculous phlegmasiæ, from which they differ however, bullæ being much larger than vesicles.

The diagnosis of bullous inflammations, necessarily uncertain when the bullæ are not fully developed, or when there is on the skin only the erythematous appearance which precedes the formation of phlyctenæ, may be equally obscure after the bullæ have broken, dried, and are succeeded by crusts of various thickness, or by superficial ulcerations. This uncertainty can be obviated only by accurate examination of the state of the skin which has preceded the formation of the crusts or ulceration, or the minute study of the form, disposition, and dimensions, of the alterations consecutive to the different kinds of bullæ. Two of the bullous inflammations, pemphigus and zona, are often coincident with phlegmasiæ of the gastro-pulmonary mucous membrane. All of these may be complicated with more or less serious lesions.

§ 100. (p.) Bullous diseases are, in general, less dangerous when the bullæ are small, few, and not much inflamed ; when the serosity is neither purulent, nor sanguinolent, and when the concomitant lesions are not very numerous or intense.

§ 101. (t.) The principles which have directed us in the treatment of exanthemata, (§ 30,) are applicable to that of bullous diseases. However, the latter do not so often require bloodletting as the former.

VESICATION.*

Syn.—*Blister, vesicatory.*

§ 102. The name of *vesication* has been given to the artificial inflammation produced by the application of cantharides to the skin. This phlegmasiæ is characterised by a large bulla, which is almost constantly followed by the denudation of the inflamed reticular body. This artificial phlegmasia is considered so generally as a remedy, that some surprise may be excited by my treating of it here as a disease of the skin. The pathological study of blisters appears to me of the more importance, as they may give rise to the most serious symptoms, and because they are prescribed in numerous diseases in the least rational manner.

§ 103. (s.) The formation of the bullæ caused by vesicatories is more prompt as the topical application is more active. The serosity effused between the epidermis and inflamed reticular body is lemon-coloured and transparent; more rarely it resembles yellow jelly. After having completely evacuated the serosity of a blister, if we compress the epidermis by appropriate bandages, it will adhere to the skin in the course of twenty-four hours, and can only be separated from it by a new vesication. If, on the contrary, the epidermis is removed, the air coming into contact with the inflamed skin produces vivid pain, which the patient compares to that of burning. If we continue to irritate the mucous body of the skin, which is called *keeping a blister open*, its surface is sometimes covered by a whitish false membrane, which is followed by a cicatrice, if a still more active irritation does not give rise to the formation of pus, the secretion of which is more or less abundant. When the skin is maintained for a long time in this state of inflammation, it becomes spongy and bleeding. The vesications are violaceous and bloody in grave and acute diseases of the viscera. They are covered with tuberculous vegetations, fisured more or less deeply, when they are kept open for a great length of time. They often occasion troublesome itching, pain, and insomnolency, particularly in children.

Blisters may excite painful inflammation of the lymphatic glands of the axilla, groins, or neck, when applied to the arm, thigh, or nucha. The inflammation extends even occasionally to the neighbouring regions, and to the subcutaneous cellular

* Baglivi (Georg.) *Dissert. de Usu et Abusu Vesicantium.* 8vo. London, 1699.

tissue. The application of very large blisters is nearly always followed by a febrile action. Like burns, they may cause sympathetic inflammation of the digestive organs, irritation more or less grave of the brain, or of the nervous system, &c.; their application also, in acute diseases, is always followed by reaction.

According to M. Richard, we quote the remarkable case of intermittent fever, caused by a blister, and each access of which was preceded by acute pain in the inflamed skin.

In children, the absorption of cantharides contained in epispastic ointments applied on inflamed skin, frequently gives rise to the development of cystitis.

Corvisart thinks that the secretion from blistered surfaces may be so abundant as to debilitate a patient. The same opinion prevailed for a long time with regard to extensive burns; but, at this day, it appears that when they are fatal, they are rendered so by the sympathetic development of gastro-intestinal inflammation or cerebral affection.

§ 104. (D.) The bullæ produced by blistering plaisters can only be distinguished from the phlyctenæ of burns, or from pemphigus, by the nature of the agent which has produced them. Vesications, when suppurating, have a great analogy with the superficial ulcerations which succeed other inflammations, bullous or vesiculous.

§ 105. (A. R.) The skin which has been the seat of a blister, may present several distinct alterations. 1° After rupture of the bullæ, the skin is found injected, and *dotted* with red inflamed papillæ. 2° In a state of suppuration, it is covered by thin whitish pseudo-membranes, which cannot be detached without causing some drops of blood to flow. 3° After long-continued suppuration, fungosities are developed, and are succeeded by deep alteration of the dermis. 4° Lastly, after the healing of a blister, the skin sometimes assumes a brown tint deeper than the ordinary patches of chloasma, with which this alteration of the pigment has some analogy; or there are small papulous or tuberculous elevations, pearly granulations, &c.; or cicatrices may form, whiter than the surrounding skin, and seamed by small depressions.

§ 106. (P.) Whenever the development of this artificial inflammation of the skin is followed by the diminution of the symptoms of a primary and more serious phlegmasia, the derivative action of this painful remedy cannot be disputed. But is there so much advantage as has been imagined in co-

vering the chest, abdomen, &c. with blisters, in the treatment of acute or chronic inflammation of the viscera enclosed in these cavities?

§ 107. In therapeutic works will be found the indications for the use of vesicatories, the manner of applying and maintaining them on the skin, and all the rules, from dressing them, &c. I shall therefore consider them here in a pathological point of view only.

§ 108. It is a pretty general opinion, that blisters are of the number of inflammations which it is dangerous to suppress. Yet, when the malady which has called for their application is removed, they may be allowed gradually to cicatrize, dressing them with emollient topicals, or merely abstaining from irritating them. Some writers advise the administration of purgatives afterwards; a precaution more frequently noxious than beneficial. Should morbid vegetations prevent the healing of the skin, they may be cauterized with the Arg. nit.

§ 109. M. Broussais has completely established that blisters employed as revulsives in chronic inflammation of the stomach, have been more frequently injurious than useful. The inflammation of the skin does not remove that of the stomach, and frequently aggravates the sympathetic disorders which the latter has caused. In this case, we are grafting one disease on another; and, under other circumstances, they cause more or less serious inconvenience.

AMPULLA.*

Syn.—Blister, *Campana.*

§ 110. Under the term *ampullæ* are designated small tumours, solitary, or few in number, formed by a serous or seropurulent fluid, effused between the dermis and epidermis. They are commonly observed on the feet and hands, produced by strong pressure, pinching, or rude and repeated friction.

§ 111. (c.) Ampullæ are frequently seen in persons confined to some mechanical work, in which the skin is frequently pressed and rubbed. They are developed on the feet after forced marches in new or tight shoes.

§ 112. (s.) Ampullæ are preceded by a painful swelling of the skin, accompanied by redness and heat. The connection between the epidermis and reticular body is ruptured, and a serous fluid effused between the two membranes. The epi-

* Cloquet (J.) *Art.* Ampoule, *Dictionnaire de Médecine.* 18 vols.

dermis is soon elevated under the form of a rounded bulla, of more or less extent, semi-transparent, and sometimes fluctuating. There is very little, or no sensation, at the surface of ampullæ. When they are seated beneath the nail, the strong, thick, and resisting epidermis is raised in an uniform manner; they are then more difficult to be recognised, and are often only to be distinguished by the round projection which they form, and by the extreme pain and tension of the part. The patient usually limps, and can only walk on the point of the foot affected.

When produced by violent and sudden pressure; when a finger, for example, has been sharply struck, or jammed between two hard bodies, ampullæ are immediately developed. Their serosity is sanguinolent, and they are violaceous,* or of a blackish colour; this is vulgarly called a *pinch*. Left to themselves, ampullæ gradually disappear, the serosity becomes absorbed, or is discharged through an aperture in the epidermis. The spontaneous rupture of ampullæ of the heel is always slow. The contained humour often becomes decomposed, brownish coloured, and very fetid; it escapes at last by holes forming in the macerated epidermis, which is in part destroyed.

§ 113. (D.) Ampullæ cannot be confounded with the bullæ of burns. To discriminate between them, we have only to ascertain the producing cause, when their situation does not sufficiently point out their nature.

§ 114. (T.) In general, it is necessary to make one or more small apertures in ampullæ as soon as they formed, so as to give issue to the contained fluid. When large, it is preferable to make an incision along the whole length of the swelling. If situated under the heel, and neglected, they may be followed by the formation of narrow fistulæ, which discharge a fetid ichorous matter between the dermis and epidermis. Under these circumstances the detached portions of epidermis must be removed with the forceps and scissors, and an emollient poultice applied to the affected part; and the heel must afterwards be enveloped in linen soaked in a solution of acetate of lead. At the end of a few days a new epidermis is formed, and the inflammation subsides.

* Violaceus, Lat.

PEMPHIGUS.*

Syn.—*Pemphigus*, Willan. *Morta. Febris bullosa.*

§ 115. Pemphigus is an inflammation of the skin, principally characterised by one, or several voluminous, yellowish, transparent bullæ, the eruption of which may be simultaneous or successive. After some days' duration, each bulla terminates by effusion of its contained fluid, and the formation of a more or less thick crust, or by superficial ulceration.

§ 116. The different appearances which the age of the patient (*congenital pemphigus*, Lobstein,) (*Pemph. infantilis*, Willan,) the number of the bullæ, (*solitary or confluent pemphigus,*) their mode of appearing, (*simultaneous or successive pemphigus,*) the more or less rapid progress of the inflammation, (*acute or chronic pemphigus,*) or the presence or absence of more or less febrile action, (*pyretic* or *apyretic pemphigus,*) impress on this disease, have been the source of a crowd of distinctions created by pathologists to facilitate the study of pemphigus. I adopt the two following divisions as fundamental: *acute* and *chronic pemphigus.*

§ 117. *Acute* pemphigus (*bullous fever, pemphigoid fever, synochus with vesicles, &c.*) is a rare disease. I have seen only three examples of it. It may be general or partial. It is observed on all regions of the body, but most commonly on the lower limbs, trunk, and face; more rarely, on the sole of the foot, scalp, and genitals.

§ 118. (s.) When the cause of *acute* pemphigus acts directly on the skin, *precursory symptoms* are remarked (*acute idiopathic pemphigus.*) It is always announced by one or more circular or oval red spots, slightly prominent, of some lines or several inches in diameter. These spots have a tint very similar to that of erysipelas. At first of a clear red, they soon become of an obscure colour. Their formation is preceded and accompanied by pain and heat in the affected part. These erythematous spots soon become transformed into *bullæ*. A transparent serosity is deposited between the inflamed reticular body and the epidermis, raising the latter into the form of large ampullæ, which all authors have, with reason, compared to the bullæ produced by the application of boiling water, or blistering plaisters. These bullæ are sometimes developed immediately after the appearance of the erythematous

* Wichmann, *Beitrag zur Keuntniss des Pemphigus.* Erfurt, 1791.—Bunel, *Dissert. sur le Pemphigus.* 4to. Paris, 1811.—Gilibert, *Monog. du Pemphigus.* 8vo. Paris, 1813.

spots, over the whole surface of which they spread rapidly. This circumstance has led some observers to suppose that the bullæ of pemphigus were not preceded by any redness of the skin. Yet, at times, the existence of these spots is so marked, that the bullæ are sometimes surrounded by a red areola, or circular rose-coloured band, proving that the bullæ have not yet spread to the most eccentric parts of the spots. The skin between the bullæ is always healthy. Generally, the larger the extent of surface affected, the greater is the number of bullæ. Sometimes, however, a small number of bullæ are dispersed over the whole surface of the body, while, in other cases, they are, so to speak, collected at a single point. Occasionally, only one large bulla exists, (*pompholix solitarius*, Bateman.) It is announced by a feeling of formication in the part it is about to occupy, and the tumour rapidly acquires such dimensions, that it frequently contains several ounces of serosity. This bulla bursts in the course of forty-eight hours. Frequently, in a day or two after, a second arises near the former one. This may be followed by two or three other large bullæ, developed in the same manner; but then pemphigus usually becomes chronic.

The size of the bullæ in pemphigus varies from that of the lobe of a pea or an almond, to that of a pullet's egg or large blister. At the time of their formation the bullæ are, for the most part, of the same dimensions, which they retain to the last. Arrived at their utmost development, most of them contain a serous, transparent, yellowish, or lemon-coloured fluid, resembling the serosity of blisters. If the inflammation of the skin is very acute, the fluid is purulent; at times, sanguinolent in old people. Far and distended during their progress and duration, which is usually two or three days, the bullæ afterwards die away; they shrivel, and form at the most depending part a sort of small hanging bag, in which the thick seropurulent humour secreted by the inflamed reticular body accumulates. Lastly, most of them break, allowing the contained fluid to escape.

After the rupture of the bullæ, if the epidermis is detached by friction, or in any other way, the reticular body of the skin is exposed, and excoriation takes place, with more or less pain. The secreted humour dries under the form of lamellous crusts, which turn brown as they get old. When these crusts fall, the only appearance remaining on the skin is some patches of an obscure red, at the parts which the bullæ have occupied. The mean duration of each bulla is about seven days; that of

acute pemphigus, from two to three weeks. In acute idiopathic pemphigus, the cutaneous inflammation is not always so intense as to give rise to general symptoms. However, when the eruption of the bullæ is simultaneous and confluent, a febrile action does take place, particularly if the cutaneous inflammation is consecutive to other phlegmasiæ of the skin, as vaccina, wounds, ulcers, &c. The general phenomena are more marked where gastro-intestinal inflammation precedes and accompanies pemphigus *(symptomatic pemphigus.)*

§ 119. *Chronic* pemphigus *(vesicular disease; confluent phlyctenoid dartre,* Alibert; *pompholix diutinus,* Bateman), differs from the preceding by the longer duration of the eruption, which is commonly several months; by the mode of its development, which is always successive; and by the absence of febrile action, at least, in the first stage of the malady.

Chronic pemphigus may exist independently of inflammation of the stomach, or any other affection. It then constitutes an indiopathic inflammation of the skin, in which several bullæ are developed at more or less distant epochs, sometimes for twenty or thirty weeks together. Like acute pemphigus, it may occupy one region of the body, or may extend over its whole surface. The bullæ of chronic pemphigus are more frequently followed by excoriation than those of acute. When these superficial ulcerations are very numerous, the patient sinks from pain and want of sleep. Chronic pemphigus is often preceded and accompanied by chronic inflammation of the gastro-intestinal and genito-urinary mucous membranes. Gastritis frequently attends pemphigus of the *face;* cæco-colitis, vaginitis, and cystitis, are almost always connected with that of the parietes of the *abdomen,* or superior part of the thighs. In these complex cases, the functional disorders of the digestive and urinary organs are allied to the phenomena produced by the cutaneous inflammation. The development of the bullæ is preceded by languor, lassitude, cephalalgia, nausea, dysuria, pains in the limbs, &c.

§ 121. Besides gastro-intestinal inflammations, which are so commonly complicated with pemphigus that they have been regarded as one of the *elements* of this disease, other affections, such as vaccina, psora, peripneumony, dysentery, œdema, inflammation of the vulva and vagina, ophthalmia, &c. may also coincide with pemphigus, and give rise to more or less serious morbid states.

§ 122. (A. R.) The alteration of the skin in pemphigus is absolutely the same as that which takes place in the second

stage of burns, or after the application of a blister. The mucous membrane of the nipple, vulva, lips, and mouth, is sometimes the seat of true bullæ. MM. Robert, Gilibert, and Alibert, say even that the bullæ of pemphigus may be developed in the stomach and intestines, and on other parts of the mucous membrane where the epithelium is very thin. For myself, I have never seen these pretended bullæ, and I am the less disposed to admit their existence, as the facts on which it is founded are so little conclusive. On the contrary, we frequently observe, at the close of chronic pemphigus proving fatal, *redness*, *thickening*, *softening*, *ulceration*, and other *alterations* of the mucous membrane, constituting gastro-enteritis.*

§ 123. (c.) The causes of pemphigus are sometimes evident, frequently obscure. Some, such as want of cleanliness, immersion of the limbs or body in stagnant water, contused wounds, topical stimulants, acute or chronic inflammation of the tegument, vaccina, itch, &c.; act directly on the skin (*idiopathic pemphigus.*) Others act primarily on organs connected more or less intimately with the skin. Thus, among the causes of pemphigus, have been enumerated all those which produce inflammation of the stomach and intestines, bad diet, the habitual use of cheese, brandy, excess of regimen, acute moral affections of long continuance, dentition, &c. (*symptomatic pemphigus.*)

Pemphigus is developed at all seasons, particularly during winter and autumn. It attacks nearly indiscriminately all ages, and both sexes. It is neither epidemic, endemic, nor contagious. Messrs. Gaitskell, Husson, &c., have inoculated with the serous humour of pemphigus, but the punctures quickly disappeared without being followed by the slightest symptom.

§ 124. (d.) When the bullæ are very distinct and intact, pemphigus cannot be confounded with any other disease. In an anatomical point of view, burns and phlyctenæ have some resemblance to partial pemphigus; but the knowledge of the producing cause at once distinguishes them. When a single bulla (*pompholix solitarius*) constitutes pemphigus, if it has no areola, it perfectly resembles the ampulla of a blister. It, in fact, differs from it only in the cause which produces it. There is also much analogy between zona and *acute* partial pemphigus. Yet zona is always a bullous and vesiculous

* Rayer, *Art.* Gastro-enterite, *Dict. de Médecine*, en 18 vols.

disease; that is, the bullæ are intermixed with vesicles. It occupies but one region of the body, around which it forms a band or demizone. In pemphigus, the areola formed by the disc of the erythematous spots often disappears during the development of the bullæ; the contrary takes place in zona, which is also attended by local pain and heat, to a much greater degree than is remarked in pemphigus. In rupia, the bullæ are not so numerous, smaller and flatter, than in this disease. The skin, more deeply inflamed, has a greater tendency to ulcerate; and the crusts formed by the desiccation of the serous sanguinolent humour of the phlyctenæ are thicker and more prominent than those of pemphigus. The bullæ sometimes accidentally developed in erysipelas differ from those of pemphigus by being developed on an uniform red surface, and not being surrounded by an areola; and are not separated from each other by healthy skin.

It is more difficult to establish a well-marked distinction between the *crusts* of pemphigus and those of several other cutaneous phlegmasiæ. In the stage of *desiccation,* pemphigus may be confounded with pustulous diseases, with *erysipelatous* impetigo, &c., if the greatest attention is not exercised in the examination of the crusts, and in taking into account the previous history of the state of the skin.

§ 125. (P.) *Acute* pemphigus, febrile or apyretic, is a serious disease so far only as it is connected with some inflammation of the gastro-pulmonary mucous membrane, or of the brain, lungs, &c. The prognosis is more grave in *chronic* pemphigus. This is always followed, particularly in old persons, by numerous extensive excoriations, causing incessant pain and continued insomnolency. It is often attended by vomiting and colliquative diarrhœa, to which the patient almost always falls a victim.

It has been said that pemphigus consecutive to inflammation of the mucous membrane or viscera, may be salutary, by removing the existing phlegmasia to the skin. These kind of derivations are rare; cutaneous affections are more frequently observed to re-act in an unfavourable manner on the digestive organs.

§ 126 (T.) In *acute* partial pemphigus, when the bullæ are neither very large nor numerous, they may either be left to themselves, or we may give issue to the fluid they contain, by making one or more small punctures through the epidermis. When the eruption of pemphigus is more considerable, we should guard against the removal of the epidermis from the

surface of the bullæ. They should be preserved from friction, and when excoriated, should be dressed with cerate spread on lint, with apertures made in it, as is practised in the treatment of the bullæ of burns. Diluent drinks, vegetable acids, lemonade, and an antiphlogistic regimen, assist the cure. When acute pemphigus is preceded or accompanied by inflammation of the gastro-pulmonary mucous membrane, blood-letting must be practised, leeches applied under the lower jaw, to the epigastrium, or margin of the anus, according to whether the inflammation is seated in the bronchi, mouth, stomach, or large intestines; and we must act against the different affections just as if the cutaneous inflammation did not exist.

§ 127. When *chronic* pemphigus occupies only a small space, it yields, at times, to the use of diluent drinks and tepid baths. Alkaline baths diminish the itching and heat of the skin; but, as they temporarily augment these symptoms at first, they often require to be alternated with tepid baths.

Should chronic pemphigus invade the whole surface, nearly, of the body for several months, and fever and numerous excoriations exist; should the inflammation spread to the mucous membranes, the antiphlogistic treatment must be doubly active. Leeches should be applied round the most inflamed parts; and emollients, gelatinous or oily applications, should be afterwards employed. Emollient baths are useful, but the patient must not be too long in them at a time. If they produce syncope, painful excoriations will inevitably be caused in removing the patient from the bath to his bed. When the patient is too feeble to be plunged into a bath, he should be placed on a waterproof cloth, and the inflamed surfaces covered with compresses, moistened in an emollient narcotic decoction, and frequently renewed; at the same time, the complications must be treated. Lastly, if the inflammation is principally seated in the large intestines and genito-urinary mucous membrane, emollient and narcotic preparations must be prescribed, particularly those containing neither wine nor alcohol. If aqueous gummy drinks cause vomiting and epigastric pain, they must be given by spoonsful only, to allay thirst.

Notwithstanding this rational treatment, it is seldom that patients survive the intense suffering produced by repeated inflammation. However, if we wish to suspend the progress of the inflammation of the mucous membrane and skin, the

patient must be put on milk diet, which may be rendered gradually less rigorous, and at last replaced with more nourishing aliment.

§ 128. Other means have been recommended in the treatment of chronic pemphigus. In old people, an acidulated decoction of bark has been used sometimes with success, when no gastric or intestinal irritation has existed; but the mucous membranes are so rarely intact in chronic pemphigus, that too much caution cannot be used in the employment of this preparation, which has been so long considered as an antidote to debility, whatever its cause. Purgatives are always injurious in chronic pemphigus. If they are contra-indicated when cutaneous phlegmasiæ coincide with inflammatory alterations of the mucous membrane, should we run the risk of provoking these lesions when the membrane is intact, under the vain pretext of reviving a derivative treatment?

§ 129. Monographs, enriched by numerous cases, have the advantage of making known all the modifications of a disease, from the most marked to the most obscure case. With this idea, I cannot too earnestly recommend to the reader the beautiful work of M. Gilbert *on pemphigus*. At the same time, I may add, that he often employs the term *vesicle* for *bulla;* and that the cases he gives as examples of complication of pemphigus with *bilious fever, adynamic fever,* &c., appear to me to be pemphigus, associated with gastro-enteritis and cerebral affection. Lastly, it is to be regretted that a case of chronic pemphigus, remarkable for the rigorous exactitude with which all the symtoms have been noted, had not been rendered more complete by anatomical research. Osiander* has reported four cases of congenital pemphigus.

RUPIA.†

Syn.—*Rupia,* Willan.

§ 130. Rupia is characterised by small bullæ, the bases of which are inflamed. They are not very numerous, but flat, and full of a serous fluid, which becomes thick, puriform, or sanguinolent, and soon dries under the form of blackish, thin, or prominent crusts.

§ 131. (s.) Rupia is commonly developed on the legs, sometimes on the loins or thighs. It shows itself on these parts

* Denkwuerdigkeiten fur dei Heilkunde und Geburts Huelfe, vol. i. p. 583.
† Bateman's *Practical Synopsis of Cutaneous Diseases.* Lond. 8vo. 1819.

by several small, distinct, flat bullæ, with inflamed bases, containing a transparent humour. When these bullæ remain intact, they become turbid, puriform, and are afterwards transformed into more or less thick, chocolate-coloured crusts, (*R. simplex*, Bateman.) If the sero-purulent humour furnished by the inflamed reticular body is very abundant, the crusts become prominent, and at times rapidly acquire an inch in thickness, (*R. prominens*, Bateman.) They resemble a good deal, both in form and colour, the shells of small muscles. In the most simple cases, after a more or less considerable lapse of time, a new epidermis is formed under the crusts; but, for a long time, the small surfaces of the skin, which have been its seat, exhibit a black or livid spot. If the crusts are detached before a cicatrix is formed, new crusts accumulate on the surface of the inflamed reticular body. This, at last ulcerating, has led some pathologists to suppose that the humour of the bullæ is corrosive. If the skin, in this state, is irritated by friction, or stimulating topicals, or by any extraneous body, the inflammation may extend through the whole thickness of this membrane. It softens, and ulcers, called *atonic* or *scrophulous*, form, which are to be cured only by methodical pressure and dressing. The cicatrices are always of a violaceous tint, which they retain for a long time.

If the small bullæ of rupia are opened prematurely, or are torn, the skin excoriates, and no crusts are formed.

§ 132. (c.) This disease usually attacks children of a delicate constitution, or those weakened by previous disease. The scrophulous appear peculiarly liable to it. It is seen most in winter, and among the ill-clothed and badly-lodged or nourished, and particularly at the close of some other cutaneous phlegmasiæ, as variola, ecthyma, &c. I have seen rupia complicated with hemorrhage of the subcutaneous and mucous membranes, (*Purpura hæmorrhagica*, W.)

§ 133. (d.) The small flat bullæ of rupia cannot be confounded with the large prominent bullæ of blisters and pemphigus. The seat and cause of these ampullæ sufficiently distinguish them from rupia. This, again, differs from zona, in never being mixed with small vesicles, nor affecting the peculiar form of zoster. Rupia is not less distinct from other inflammations of the skin, and particularly from ecthyma, with which Willan and Mr. S. Plumbe have confounded it. In its primary form it is *bullous*, while ecthyma is *pustulous*. Again, the base of the pustules of ecthyma is strongly

inflamed; the crusts which are afterwards formed are hard, and as if imbedded in the tissue of the skin: the circumference of the bullæ of rupia does not offer the same induration, and the crusts are much larger and less adherent than those of ecthyma. The excoriations of rupia are distinguished from those consecutive to the bullæ of pemphigus, by not being so large, and having more tendency to ulceration.

§ 134. (P.) Rupia is never, in itself, a serious disease. If its cure is sometimes long, it is because it is frequently developed in individuals who are afflicted with hemorrhage, chronic inflammation of the digestive organs, lungs, &c., and in those suffering from the debilitating effects of calamity.

§ 135. (T.) The general treatment of this disease should have for its object principally to favour nutrition by a good alimentation, and to combat any internal phlegmasiæ that may exist. The bullæ should be opened if they contain serosity. They should be covered with lint, having apertures in it, over which we should apply some charpie, maintaining it in its situation by means of a compress and bandage. After the crusts have fallen, the ulcerated bullæ should be washed with mallow-water, if painful; they may be stimulated with sugared wine, or solution of cream of tartar, when the inflammation appears to be below the degree requisite for the reproduction of a new epidermis, or the formation of a cicatrix.

§ 136. There are scarcely any written cases of rupia in existence. Yet this disease is, perhaps, as frequent as pemphigus. If it is less generally known, it is because the bullæ which characterise it, always few, and soon succeeded by crusts or excoriations, have escaped the observation of pathologists. Not so with the crusts and excoriations which succeed the bullæ of rupia; several authors have mentioned them in the descriptions they have given of *atonic* or *superficial scrophulous ulcers.*

ZONA.*

Syn.—*Herpes Zoster,* Willan. *Zoster. Zona Ignea.*

§ 137. Zona is an acute inflammation of the skin, and most usually appears on the trunk, under the form of a semicircular band, composed of vesicles and inflamed bullæ. This disease really forms a connecting link between bullous and vesiculous inflammations.

* Molinié, *Diss. sur le Zona.* 8vo. Paris, 1803.—Lesénécal, *Diss. sur le Zona.* 4to. 1814.

§ 138. (s.) The appearance of zona, like that of erysipelas, is sometimes preceded by shivering, of longer or shorter duration, by more or less intense cephalalgia, agitation, anxiety, insomnolency, nausea, thirst, loss of appetite, &c. The pulse is accelerated, and the tongue covered by a whitish or yellowish coat, the patient not feeling inclined to follow his ordinary occupation. The day previous to the eruption he complains of a pricking, tension, or burning heat, in the region about to become the seat of the disease. These precursory phenomena are frequently developed only with the cutaneous inflammation, or do not appear until after its complete eruption.

Whatever its seat, zona shows itself under the form of a semicircular band of more or less extent, covering part of the trunk, or of a limb, and is composed of grey or yellowish transparent vesicles and bullæ, surrounded by a red inflamed areola. These vesicles and bullæ are full of serosity. Some are as small as a lentil, others acquire the size of an almond. Although usually distinct from each other, several are so close that they form a sort of bunch; these afterwards join, and become confluent. At the end of five or six days, the humour of the vesicles assumes an opaline tint, becoming seropurulent. If the inflammation is more intense, the vesicles and bullæ contain true pus. They break spontaneously from the second to the fourth day, and a limpid inodorous fluid escapes. The epidermis becomes detached, and the reticular body denuded. The vesicles and bullæ ruptured and deprived of the epidermis, form numerous small inflamed surfaces, which suppurate for some days, similar to blisters. Others dry up without opening, and are transformed into small crusts as the serosity increases in consistence. The crusts turn black, and soon become detached from the skin.

The vesicles and bullæ of zona appear successively. They never produce the intense pain spoken of by a modern pathologist. According as the earlier of them dry, others, but in small number, arise in the intervals, and follow the same course as the former, that is, if they are surrounded by an erythematous areola. After eight days at least, or three or four weeks at most, from the date of the invasion, all the crusts become detached, and the disease commonly leaves no other traces behind than red patches, which gradually disappear. Yet, when the inflammation is very acute, the crusts are yellow, globulous, and much more adherent. Lastly, when the bullæ or vesicles have suppurated, when the sub-

cutaneous cellular tissue has been inflamed, a painful sensation is often left on the region they have occupied, and true cicatrices are formed.

When the eruption terminates, the general symptoms which accompanied its development, such as fever, thirst, cephalalgia, &c., diminish in intenseness, and sometimes entirely cease; but a very acute local pain, like that caused by burns, continues to the end of the malady. This is exasperated, diminished, or increased, in proportion to the rubefaction of the skin.

Zona is most frequently developed on the trunk, and especially on the abdomen. It begins from some point on the median line, extending outwards, and is continued to near the vertebral column, and thus forms a sort of semicircle, or demizone. Zona never becomes a complete circle. Pliny, Turner, Russell, and Tulp, have spoken, it is true, of this disposition of zona; but it has not been supported by cases. It may form three fourths of a circle when it invades a region of small circumference. Thus it sometimes surrounds the neck like a necklace. In other cases zona represents a sort of bracelet, garter, scarf, &c. according to its seat, and the direction it takes. The examples of perpendicular zona, that is, parallel to the axis of a limb, are very rare. However, I have seen this disease form a longitudinal band on the thigh, from the trunk to the knee. In another case it surrounded the scapulo-humeral articulation. When zona is developed on the face, the inflammation sometimes spreads to the mouth, one of the sides of which it also attacks, causing a pretty copious salivation. In ten cases of zona, there were eight in which this vesiculo-bullous disease was developed on the right side, without the cause of this anatomical disposition being known.

It is seldom that zona is met with as a perfectly simple affection; psydraceous pustules may accidentally appear in the midst of the bullæ and vesicles. The lymphatic glands of the axilla and groin are occasionally inflamed in zona of the thorax, or abdomen. Among the internal lesions coinciding with this cutaneous inflammation, there are none more frequent than those of the stomach and intestines. Not only do the *precursory* phenomena of zona, when present, evidently denote lesion of the digestive organs, but the latter continues for several days after the complete development of the eruption. Anorexia, a white, red, or whitish or yellowish dirty coat on the tongue, constipation, diarrhœa, thirst, &c. have

been placed among the symptoms of zona by nearly all pathologists.

§ 139. (A. R.) Zona has its seat in the reticular body of the skin. The inflammation is not so deep-seated as in erysipelas, and rarely extends to the subcutaneous cellular tissue.

§ 140. (C.) The causes of zona are little known. They appear to be the same as those of symptomatic erysipelas. It is more common in hot weather, when the temperature is elevated.

Zona has been attributed to a crowd of imaginary agents: to a degenerated petechial virus, (Zæger;) to vitiated ingesta and humours, and to the suppression of the insensible transpiration, (Lorrey;) to a syphilitic degeneration, (Girtauner;) again to a combustible principle, the explosion of which, by irritating the nervous system, occasions general disturbance of the animal economy, (Hoffmann;) to a specific miasma, (Wichmann;) lastly, Hufeland regards it as produced by the influence of a rheumatic or catarrhal constitution.

§ 141. (D.) Zona has some points of resemblance with pemphigus, with erysipelas when surmounted by bullæ, and particularly, with herpes phlyctenoïdes. It has nothing in common with erysipelas except the functional disorders of the digestive organs, which frequently accompany both. In erysipelas, the tumefaction of the skin is considerable and uniformly developed; the accidental bullæ have no areola. Zona, on the contary, is characterised by vesicles and distinct bullæ surrounded by areola, which extend as the disease advances, and the vesicles and bullæ approach desiccation. In erysipelas, the red colour disappears momentarily under the pressure of the finger. This is less marked in zona. The latter constantly assumes a form quite foreign to the former. In erysipelas complicated with bullæ, the tumefaction of the skin, much greater than in zona, is attended by a puffiness of the subcutaneous cellular tissue. Lastly, erysipelas terminates by general desquamation of the part, while the fall of the crusts in zona is confined to the individual points which the bullæ and vesicles have occupied.

The form of zona is alone sufficient to distinguish it from pemphigus. Zona merely occupies, so to speak, a band of the skin. Pemphigus is characterised by a large solitary bulla, or numerous small ones, covering at the same time different regions of the body, and never having a tendency to form a zone. In zona, the redness forms round each vesicle or bulla an areola, which becomes larger and larger, as the

bullæ approach desiccation. In pemphigus the areolæ are very light; sometimes nearly, or quite, imperceptible, the redness of the skin disappearing as the bullæ extend or dry up. Lastly, the form and smaller volume of the vesicles of herpes phlyctenoïdes, (the only variety which is likely to be confounded with zona,) suffice to distinguish it from the latter.

§ 142. (P.) Zona always terminates favourably. It never runs into any other disease; is seldom followed by subcutaneous abscess, and still more rarely terminates in gangrene. If Pliny the naturalist asserted that zona became dangerous when it completed a circle round the body, his assertion deserves the less credence, because it is never seen in this form. When individuals afflicted with this disease die, death is always caused by some grave complication, which ought to be considered the principal affection.

§ 143. (T.) Rest, antiphlogistic regimen, the use of aqueous drinks, general bleeding, but more frequently local, from the epigastrium and margin of the anus, are the only means to be opposed to the *precursory symptoms* of zona, or rather to the gastro-intestinal inflammations which they indicate. When the eruption appears, the precursory phenomena may decrease in intenseness, or may continue with the same violence for some days, requiring the topical bleeding and emollient clysters to be repeated. General bloodletting should only be employed when zona occupies a large surface, or is complicated with other phlegmasiæ more or less grave.

The inflammation requires only the most ordinary applications. If the surrounding areolæ are very red, inflamed, and painful, leeches may be applied round the edges of the eruption, or near the most irritable parts, and the patient placed in an emollient, narcotic, tepid bath. Warm baths increase the determination to the skin, and the symptoms attending it. Local stimulants undoubtedly prolong the duration of the disease. Emollient topicals rarely assist the cure. Opiate liniments are sometimes useful in soothing the pain and preventing insomnolency. They never cause the suppression of the eruption, as some authors have supposed. Lastly, the inflamed skin must be protected from the contact of the air and the friction of the garments, by means of silk paper imbued with oil or opiate liniment.

§ 144. Not long since, the functional disorders produced by irritation of the stomach and intestines were known, in France, under the name of *gastric disorders, bilious state of the primæ viæ*, &c.; it was then still the custom to give the

patients emetics at the onset of zona, and to terminate convalescence by a purgative; but it was seldom before the end of the third or fourth week that the disease yielded.

VESICULOUS INFLAMMATIONS.

Syn.—*Vesiculæ*, Willan. *Vesicles.*

§ 145. This class of phlegmasiæ is characterised by vesicles, that is, by small serous, transparent elevations, which differ from bullæ only by their smaller volume; they are formed by a drop of serosity effused between the epidermis and inflamed reticular body. This serosity may either be absorbed again, or effused on the surface of the skin, after the rupture of the raised epidermis. Vesicles are sometimes succeeded by superficial excoriations, or replaced by thin, lamellous crusts.

§ 146. Vesiculous inflammations are four in number: herpes, psora, eczema, and miliaria. The vesiculous character of itch, however, has been disputed by Bateman, who places it among the pustulæ. This error has been repeated by M. Biett. On the other hand, Bateman classes vaccina among the *vesiculæ*, also aphtha, rupia, and varicella. Yet vaccina is decidedly a *pustulous* affection. Aphtha is not a disease of the skin; and rupia is a *bullous* disease. With regard to varicella, I admit that, of three or four varieties which this disease offers, designated by the English pathologists as *chicken-pox*, *swine-pox*, *hives*, and *modified small-pox*, one at least, the *chicken-pox*, is really vesiculous; but certainly, the other varieties, particularly *hives*, and *modified small-pox*, are constantly pustulous diseases. By this double character, varicella forms a connecting link between vesiculous and pustulous inflammations. At liberty to place it in either of these groups, I prefer classing it among the pustulous, thus connecting it with variola, of which it may, perhaps, be a modification.

§ 147. Vesicles are accidentally developed also in other diseases; but they are then few in number, and constitute real complications.

§ 148. (s.) The appearance of vesicles on the skin, in itch, is not preceded by any appreciable redness. Redness, on the contrary, is evident in herpes, eczema, and miliaria; it is seen under the form of points, patches, or surfaces of more or less extent, and upon which the vesicles are disseminated. The dimensions of some vesicles are so large in herpes *labialis*,

or herpes *iris*, as to equal the bullæ of rupia. The vesicles of eczema, on the contrary, are at times so small, that they cannot be easily distinguished from lupus. The forms of vesicles are not less various. Thus the vesicles of miliaria are globulous; those of herpes *labialis* large and *flat*, while those of itch are accuminated, &c.

Vesicles again, may be scattered, agglomerated, or disposed in more or less considerable groups. Their eruption is at times simultaneous, sometimes successive. Their duration varies from a few hours to some days.

Vesicles terminate, 1°, by reabsorption of the humour contained, and slight desquamation; 2°, by the transformation of the humour into thin lamellous crusts, under which a new epidermis is usually found; 3°, by excoriation of the skin, which furnishes more or less abundantly a seropurulent secretion at first, and afterwards becomes the seat of desquamation.

In miliaria, the vesicles are capable of terminating in the first manner only. In herpes, they often exhibit the second; and in eczema may present any of them. Attention will be more particularly directed to these circumstances when we treat of the diagnosis of the different vesiculous phlegmasiæ.

§ 149. (c.) Vesiculous phlegmasiæ may be complicated with exanthematous, pustulous, and other inflammations of the skin. Two of them, herpes and miliaria, are almost always associated with internal affections more or less serious.

§ 150. Two vesiculous diseases, psora and miliaria, are contagious. Two others, herpes and eczema, are not so, and their etiology is often very obscure.

§ 151. (d.) Vesiculous, are very distinct from exanthematous inflammations of the skin. They are less so from bullous diseases, yet their distinctive characters are sufficiently marked; for although zona (terminating the series of bullous diseases) and herpes phlyctenoides (commencing the vesiculous series) have numerous striking similarities in the form and aspect of the bullæ and vesicles, yet, on the other hand, the bullæ of pemphigus are very different from the small vesicles of eczema, psora, and miliaria. The characters distinguishing vesicles from pustules, papulæ, tubercles, &c., have been already indicated (§ 5,) and will be ulteriorly explained.

When vesicles are destroyed, the crusts and furfuraceous squamæ which succeed, in some diseases, are more difficult to distinguish from the analogous alterations which are observed at the close of other forms of inflammation. I shall

make known the manner of establishing the diagnosis in these difficult cases, when treating of each inflammation in particular.

§ 152. (P. and T.) Vesiculous phlegmasiæ, as far as regards prognosis and treatment, present but few general characters.

HERPES.

Syn.—*Herpes*, Willan. Syn.—*Tetter*.

With Willan and Bateman, I designate, under the generic term of *herpes*, a class of vesiculous inflammations of the skin, which, resembling each other in their form, differ only in their seat, (*H. labialis; H. preputialis,*) or by the disposition of the vesicles in groups, (*H. phlyctenoïdes,*) or in a ring, (*H. circinnatus,*) or lastly, by the colour of their surrounding edge, (*H. iris.*) In this acceptation, the term *herpes* is not at all synonymous with that of *dartre*, or *tetter*, by which the older pathologists, French and English, have rendered it. It thus represents affections very different from those which Lorry, Turner, Alibert, &c., have classed under the name of *herpes;* but is possessed of accuracy vainly looked for in the nomenclature of these authors.

HERPES PHLYCTENOÏDES.

Syn.—*Herpes Phlyctenoïdes*, Willan. *Herpes Miliaris.*

§ 153. H. phlyctenoïdes is characterised by globulous transparent vesicles, of the size of a millet-seed, which appear in different-sized groups, more or less numerous, on different regions of the body.

§ 154. (S.) This variety of vesiculous inflammation, well described and represented by Bateman, is developed at times exclusively on the forehead, cheeks, neck, and more frequently on the limbs; or it may spread successively to several regions.

A feeling of formication in the parts on which this eruption is about to appear, followed by heat, itching, and the development of red patches, commonly circular, precede for some hours, and sometimes for one or two days, the appearance of the vesicles, which are elevated on the surface of the skin; they are at first about a line in diameter, and the size of a small pearl. They are filled with a colourless or lemon-coloured lymph, and arise under the form of more or less considerable irregular groups, usually composed of a dozen or

fifteen vesicles at most each, not very numerous, but at times succeeded by several similar groups. The tegument preserves its natural tint between the groups, but rarely between the vesicles composing them. The formication and smarting is increased by the warmth of the bed at night. Most of the vesicles increase rapidly in size, some acquiring a pretty large volume. In twenty-four or thirty-six hours after their formation, if the contained fluid escapes, it is found already turbid. The small vesicles soon assume a milky appearance, and the large turn brownish, and become filled with a sanguinolent serosity. From the sixth to the tenth day they all die away, and new groups are developed, if the eruption is successive. The humour of the small vesicles is often absorbed; while the contents of the others is discharged by their rupture, or transformed into yellow or blackish crusts, which usually fall off from the fifteenth to the twentieth day. The skin often continues red on the affected points; and sometimes a sensation of pricking or smarting is felt, similar to that which attends the disappearance of zona. Some weeks after the vesicles are healed, small yellow circular patches still indicate the points which they have occupied.

The development of H. phlyctenoïdes is commonly connected with slight chronic irritation of the digestive organs, characterised by slowness of digestion, thirst, meteorism of the belly, &c. In some cases even, the treatment of this internal affection is of the greater importance.

§ 155. (c.) The causes of this affection, like those of zona, are very obscure (§ 140.)

§ 156. (d.) Herpes phlyctenoïdes cannot be confounded with pemphigus, since the former is a vesiculous, the latter, a bullous inflammation. Two circumstances, however, have thrown some obscurity over the distinctive characters of these two diseases. At first, Alibert described pemphigus under the name of *herpes phlyctenoïdes*, or *dartre phlyctenoïde;* but this is not the only case in which two different affections have been described under the same name; to avoid this error, it is sufficient to be aware of it. On the other hand, the custom of using indiscriminately the words *bullæ* and *phlyctenæ*, ought to have deterred Bateman from employing the epithet *phlyctenoid*, which tends to perpetuate the confusion. The old denomination of *herpes miliaris*, or any other which had regard to the usual size of the vesicles, or to their disposition in groups, had certainly been preferable. When H. phlyctenoïdes is complicated with bullæ, it very much resembles zona. The

latter, indeed, really differs from it only in the singular form it assumes.

§ 157. (P. and T.) Herpes phlyctenoïdes, the danger of which has been greatly exaggerated by some pathologists, rarely occupies an extensive surface. It yields readily to the use of cold baths, emollient and narcotic ointments, diluent drinks, and antiphlogistic diet, without having recourse to bloodletting.

HERPES IRIS.*

Syn.—*Herpes Iris*, Willan. *Rainbow Ringworm.*

§ 158. Herpes iris is characterised by flat vesicles, usually surrounded by four concentric rings of various colours.

§ 159. This rare disease is usually seen on the dorsum of the hand, instep, olecranon, &c. It commences by the appearance of small red circular patches, composed of concentric rings of various shades, which successively acquire from two to eight lines in diameter. In the centre of each of these patches, a yellowish-white flat vesicle soon appears, and is itself surrounded by several smaller ones, disposed in rings. The central vesicle is surrounded, first, by a circle of brown or obscure red; this again, by a second more external, of nearly the same colour as the vesicle; this ring is enclosed by a third of a deep-red; a fourth, or rose-coloured areola, is traced about the seventh, eighth, or ninth day; this is insensibly lost in the natural hue of the skin. From the tenth to the twelfth day all the vesicles break, unless their development has been successive. The contained humour escapes, or dries on the surface under the form of superficial crusts, which become detached at the end of the second week.

Willan, who has not observed this singular variety of vesiculous inflammation, but only the erythematous patches which precede the development of the vesicles, has placed H. iris among the exanthemata. Bateman has since given a more complete description of it, accompanied by a good drawing.

§ 160. (C.) The etiology of herpes *iris* is but little known. This disease is most frequent in infants, sometimes accompanied by *H. labialis.*

§ 161. (D.) This is very distinct from the other varieties of herpes; it is, indeed, the only acute disease of the skin in which vesicles are surrounded by several concentric rings.

* See Bateman's Work.

When the central vesicle is destroyed, and the rings faintly marked, *H. iris* may be confounded with the patches of erythema. It never resembles pemphigus; I believe it scarcely possible to mistake one of these diseases for the other. I have never witnessed such an error.

§ 162. (P. and T.) Herpes *iris* spontaneously heals, sometimes in a week or two. Tepid baths and linseed decoction, and emollient lotions, are sometimes useful. Bloodletting is not called for, unless where *H. iris* coincides with more or less considerable inflammation of one of the divisions of the gastro-pulmonary mucous membrane.

§ 163. Herpes *iris* is a rare disease but little known. D. Marshall Hall has published a well-detailed case, and I myself have given two cases. In one, the central vesicles were very apparent, and the rings well marked; but the patches which preceded them were not seen, the patient not having been submitted to my notice the two first days of the development of the eruption. In the other, the erythematous spots, surmounted by a small crust, and surrounded by concentric rings, some of which at least had become vesiculous, decided the case. This incomplete case appeared interesting also, as showing the difficulty of diagnosis under some circumstances, and will partly explain how Willan, who had not observed the vesicles, was led to class *H. iris* in the exanthemata. This case is remarkable too, from this affection having been associated with a pretty acute gastritis and with *H. labialis.*

HERPES CIRCINNATUS.*

Syn.—*Herpes Circinnatus,* Willan. *Herpes Serpigo, Vesicular Ringworm.*

§ 165. The English practitioners commonly designate this singular variety of vesiculous inflammation under the name of *ringworm.* But this name has been applied to two *pustulous* phlegmasiæ very different from this variety of herpes.

§ 166. *H. circinnatus* is characterised by globulous vesicles, very close together, and disposed in the form of rings, or circular bands. It is seen on the neck, cheeks, arms, or shoulders, under the form of red inflamed patches, circular or oval, from half an inch to two inches in diameter, the development and existence of which is accompanied by itching and a

* Bateman.

sense of formication very unpleasant. These little vesicles, which have a slightly inflamed base, contain a transparent fluid, and are developed at the circumference of the patches, which they surround in the form of a ring, the centre acquiring at the same time a red tint of a deeper cast. From the fourth to the sixth day of the eruption, the central redness of the spots diminishes, the vesicles at the circumference break, or are covered by small blackish crusts, which usually fall off from the tenth to the fifteenth day, a slight desquamation taking place at the middle of the spots. This disease is never attended by any general functional disorder, at least, when not complicated with gastro-enteritis, or any other phlegmasiæ. It may continue for three or four weeks, when the spots and vesicles which characterise it are developed successively on different parts of the body, as I have sometimes seen them.

§ 167. (C.) This disease, more common before the age of puberty than in adult, or old age, being sometimes manifested in several children in the same school or family, has been considered by some authors as contagious; but as it has not been proved by direct experiment that it can be propagated by inoculation, I agree with Bateman, that this simultaneous development may be owing to other causes.

§ 168. (D.) Herpes *circinnatus* being the only disease of the skin in which an erythematous spot is surrounded by an areola of vesicles, its diagnosis is always easily made.

§ 169. (P. and T.) I have already said this slight phlegmasia ordinarily terminates in the space of one or two weeks. Bateman recommends the itching by which it is attended to be soothed by aqueous solutions of the sulphate of zinc, borax, or alum. I have always found the application of cold water, or rags soaked in it, answer the same end.

HERPES LABIALIS.*

Syn.—*Herpes Labialis*, Willan. *Herpes of the Lips.*

§ 170. (S.) Slight local heat, soon followed by a sensation of smarting and tension, precede and accompany the development of the vesicles which characterise herpes *labialis*. These are from two to six lines in diameter. They occupy the external surface of the lips, around which they form a sort of ring, which extends irregularly to the chin, cheeks, alæ of

* Huxham, *De Acre et Morb. Epid.* vol. ii.—Baier, *Diss. de Pustulis Labiorum.* 1709.

the nose. The contained humour, transparent at first, becomes turbid in the course of twenty-four hours, afterwards assumes a yellowish tint, and concludes by taking on a puriform aspect. About the fourth or fifth day of the eruption the vesicles break, the contained fluid escapes, or is transformed into thick blackish crusts, which usually become detached from the eighth to the twelfth day, by which time all appearance of this slight inflammation disappears; it is always attended by more or less tumefaction of the parts affected.

§ 171. (c.) *H. labialis* may be produced directly by the action of certain irritants to the skin of the lips; but more frequently it occurs in the course, and particularly towards the decline, of stomatitis, coryza, angina, gastro-enteritis, or after an accession of intermittent fever. If this peculiarity has not been particularly indicated by authors who have treated of this slight vesiculous affection, still they have all remarked that it is frequently preceded, or accompanied by, aphthæ or vesicles in the mouth, difficulty of deglutition, pain in the epigastrium, nausea, &c.; and that its development has sometimes coincided with the diminution, or cessation, of a more or less grave phlegmasia of the viscera.

§ 172. (D. and P.) *H. labialis* cannot be confounded with any other affection of the lips. It is sometimes a favourable sign in intermittent fevers. (*"Febres in quibus labia ulcerantur fortassis cessant."* Hippoc.)

§ 172. (T.) This affection, in itself of no importance, rarely requires any consideration beyond the treatment of the disease which has caused its development. Yet, when the vesicles are numerous and confluent; when the pain, heat, and tumefaction of the lips is considerable, cold emollient lotions procure ease, which the little importance of the affection often causes to be neglected.

This slight inflammation is generally known, and its study is not possessed of any interest. Several pathologists have considered it merely as a *symptom* common to some acute diseases.

HERPES PREPUTIALIS.*

Syn.—*Herpes Prep.* Willan. *Herpes of the Prepuce.*

§ 174. *H. preputialis* is characterised by groups of small globulous vesicles, which are developed, sometimes on the

* Royston, *History of an Eruptive Disease of the Integuments of the Penis.* (Med. and Phys. Journ. vol. xxiii.)—Kechnie, *Observations upon Herpes of the*

internal, at other times on the external surface of the prepuce, which usually heal in a week or two.

§ 175. *H. preputialis* commences by the appearance of one or several spots, of six or eight lines diameter, circumscribed, and of a rather bright-red colour. They are attended by slight itching, particularly towards the centre, upon which, about the second or fourth day, small vesicles appear, containing a transparent serous fluid ; and, from their extreme tenuity, are of the same colour as the skin on which they are developed. The heat and itching shortly increase, also the size of the vesicles ; and, about the fourth or fifth day, the contained humour becomes turbid, and assumes a puriform aspect. When the eruption is on the inner part of the prepuce, the vesicles frequently break the fourth day. The raised epidermis becomes detached, leaving the inflamed reticular body denuded. Thus is established a superficial ulceration, and its whitish colour and slightly raised edges have been sometimes confounded with syphilitic ulcers. The characters of this affection are less equivocal when the vesicles are developed on the *external* surface of the prepuce. About the fifth or sixth day the contained matter dries, and is transformed into small dry conoid crusts, which become detached from the the tenth to the twelfth day, by which period the healing is completed, unless the parts have been irritated by friction. It is seldom that the inflammation is so intense as to cause sympathetic swelling of the glands of the groin. Mr. Evans, however, has met with examples of this complication ; but the inflammation of the glands did not terminate in suppuration.

§ 176. (c.) Habitual excitation of the organs of generation, the contact of the fluids secreted by the uterus or vagina in a chronic inflamed state, are the causes, the influence of which seems clearest proved. I have seen this affection produced several times in the same individual from these causes. Mr. Pearson supposed it might be occasioned by the previous use of mercurials ; others have thought they have observed it more frequently in subjects who have had one or several attacks of syphilis. Mr. Copeland asserts that it is sometimes symptomatic of inflammation and contraction of the urethra. Mr. Evans and Mr. Plumbe, on the contrary, affirm that its existence is most frequently owing to disorder of the digestive organs. Lastly, all appear to acknowledge

Prepuce. (Edin. Med. and Phys. Journ. vol. vii.)—Evans, *Pathological and Practical Remarks on Ulceration of the Genital Organs*. Lond. 1819, p. 19.

that *H. preputialis* is not contagious. Mr. Evans, it is true, says that one of his friends, having taken lymph from a vesicle of *H. preputialis*, and introduced it beneath the epidermis of the arm, near the part usual for inoculation, it was followed by the development of a vesicle much larger than that which had furnished the inoculated matter; but this experiment has been repeated several times without having the same result; and, according to Mr. Evans himself, this variety of herpes appears to be independent of any specific cause.

§ 177. (D.) The vesicles of *H. preputialis* cannot be confounded with the syphilitic *pustules* and *tubercles* sometimes observed on the prepuce; each of these forms of phlegmasiæ has well-marked external characters. (§ 5.) *Venerola vulgaris* (Evans) is, of all diseases of the organs of generation, that which may most easily be confounded with *H. preputialis*. However, when situated on the exterior of the prepuce, it is at first announced by a solitary pustule, while the latter consists of a group of small vesicles. The thin scaly crusts of *H. preputialis* are very distinct from the thick crusts of *venerala vulgaris*. The diagnosis is not so easy when these affections are met with on the internal surface of the prepuce, and are excoriated. Patients cannot often say whether the inflammation was primarily *visiculous* or *pustulous;* the prepuce may be accidentally inflamed in a case of herpes, rendering the diagnosis uncertain for some days.

§ 178. (P. and T.) *H. preputialis* is not a serious disease, and the cure is always effected in a week or two. When developed on the exterior of the prepuce we are seldom consulted, except when the vesicles have been excoriated or inflamed by the friction of the clothes, or by the application of some irritant. The complaint should be left to itself, for all that is done to cut short its course prolongs its duration. Mr. Evans has known a case in which it continued six weeks, in consequence of the means used to prevent the little ulcerations from being covered by crusts. If the vesicles are situated on the *interior* of the prepuce, and excoriated, the cure is always obtained by placing a little lint between the glands and prepuce, and the use of cold saturnine lotions only.*

§ 179. Of several cases of *H. preputialis*, I noted but one in which inflammation of the lymphatic glands of the groin took place.

* A bit of lint soaked in liq. plumb. acet. diluted and placed between the prepuce and glands, has never failed once (in a great number of cases) of effecting a cure.—T.

§ 180. Similar vesicles to those of *H. preputialis* are sometimes seen on the upper eyelid in certain opthalmiæ; on the concha of the ear, in external otitis; on the vulva, in pregnant women, and those having leucorrhœal discharges.

I had the care of a young workman, aged sixteen, well constituted, who had on the back of both his hands numerous vesicles resembling those of *H. labialis*. Some of these vesicles had dried, others contained a seropurulent humour. This inflammation, which lasted about seven or eight days, had been developed several times in the same person; his employment was colour-grinding, and he had been accustomed to wash his hands in strongly acidulated water, after having rubbed them with black soap.

[This (§ 180,) should have been headed *Herpes auricularis, H. palpebralis, Herpes vulvaris,* &c.]

PSORA.*

Syn.—*Scabies,* Willan. *Pruritus. The Itch.*

§ 181. Itch is a contagious apyretic inflammation, characterised by vesicles slightly elevated above the surface of the skin, constantly accompanied by itching; they are transparent at their summit, contain a viscid serous liquid, and may be developed on any part of the body, but are more particularly observed in the folds of the articulations of the limbs, and in the intervals between the fingers.

§ 182. (s.) When itch has been communicated from one individual to another, after some days a slight itching is felt in the parts that have been most directly exposed to contagion. The itching is increased by the heat of the bed at night, by the use of alcoholic drinks, acrid food, and all causes producing a determination to the skin. Small elevations are soon observed, scarcely surpassing the level of the skin. This eruption takes place in children, usually four or five days after contagion; in adults, not till the eighth, fifteenth, and sometimes even the twentieth day; in old people, and persons affected with chronic diseases, frequently not for one or several months after infection.

The vesicles of itch are first observed on the parts where contact has taken place with the infected; on the hands in tailors, salesmen, &c.; on the buttocks in children at the

* Mourouval, (I. F. J.) *Recherches et Observations sur la Gale, Faites à l'Hôpital St. Louis.* Paris, 1821.—Biett, Art. *Gale, du Dict. de Med.* 18 vols. Paris, 1824.

breast. The elevations have a rose tint in young sanguineous individuals; in valetudinarians they are of the colour of the skin. They spread by degrees to the neighbouring parts. The *vesiculous* character soon shows itself, the small vesicles on their summit being distinctly perceptible.

When the vesicles are not very numerous, the itching is slight, and they preserve their primary form for a long time. If, on the contrary, they rapidly multiply, they approach each other, agglomerate, and the skin between them participates to a certain extent as the inflammation becomes greater. The itching increases, grows more general and insupportable. The vesicles being constantly torn with the nails, the contained viscous fluid escapes, and is soon converted into small, thin, light crusts, but slightly adherent. In some sanguineous and robust individuals, and those given to the use of stimuli, the inflammation attains a much higher degree, the vesicles extend and become so fully developed, as to assume the characters of *pustules*. Left to itself, the itch may invade by degrees nearly the whole surface of the body, and give rise to symptoms and complications of a more or less serious character.

In the summer and spring of meridional climates, in young, sanguineous, and robust subjects, each vesicle runs rapidly through its stages; in the autumn and winter, in northern climates, and in old and debilitated individuals, the progress is slower. The average duration of itch is from twelve to fifteen days, when properly treated. This disease never terminates spontaneously: it may continue through life in a person who neglects to oppose it by appropriate means.

§ 183. Psora may be complicated with other inflammations of the skin, rendering the diagnosis sometimes obscure. Yet, it is seldom that other *vesiculous* inflammations are manifested at the same time as itch. When eczema is complicated with it, it is always after the employment of stimulating lotions, frictions, &c. I have however seen vesicles, similar to those of eczema, and true *bullæ*, developed on the backs and palms of the hands, when they have been the seat of very numerous psoric vesicles. It is almost always with *papulous* inflammations that itch is found complicated. When psora is seated on a great many points of the skin, in a young and robust subject, it often causes the development of lichen, the papulæ of which may be scattered or collected in groups. Prurigo also is sometimes met with in persons who have an old itch; this has led to the supposition that it may *degenerate* into a

papulous affection. If the skin is very greatly irritated, the *pustules* of ecthyma, and even true *furuncles*, may also be associated with itch. Lastly, in some rare cases, the inflammation of the skin caused by this affection, or the cutaneous phlegmasiæ complicated with it, is sufficiently extensive and intense to produce inflammation of the gastro-pulmonary mucous membrane. When disease of the digestive organs or lungs is highly devoloped, or aggravated by imprudent regimen, the vesicles of itch wither, fade away, and soon entirely disappear, (*Retrocession of psora.*)

The progress of psora is scarcely at all modified by scrophula or syphilis. In scurvy, the vesicles assume a livid hue. When very numerous, they are frequently complicated with ecthyma *cachecticum*.

§ 184. (c.) Psora is one of the most common contagious diseases. It is imagined to be communicated by means of an insect (*acarus scabiei*) or by a virus. Yet M. Mouronval has not succeeded in producing it by the rubbing or inoculation of the serosity of the vesicles; and M. Biett, and several other practitioners, have looked in vain for the *acarus* of itch. This disease is met with in all climates, all seasons, all ages, and in all conditions of life; but it most frequently affects individuals plunged in misery, and who neglect personal cleanliness. When found among the rich and affluent, it has almost always been conveyed to them by nurses, wetnurses, or servants. Sailors, soldiers, manufacturers, and prisoners, collected in ships, barracks, workshops, prisons, &c., are frequently its subjects. Psora is neither epidemic nor endemic; it is not by climacteric, or local conditions, that it is propagated in certain countries, but by want of cleanliness.

§ 185. (d.) The maladies most likely to be confounded with itch, are eczema, lichen, prurigo, and ecthyma.

When psora is *simple*, and a number of vesicles are still intact, with a little attention, these elevations are easily distinguished from the papulæ of lichen and prurigo, and from the pustules of ecthyma. They are, in fact, very different. Eczema has a greater analogy with itch, and belongs to the same form of phlegmatia; but they differ in many respects, and in particular by the noncontagiousness of the former, the vesicles of which are of a deeper colour and flatter than those of psora. The diagnosis is more difficult when the vesicles have been destroyed; for though the small, thin, slightly adherent crusts of itch are very distinct from those of ecthyma, which are as if embedded in the skin, and from the

squamous excoriations of chronic eczema, they are less so from the small crusts of prurigo, and those produced by the puncture of a large pin. Lastly, when itch is complicated with other cutaneous affections, it is only by studying minutely the forms of the divers alterations presented by the skin, (*vesicles, papules, pustules, crusts, excoriations,*) that we can arrive at the analysis, and determine the number, nature, and importance of the various lesions which constitute these complex cases.

§ 186. (P.) Psora is never dangerous, except through accidental circumstances foreign to the disease itself. Although this disease may be more benign than is commonly supposed, it is very seldom that its development exercises any beneficial influence on chronic inflammations of the mucous membranes, as some authors have attributed to it.

§ 187. (T.) In simple itch the cure is easily affected, without any internal or preparatory treatment, by different local applications, the usefulness of which has been proved by experience. Under other circumstances, particularly when the itching is considerable; when the vesicles are very numerous and close together; and in ancient psora, accompanied by acute inflammation of the skin, it is advantageous to begin the treatment by one or two bleedings from the arm, the administration of a few baths, and the use of antiphlogistic drinks.

If the treatment by *friction* is adopted, we may use indiscriminately either the sulphur ointment, the ointment of Helmerick,* or the powder of Pyhorel;† either of these usually effect the cure in fifteen days.

About ℥ij of the sulphur ointment should be used in the day, in two frictions over all the parts occupied by the eruption.

When Helmerick's ointment is used, the patient should first have a soap-bath. Then he may have three frictions a day with the ointment of ℥i each before the fire, and conclude with another soap bath, to cleanse the skin.

The method of Pyhorel, is to dilute ℈i of sulphuret of lime in oil, and to rub the skin of the hands night and morning with the mixture.

Frictions are attended with the disadvantage of soiling the

* ℞ Adip. ℥j. Sulphur. ℥ij. Potassæ. ℥i. M. ft. ung. Two frictions, of two ounces each, twice a day.

† ℞ Sulphur. Calc. ʒij. The powder to be placed in the hand, and a small quantity of oil added to it. The parts to be rubbed with this mixture.

linen, and there are many cases in which they may be advantageously superseded by *baths* and *lotions*.

Sulphureous baths, artificial or natural, are peculiarly adapted to children. But this method, which requires, perhaps, twenty baths to effect a cure, is expensive.

Sulphureous lotions* commonly produce a prompt cure. They do not soil the linen, like the ointments, but they occasionally irritate the skin, so as to give rise to the development of eczema, or lichen.

Soapy alcoholic lotions,† although less certain in their effects, may be recommended to rich persons who wish to keep the disease secret, and who have a repugnance to sulphureous preparations.

§ 188. I shall not enter into much detail relative to the treatment of the complications of itch with eczema, prurigo, lichen, ecthyma, &c. Each of these diseases requires its particular treatment, which will be hereafter explained. I may remark, however, that when these complications are met with at the outset of the complaint, they must be combated before we proceed to the employment of the antipsoric remedies, which may aggravate the inflammation of the skin.

This I have seen in several cases, when these complications have been mistaken for, and treated unsuccessfully as, varieties of itch. When they supervene towards the termination of psora, the opposite error must be avoided of regarding them as *modifications* or *deteriorations* of this disease; for it is not without serious consequences that we can employ acute psoric remedies under these circumstances.

Lastly, when a gastro-intestinal phlegmasia is coexistent with itch, all external treatment should be suspended. The treatment must be confined to the employment of tepid baths, and great cleanliness, till the internal inflammation has been subdued.

After the disappearance of the vesicles, the tepid bath should be continued a week or two to prevent their return. The clothes, particularly if woollen, should be disinfected, by exposing them to a current of sulphureous acid gas; the linen should be frequently changed; in a word, every means of cleanliness should be adopted.

§ 189. It would be fastidious, perhaps, to pass in review all the recipes and measures employed against itch. I will

* ℞ Pot. Sulphur. ℥i., ad ℥ij. Ag. flum. bj. An ounce of this solution to be added to ℥iv of warm water for a lotion.

† ℞ Saponis ℥ij. Alcohol. bj. An uncertain application.

remark, however, 1°, that sulphureous fumigations,* used in some hospitals, are attended by no expense, have no odour, and do not injure the linen, but the long duration of the treatment takes away from their advantages; 2°, that mercurial lotions,† the citron ointment, Laubert's ointment, sometimes occasion copious salivation, and disorder the digestive organs; 3°, that the use of Jadelot's liniment has been followed in some cases by *sweats*, *smarting*, *general disorder*, and the development of eczema; 4°, lastly, that numerous other applications, such as hellebore ointment, the iodurets of mercury, &c., are more noxious than beneficial in the treatment of itch.

§ 190. M. Mouronval, in his work, gives a great many cases, which may be read with advantage, exhibiting the different modifications which it behoves us to make in the treatment of itch, according to the age, profession, and temperament of the patient; and according as the case is simple or complicated, &c. He relates also several experiments made with the different preparations, with which the therapeutics of itch is so loaded.

ECZEMA.‡

Syn.—*Eczema*, Willan. *Eczema*. *Heat Eruption.*

§ 191. Eczema is an inflammation of the skin, characterised at its outset by small noncontagious vesicles, very close together, and terminated by the reabsorption of the contained fluid; by superficial excoriations attended by more or less abundant serous exudation; or by a squamous condition of the skin.

§ 192. (s.) Eczema may be confined to some particular part of the body, or it may invade several regions, or even the whole surface nearly. It generally attacks the parts at which the follides are most numerous, the axilla, groin, concha of the ear, &c. When it is general, it spreads at first over the backs of the hands, face, scalp, neck, and fore arms. It shews itself in men occasionally on the internal parts of the thighs, scrotum, and margin of the anus; in women, it is developed at times on the mucous membrane of the nipple, vulva, and rectum.

To facilitate the study of this disease, Bateman admits

* Simply sulphur fumes.
† ℞ Aq. Rosæ bj. Aq. Cologn. ℥i. Hyd. Oxymur. g. viij. ft. Lotio.
‡ Bateman.

three varieties: one, named from its cause (*E. solare*); another, from the erythematous tint which the affected skin assumes (*E. rubrum*); and a third, from the accidental development of psydraceous pustules attending it (*E. impetiginodes.*) The two following divisions appear to me more practical, and therefore more useful: *acute* and *chronic* eczema.

§ 193. *Acute Eczema.* The eruption of *acute* eczema is announced by a sensation of formication in the skin about to be the seat of this affection, and by heat, at times causing a tingling sensation.

1°. In its most simple form (*E. simplex*) the skin on which it is developed preserves its natural tint. The vesicles characteristic of it are very small, very close together, and can scarcely be called inflamed at their base; they contain a minute drop of serosity, at first limpid, then opaque, milky or turbid, and which is ultimately reabsorbed, or dries on the summit of the vesicles after their rupture. In the latter case, which is the more rare, there are observed on the points which the vesicles have occupied very small epidermic prominences, and small crusts of the size of a pin's head. These afterwards become detached from the surface; and often, in the course of one or two weeks, there are no traces of this slight inflammation left; at least, such is the progress of slight eczema, produced by external appreciable causes, such as solar action, topical irritants, &c.

2°. If the inflammation is more acute, the skin becomes red and shining, as in erythema and erysipelas, and at the same time being covered with vesicles (*E. rubrum*, W.) It is usually in the vicinity of hairy parts, as the organs of generation, margin of the anus, &c., that eczema is met with under this form, which is more grave and more frequent than the preceding. The vesicles are small, close, and confluent; transparent, shining, and surrounded by a reddish areola, particularly if the individual affected is young and robust. The contents remain limpid till their rupture. Towards the fifth or sixth day they burst, giving out a reddish serosity, and are then succeeded by small yellowish, lamellous, epidermic productions.

3°. Lastly, the vesicles of eczema may be complicated with small psydraceous pustules (*E. impetiginodes*, W.) The inflammation is then carried to a higher degree, and preceded by a sensation of tension, burning heat, and insupportable itching. The tumefaction is considerable; the vesicles are

confluent, and, so to speak, agglomerated; at first transparent, at the end of three or four days they assume an opaline tint, and become purulent; they are also mixed with psydraceous pustules. All give issue to a humour of a faint odour, like that of burnt hay, or worm-eaten wood, the contact of which irritates the skin.

The appearances produced by acute eczema at its outset do not ordinarily extend beyond the part, or the regions upon which it is developed. In *E. rubrum* and *E. impetiginodes*, there is a strong febrile action, the intenseness of which is proportioned to that of the local irritation; general symptoms exist also when eczema is preceded by gastro-enteritis. Lastly, the lymphatic glands adjacent to the inflamed parts sometimes become tumid and painful.

Acute eczema is nearly always produced by external appreciable causes. Its duration does not usually exceed two or three weeks; but the parts which it has occupied preserve for a long time a reddish tint.

§ 194. *Chronic Eczema.* This may succeed to either of the three degrees of inflammation which constitute acute eczema (*E. simplex*, *E. rubrum*, *E. impetiginodes*), whatever has been the exciting cause. In this variety, the inflammation of the dermis is increased after the opening of the vesicles; it extends to the deeper layers, and even to the subcutaneous cellular tissue. The skin becomes very painful, cracks, excoriates, and when very much irritated, presents a surface similar to that of a blister in suppuration. In this state eczema constitutes one of the varieties of the *dartre squameuse humide* of M. Alibert, which is only one of the graver modifications of another disease. The skin exhales almost continually an ichorous matter resembling drops of dew. This fluid is at times so abundant, that it soaks through all the linen applied over the affected parts.

It is when arrived at this stage that eczema is the seat of the most violent itching. The skin is then so inflamed, that at some points it is as red as carmine. At night repose is frequently impossible; the mucous exhalation prevents the patient from sleep; and he scratches himself till the blood flows. The itching, however, is not continual; occasionally the patient procures some moments of relief, during which his sufferings are quite suspended; but suddenly, and without any apparent cause, the itching again begins. The sensibility of the skin is so highly augmented, that neither exhortation nor menace is sufficient to prevent the indulgence of the

gratification the patient feels in scratching. The itching at last becomes so insupportable, that the patient tears and lacerates the inflamed skin; and these sufferings are often prolonged for a considerable time.

After a more or less considerable lapse of time, from some weeks to several months, the inflammation diminishes. The epidermis, swelled and yellow from serosity, resolves itself into large, tumid, transparent scales; these fall off, and are succeeded by others which undergo the same process.

The epidermis is thus reproduced several times on the surface of the excoriations, but is thicker and yellower than in the healthy state. This is again detached in more or less considerable lamellæ, and this desquamation extends to all points of the skin adjacent to the excoriations of eczema. Lastly, when this disease continues for several months, the skin is of a pale-red, cracked, and *squamous*, as in certain cases of psoriasis.

This vesiculous affection also has very remarkable exacerbations, at more or less distant epochs. It often appears on the point of being cured, and then suddenly pours out a superabundance of acrid, injurious serosity, or again, it disappears at one part to shew itself on another. I have seen it thus occupy successively the internal part of the thighs, hands, nipples, ears, &c. New vesicles may be formed too on the inflamed skin, after it has been covered by a new epidermis. In this case, the vesicles break and disappear much sooner than when they are formed on healthy skin. They seldom exist more than five or six hours, and furnish a much less abundant serosity. This fact is analogous to the *accelerated course* of the pustules of variola, when developed on skin previously inflamed.

Chronic eczema is always dependent on a peculiar organic disposition, which some pathologists suppose to be an alteration of the humours. This disease may continue for some months, or for several years.

§ 195. Besides the remarkable differences presented by eczema, according to the degree of inflammation, its acute or chronic form, the state of the vesicles, and other alterations of the skin, it possesses some peculiarities, according to the region it occupies, and the causes giving rise to it.

1°. *E. rubrum* and *impetiginodes* of the *face* is frequently attended by general redness and tumefaction of the face, and œdema of the eyelids, similar to what is observed in phlegmonous erysipelas. However, eczema differs from the latter

in being of much longer duration, and shewing a mixture of vesicles and pustules, instead of a simple exanthematous inflammation or one mixed with bullæ. Eczema of the eyelids is sometimes accompanied by inflammation of the conjunctiva, which may also offer the vesiculous form.

2°. Chronic eczema of *the ears*, is frequently met with in both sexes. It is often complicated with otitis, or inflammation of the sides of meatus auditorius externus. Eczema of the ears is sometimes preceded by that of the *hairy scalp*. This has been described as *tinea* by some authors, who have indiscriminately applied this name to all inflammations developed on the tegument of the cranium.

3°. Eczema of the *scalp* is commonly first observed on the nucha, and on the occipital and temporal regions, and may occupy a more or less considerable extent. This is accompanied by sharp itching, which in infants and old people may be still farther aggravated by the production of a vast number of lice. On the first appearance of eczema of the scalp, the inflamed reticular body furnishes an abundant viscous humour, of a faint disagreeable odour, which impregnates the hair and covering of the head. This secretion afterwards diminishes, becomes attached to the hair, and forms furfuraceous lamella, which are raised by the slightest rubbing. Lastly, the secretion is quite stopped; the skin passes into the squamous state, and becomes the seat of an abundant and continued desquamation. At this period, if these squamæ are removed with a comb, the skin beneath appears red, shining, and irritated. When eczema of the scalp has lasted several months, or has occupied a large surface, the lymphatic glands of the posterior cervical region often inflame. In very ancient eczema, the inflammation may extend to the pilous follicles, and cause alteration, or even fall of the hair.

4°. Chronic eczema of the nipples is very common in women; it is attended by fissures, and generally heals under simple local treatment.

5°. Chronic eczema of the dorsum of *the hand*, of the folds of the arms and hams, presents no peculiarities; yet that of the fingers and toes is sometimes followed by the fall of the nails, and inflammation of the skin which protects them.

6°. Chronic eczema of the superior parts of the *thighs* sometimes spreads to the margin of the anus, and vulva, in women, and almost always to the scrotum, in men; in all these varieties the itching is intolerable.

In eczema of the *penis*, the prepuce is usually fissured and

sanguinolent; erections are frequent and painful, and the patient sometimes suffers such severe itching as to nearly cause delirium.

7°. Lastly, acute or chronic eczema may occupy at the same time, or successively, all regions of the body.

§ 196. Acute eczema is at times complicated with the papulæ of lichen *simplex; mercurial* eczema is frequently associated with gastro-intestinal inflammation. Lastly, chronic eczema almost always exists independently of all complication, at least, when it does not occupy a large surface.

§ 197. (c.) Eczema is not contagious: there are circumstances, however, under which it may be transmitted from one individual to another; at least, I was once consulted for eczema of the penis, developed in the husband of a woman who herself had eczema of the vulva. Eczema is sometimes *idiopathic*, and produced by direct causes. Thus persons exposed to the heat of ovens are attacked by it, and those exposed to the sun during the months of June and July (*E. solare.*) This vesiculous eruption, the cure of which is easily affected in a week or two, is attended with intense redness of the skin. So also is *E. mercuriale*,* which, like the preceding, is but a variety of *E. rubrum*, and is developed more particularly in robust hairy individuals, when they do not take the precaution of shaving the limbs before using mercurial frictions; it may extend over the whole surface, and is often complicated with gastro-enteritis, angina, inflammation of the mouth, and irritation of the salivary glands.

The contact of certain metallic oxyds, topical irritants, such as diachylum gum, hemlock, and pitch plaisters, the application of a blister, dry or mercurial friction, or cupping-glasses, and want of cleanliness, may all give occasion to the production of eczema; it appears too that its predisposing, or indirect cause, is sometimes found in excess of diet and the abuse of spirituous liquors; lastly, eczema appears in some individuals without any appreciable cause, either at its development, or after its reproduction. It is in these cases that it is the most obstinate, and attacks, in general, persons of a ner-

* Pearson, *Observat. on the Effects of various Articles of the Mat. Med. in Lues Vener.* Chapter xiii.—Moriarty, *A Description of the Mercurial Lepra.* (Edinb. Med. and Surg. Journal, 1806.)—Alley, *An Essay on a peculiar Eruptive Disease, arising from the exhibition of Mercury.* Dublin, 1804. *Observat. on Hydrargyria, or that Vesicular Disease arising from the exhibition of Mercury.* London, 1810.

vous temperament; it is common in women, particularly at the critical epoch of life.

Acute eczema may be epidemic, or, at least, attack a great number of persons at the same time. The pretended epidemic of itch, mentioned by Hoffman, was only the vesiculous or papulous eruption of acute eczema, or lichen, during the heat of summer. I have often remarked, and sometimes in members of the same family, vesiculous eruptions which have extended over the trunk and extremities: these vesicles were small, scarcely elevated beyond the level of the skin, and very light-coloured at the base; the analogy of these affections with itch is less striking than has been generally supposed.

§ 198. (D.) When acute eczema is developed on the fingers, hand, or part of the fore arm only, and the skin on which it appears is slightly inflamed, a superficial observer would confound it with itch; it differs from this, however, in the form and noncontagious character of the vesicles, and in the nature of the causes which produce it. Lastly, in the means required for its treatment. The two varieties of eczema which have a rather marked resemblance to itch are *E. rubrum* and *E. impetigenodes.* The vesicles of *E. rubrum* are however in general flatter than those of itch; they have a brighter aspect, and are oftener confluent. The vesicles of eczema are commonly seated on parts in which the pilatory system abounds; such as the axilla, ears, forehead, genitals, &c., but sometimes the eruption, more considerable, invades the whole surface of the skin; extends over the abdomen, arms, and hands; the mistake is then more easily made; yet the itching of eczema is a kind of smarting, and has not exacerbations, like that of itch. *E. impetigenoides* is still more difficult to be distinguished from psora; indeed, the vesicles of this variety are pointed, and like those of itch, are converted into pustules, but they are seen on the lips, more rarely on the trunk, arms, and thighs, but their most frequent seat is the palm of the hand, or sole of the foot, while itch is but rarely seen on these parts. The eruption of the pustules of *E. impetiginodes* is in successive groups, following an isolated march, the changes of which are marked by suppuration and slight desquamation. In this disease, the mucous tissue is more acutely affected than in psora, and in some irritable subjects causes general symptoms; the itching of *E. impetiginodes* is acrid and burning. This species is not more contagious than the preceding.

At the time of their appearance, the vesicles of acute ecze-

ma bear some resemblance to those of miliaria; but it is easy to distinguish these two diseases. Miliaria is accompanied by lesions, more or less grave, of the mucous membrane of the stomach and intestines; it is almost always epidemic; the eruption is contagious; it appears in the midst of general derangement of the functions, &c.

Mr. Alley has insisted much on the characters distinguishing *E. rubrum* caused by mercurial frictions, from some exanthemata, such as rubeola, scarlatina, erysipelas, which differ from it totally, in not being vesiculous. Eczema from mercurial friction has been mistaken for a syphilitic affection only by persons but little acquainted with the study of these diseases; for syphilis never shews itself on the skin under the *vesiculous* form.

Lastly, the excoriations and squamous state of the skin, in chronic eczema, are somewhat difficult to be distinguished from the analogous alterations which are seen in lichen *agrius;* but lichen *agrius* is a more rare disease, much more serious and difficult of cure. Chronic eczema of the scalp too is discriminative from the different species of tineæ, by characters which will be easily shewn when we come to treat of these.

§ 199. (P.) Whatever its extent, acute eczema does not, in general, give rise to any sympathetic disorder of the principal organs of the system.

E. solare yields promptly in persons of a good habit; but in others it may excoriate and pass on to the squamous state. Some cases reported by Alley prove that *E. mercuriale* may be fatal when it occupies a large surface, or is improperly treated. The extent and intensity of the inflammation, the permanent or temporary causes which have produced it, render the chances of the cure being tedious or rapid, more or less probable.

Chronic eczema (*dartre humide squameuse*) is a disease frequently difficult to cure; it is always obstinate when it appears under the influence of unknown causes.

§ 200. (T.) It was formerly a pretty general opinion that eczema, acute or chronic, developed without any apparent cause, had a salutary effect; that it was *depurative,* to use an expression of the time. Experience has done away with this theory, but has not hidden the important fact, that the development of eczema in persons affected with chronic inflammation, is often followed by a diminution of the symptoms of the latter, which again increase as the cutaneous affection

disappears, either spontaneously, or in consequence of injudicious treatment (§ 23.)

In the treatment of acute or chronic eczema, the cause which has given rise to it, when known, must first be removed. The first indication in hydrargyria, is to suspend the employment of mercurial preparations; to remove the patient out of a mercurial atmosphere, change his clothes, cleanse the skin by tepid baths, &c.

Acute eczema, when the inflammation is not very intense, (*E. simplex*,) may be treated with acidulated and diluent drinks only. When confined to a particular region of the body, emollient and narcotic cataplasms, particularly those made with potato pulp, or rice, and the crum of bread, moistened with the decoction of mallow-root and poppy-heads, are useful. Linseed meal poultices occasionally cause the appearance of small psydraceous pustules. Emollient lotions with tepid milk, or decoction of bran, oatmeal, mallow-root, or poppy-heads, repeated several times a day, give more rapid and effectual relief in the itching and formication which the subjects of eczema experience, than simple lotions of tepid water. Mucilaginous and gelatinous baths are very useful, particularly in *E. impetiginodes*. If the eruption of vesicles is very considerable, the patient young and vigorous; if the skin is excoriated, and strongly injected; the pulse full and strong, (*E. rubrum;*) bleeding at the proper time ensures the cure, and prevents the inflammation from passing into the chronic state.

Cupping and the application of leeches are equally indicated, particularly if the vesicles are collected round the same point. Syphon cupping-glasses are preferable to those in which paper, &c. is burnt, as this part of the operation is very irritating to the skin.

Acids applied to the skin, as lemon, or the sulphuric, muriatic or tartartic acids, with or without the addition of gum; and slight laxatives, such as seidlitz water, and small doses of calomel, contribute to the success of the local treatment.

§ 201. Although the treatment of *acute* eczema is usually efficient and easy, yet that of *chronic* eczema presents some difficulties.

There are numerous *external* applications, the employment of which must depend on the more or less inflamed state of the skin. The irregular exacerbations and remissions of chronic eczema, and its uncertain progress, prevent any precise rules from being laid down in this respect.

After the rupture of the vesicles, the antiphlogistic treatment ought to be continued, and persisted in as long as there is the slightest inflammation; if there is considerable exudation from the skin, the part may be covered with linen soaked in a solution of the acetate of lead, or with a rag spread over with saturnine ointment. The dressings must be renewed, according to the state of the morbid secretion. I have used also a liniment with lime-water with much success.

At times, caustics have been employed with advantage, particularly the Arg. Nit.,* or a strong solution of the muriatic acid, by changing the mode of irritation of the skin. If these applications are made without consideration, and at a wrong period, they may alter, or even destroy, the cutaneous tissue. A hatter, who had chronic eczema of both hands, was cauterised with muriatic acid at the hospital of St. Louis; the disease was aggravated, and the operation followed by deformed cicatrices. I afterwards cured this patient by means of an issue, and by giving the dulcamara and the sublimate.

When eczema has passed to the squamous state, when it has existed for several months or years, and is confined to a particular region of the body, the cure is sometimes effected by suddenly causing a more acute inflammation on the affected surface. With this view, ointments containing the red precipitate, or the tartrate of antimony or potash, have been employed, or cataplasms made of chelidonium and euphorbium, or, lastly, blisters have been applied to the part. In partial eczema, occupying a small surface only, the latter method has been sometimes successful, by superseding a more obstinate and painful inflammation. In eczema of the face, complicated with ophthalmia, after one or two bleedings, a blister should be applied, either on the arm, or back of the neck, and kept open.

When eczema in the squamous state is spread over a large surface of the body, alkaline baths frequently diminish the itching, by ridding the diseased skin of the accumulated layers of epidermis on its surface.

Sulphureous baths have also been employed in this advanced stage of eczema, in old and debilitated subjects; under all other circumstances, they irritate the skin, and often aggra-

* Guillemineau (L. C.) *De l'Emploi du Nit. d'Argent Fondu, dans la Traitement Externe de quelques Maladies.* 4to. Paris, 1826.

vate the disease. A quantity of gelatine should be at first added, or they may be diluted with two-thirds of water. Their activity may be gradually increased. Simple baths are useful when chronic eczema is in an active stage, or when there are acute paroxysms, with short remissions between. Under these circumstances it may sometimes be cured by tepid baths, aqueous drinks, saturnine applications, and antiphlogistic regimen. Towards the decline of the disease, when the inflammation is dissipated, and the squamæ detached; when there is merely heat and dryness of the skin, simple vapour-baths are very advantageous. Employed too early, baths and fumigations increase the inflammation, and cause œdematous engorgement of the limbs. *Internally,* among the medicines employed we meet only with those endowed with irritating properties more or less energetic, from the dilute acids to arsenical preparations. Vegetable acids are proper when the vesicles throw out an abundant secretion. When eczema is renewed with increased intensity, particularly when complicated with psydraceous pustules, stronger solutions of the sulphuric and muriatic acids are employed.

Purgatives, such as Seidlitz and Balaric waters, have been given in small and repeated doses. Taken immediately after the appearance of eczema *impetiginodes* on the face, they procure constant relief. When eczema is not complicated with any internal affection, (which it usually is,) the advantage of purgatives is undoubted. Their administration is always followed by improvement of the symptoms, and they should be repeated at intervals of a few days, when they only give rise to temporary derangement of the digestive organs. The use of these medicines must be suspended as soon as they are observed to irritate the intestines, inflammation of which, independent of its own danger, may sympathetically increase that of the skin. Sulphur, and sulphureous waters, are necessary means; they have, however, been exaggerated in their effects. The combined action of the sublimate with dulcamara, appears to be useful in a great number of cases. I allow that these medicines have the serious disadvantage of irritating the gastro-pulmonary mucous membrane, and we cannot be too watchful of their effects; but all internal remedies which exercise any influence on eczema are in the same dilemma. I have never employed the dulcamara alone; and Carrère and Bertrand-Lagrésie have always associated it with other preparations, such as Belloste's pills, depurated juices, &c.

The tincture of cantharides has been beneficial, according to some pathologists; very small doses have been increased gradually to sixty drops a day. However, it has occurred that no advantages have resulted from its use continued for months, and certainly that is giving it a fair trial.

Arsenical preparations are sometimes had recourse to when eczema is very old and inveterate, and are often successful when all other means have failed. But their use requires great caution; and the tendency of the mucous membranes to inflammation in chronic phlegmasiæ of the skin should be borne in mind, as well as the danger to be apprehended from the medicine itself; twenty grains of the arseniate of soda should be the maximum dose. This treatment should be frequently interrupted by the use of diluent drinks. In a few days the arsenical preparations may be resumed. Thus the attendant danger may be lessened. It is always found necessary to continue the use of the arseniate of soda or ammonia for several months, suspending its action from time to time.

Lastly, whatever the form, progress, or degree of inflammation of eczema, the patient should abstain from the use of spirituous drinks and heating aliments.

Bateman recommends tonics in the treatment of eczema in weak subjects; but, whatever the salutary properties attributed to the serpentaria, cinchona, &c., before prescribing them for cachectic individuals affected with eczema, it must be first ascertained that the cachexia does not depend on chronic inflammation of the viscera.

§ 202. Several cases of *acute* eczema have been published under denominations of *pimples, hydrargyria, epidemic itch, vesiculous eruption*, &c., in particular and general treatises on cutaneous diseases, or in periodicals. A great number of cases of *chronic* eczema have been also inserted in the works of our pathologists, under the names of *dartre vive, D. squameuse humide*, which have been equally applied to the excoriations of lichen *agrius*. This confusion in the classification of facts arises not only from the difference of nomenclatures, but also from the error of considering as three or four distinct diseases the degrees, and even the different terminations of eczema; the successive transformations of which have not been studied with sufficient care. I regret that the nature of this work does not allow of the insertion of a sufficient number of cases of an affection, the external characters of which are so varied, and the treatment so beset with difficulties.

MILIARIA.*

Syn.—*Miliaria*, Willan. *Febris Miliaris, Miliary Eruption.*

§ 203. Miliaria is an acute contagious inflammation, affecting at the same time the gastro-intestinal mucous membrane and the skin. It is announced externally by abundant sweats, and by small round vesicles of the size of a millet-seed.

The double inflammation which constitutes miliaria may be more or less intense, and even complicated with other more or less serious affections. From these various combinations arise a crowd of symptomatic phenomena, dividing the disease into two principal forms.

§ 204. (s.) 1°. In *benign* miliaria, the invasion of the disease is announced by a feeling of lassitude, pain over the eyes, and loss of appetite; but is frequently unattended by any precursory symptoms. In the epidemic which prevailed in the department of the Oise, 1821, several individuals who retired to bed in perfect health, on awaking, found themselves attacked by the disease, and were inundated with sweat, which continued till death or convalescence took place. In some instances, a scarcely sensible febrile action, a burning heat, or a creeping sensation running through the limbs, with almost always a sense of constriction in the epigastrium, preceded for several hours the appearance of the sweat, or rather of a hot vapour, which at first confined to certain parts of the body, afterwards extended over the whole surface. The mouth was clammy, covered with a dirty-white coat, rarely yellowish; there was little or no inclination for food; urine natural. The bowels were constipated during the whole course of the disease, in general. In most cases the pulse was natural, but became frequent when the eruption appeared. Respiration was attended by that kind of embarrassment which takes place when the temperature is too high. The encephalon the organs of sense, and those of generation, were not included in these derangements. This state continued, with slight variation, the second, third, and fourth days of the disease. On one of these days, and usually the third, after

* Bellot, *Febri Putridæ Picardis* Suette *dictæ sudorifera.* 4to. Paris, 1733. —Pujol (Alexis) *Mémoire sur la Fièvre Miliaire qui Regna en Languedoc et dans les Provinces Limitrophes, durant le Printemps de* 1782, 8vo.—Rayer, *Histoire de l'Epidémie de Suite Miliare qui a Regné en* 1821, *dans le Département de l'Oise.* 8vo.

slight smarting, the eruption appeared, first on the sides of the neck, on the nucha towards the ears, and under the breasts in women, then on the back, inside of the arms, lower part of the abdomen, and inner parts of the legs and thighs.

Miliaria may be general and rapid, partial and slow, circumscribed and ambulant, extensive and spreading, distinct or confluent. The vesicles which characterise it are about the size of a millet-seed, pearly and diaphanous, more distinct when the skin is put upon the stretch and looked at obliquely, and are perceptible to the touch. These vesicles are often interspersed by red inflamed papulæ, which render the skin irritable; lastly, true bullæ may be developed accidentally on different parts of the body.

The duration of the vesicles is two or three days. Then they dry, and are followed by a more or less considerable desquamation. This vesiculous inflammation is attended by an abundant fœtid sweat, having a similar odour to that disengaged from rotten straw. It appears at the commencement of the disease, and is continually exhaled, under the form of a dense steam, its whole duration.

The symptoms, after gradually diminishing, disappear about the eighth, ninth, or tenth day.

2°. Inflammation of the stomach and intestines, scarcely observable in *benign* miliaria, acquires in some cases more intensity, or inflammation of the lungs, brain, bladder, &c. may exist; these complex cases constitute what is called *malign* miliaria. Then, a more violent constriction is felt at the epigastrium; the spasm extends to the organs of respiration, and causes painful anxiety; the patient often sighs deeply; complains of oppression at the chest; and, in addition to the sense of constriction, feels a straitness and throbbing isochronous with the pulse in the region of the stomach, and general uneasiness, causing the most awful forebodings. These phenomena appear sometimes at the commencement of the disease, and reappear several times during its progress, having a violent exacerbation immediately preceding the eruption, partial or general; this takes place from the third to the fourth day from the date of invasion. The patient, sometimes from the commencement, suffers from vertigo, violent cephalalgia, and nausea, making violent efforts to vomit; again, the face is red and bloated, the eyes project and are inflamed, the temporal arteries beat with force, the pupil is contracted and immoveable, and the patient dies in a

few hours in a state of coma, or in convulsions. At other times there is deep-seated pain in the chest, and defect of sound in part of that cavity; difficulty of respiration, which is short and laborious; frequency and fulness of the pulse, and sanguinolent expectoration, showing inflammation of the lungs. Lastly, some persons complain of dysury and deep pain in the hypogastrium, phenomena attendant on red colour, scarcity and painful excretion of urine.

The duration of miliaria presents a remarkable difference in a determined number of patients. Some die in twenty-four or forty-eight hours; the disease sometimes terminates in the course of one week, more frequently lasts two, and may be prolonged beyond the third.

§ 205. (A.R.) From the few anatomical researches which have been made on individuals who have died of miliaria, it appears that when death has been preceded by anxiety, epigastralgia, vomiting, and heat of the epigastrium, the mucous membrane of the stomach has been found of a more or less vivid red, and its capillaries have appeared injected. This redness extends to the small intestines, but is there less apparent. When death has been principally caused by determination of blood to the brain, the blood-vessels of this organ are injected, and there is more or less serosity found in the ventricles.

§ 206. (C.) In France, miliaria has been chiefly studied in Picardy, Languedoc, Normandy, Berri, &c. It usually occurs in an epidemic form. I have never met with it in Paris, where it is hardly known. Indeed, some practitioners of the capital have erased it from their nosology as a non-entity, or have confounded it with gastro-enteritis. Miliaria is seen only between the forty-third and fifty-ninth degrees of latitude. Humid and shaded situations favour its development; but it spreads, like measles and scarlatina, to the most elevated places. Several physicians have inoculated themselves with the matter of the vesicles with impunity. No age is exempt from it; but it more particularly attacks adults, and appears to be most frequent in females. In the epidemic of 1821, the disease was most prevalent in those communes nearest to where the disease first showed itself; this was the most unhealthy of them, and contained the largest number of indigent.

§ 207. (D.) To describe the characteristics of miliaria, it is sufficient to compare it with other diseases, which, like itself, show themselves on the skin under the form of vesicles. The

vesicles of the different varieties of herpes are larger, and confined to some one region of the body. Acute eczema is never accompanied with such abundant sweats as those of miliaria; the vesicles of the former are smaller, and not contagious. Lastly, the vesicles of *chicken-pox* are more voluminous and prominent than those of miliaria. Broussais, and many of his disciples, have confounded miliaria with gastro-enteritis; no doubt, in consequence of the stomach being affected in the *sweating disease* of Picardy. This fact corresponds with the hypothesis which has led them to see only a simple bronchitis in rubeola, and nothing but angina in scarlatina.

§ 208. (P.) Miliaria, in its simple form, is a mild disease. The gastro-intestinal inflammation which precedes and accompanies the eruption, and the cerebral inflammation, pulmonary irritation, and the affections of the bladder, &c., which may aggravate the disease at different stages of its development, alone render the prognosis more or less serious, as they themselves are more or less intense.

§ 209. (T.) In epidemic miliaria, isolation would be useful were it practicable. The advantage of instant removal is decided; other preservative means are uncertain. Antiphlogistic drinks, the application of leeches to the epigastrium, or to the feet in mild cases of the disease, and general bloodletting, assisted, or not, by powerful derivatives, such as sinapisms and blisters in determination of blood to the brain, form the principal features of the treatment of miliaria, as well as of measles. (§ 61.)

Purgatives and irritants should be proscribed, as they needlessly derange the digestive organs. The employment of tonics, too, should be avoided; also sudorific drinks and medicines. Lastly, the cruel practice of keeping the patient constantly awake, with a view to prevent brain affection, cannot be too strongly reprobated.

It is almost needless to add, that cleanliness, renewal and purification of the air, a diet appropriate for acute diseases, and the judicious employment of moral means, will tend to increase the success of the treatment.

PUSTULOUS INFLAMMATIONS.

Syn.—*Pustulæ*, Willan. *Pustules.*

§ 210. This class of inflammations is characterised by *pustules;* that is, by elevations, varying from half a line to three

lines in diameter, circumscribed, often surrounded by an inflamed areola, and formed by *pus*, or a *non-serous* fluid, deposited between the epidermis and inflamed reticular body. Pustules terminate by desiccation of the contained humour, by ulceration, or by tuberculous induration.

§ 211. There are ten pustulous diseases: varicella, variola, vaccina, vaccinella, ecthyma, cuperosa, mentagra, impetigo, tinea, and artificial pustule, to which might be added, syphilitic pustules, but which I have placed in another class. I have already remarked, that in Bateman's classification, psora has been erroneously placed among the pustulous diseases, and I have explained the motives which have led me to place variola with varicella, three varieties of which are indisputably pustulous. Vaccina and vaccinella ought to be placed in the same class, and not with vesiculous diseases. Indeed, pustules differ from vesicles, not only in containing pus or non-serous humour, but by the depth and intensity of the inflammation. This latter point appears the more important, as the serosity of all vesicles becomes turbid and purulent in the stage of desiccation, and the contents of all pustules are at first serous. Lastly, Willan and Bateman were deceived when they supposed that cuperosa and mentagra were announced by tubercles, for these inflammations are primarily *pustulous*.

§ 212. (s.) Under general consideration, pustules may be divided into two principal forms. The one (*phlyzaceous pustules*) are commonly of large size, elevated on a hard, circular, inflamed base, and terminate by a thick resistant crust, of a brownish colour. Such are the pustules of variola, ecthyma, vaccina, &c. The other (*psydraceous pustules*) are small, often irregularly circumscribed, scattered or disposed in groups, and terminate in crusts of various form, and in tuberculous indurations; such are the pustules of impetigo, cuperosa, mentagra, &c.

§ 213. Some pustulous inflammations, such as vaccina, cuperosa, &c., are *partial*, that is, they never extend over the whole surface of the body. Others, such as variola, varicella, ecthyma, tinea favosa, &c., shew themselves on all regions, or may do so. Pustulous diseases are frequently accompanied by more or less intense inflammation of the mucous membranes; but variola is the only one of them in which these membranes really present, in the parts furnished with an epithelium, true pustules, analogous to those of the skin.

§ 214. Each pustulous inflammation has particular charac-

ters, according to the form, dimensions, and degree of inflammation of the pustules. Some pustules, like those of cuperosa, are acuminated; others, like those of variola, are acuminated at the outset, and umbilicated at their *summum* of development. The contained fluid is ordinarily opaque and whitish, but may be transparent, viscous, puriform, &c., contagious, or non-contagious. Most usually the fluid is deposited in one single cavity, but some pustules are multilocular. Most pustules become covered by *crusts;* some are transformed into real *ulcers*, or degenerate into *tubercles.*

Crusts produced by the desiccation of pustules present secondary characters, which it is important to study. Some, as those of tinea favosa, are yellow and cup-shaped; others, as those of impetigo *figurata*, are prominent, greenish, or brownish, &c.; some again, affect a granulated form, or are stalactiform, &c. As for the knowledge obtained by analysis of the crusts, it is but of little interest. The crusts which are formed only in the latter stages of pustulous inflammations, I have not thought it worth while to treat of, so vague and incomplete are all distinctions drawn between these different diseases which depend on the secondary character of the crusts only.

The state of the skin beneath the crusts, in different species of pustulous inflammations, should be the more carefully studied, because the crusts may be accidentally deformed, or torn off, in part or wholly, by lotions, poultices, or other applications. The degree and extent of these hidden alterations of the skin, and the number, form, and aspect of the *ulcerations* and *tubercles* which succeed to pustules, should be studied and described with the minutest exactitude. The *cicatrices* themselves, when they exist, are often characteristic of the disease which has produced them.

§ 215. Most of the pustulous inflammations may be complicated with one another, without this circumstance exercising the slightest influence on their respective progress. Some, on the contrary, such as variola and vaccina, are never simultaneously developed without being modified by one another; they may even, reciprocally exclude each other, when either has run through its own course. Pustulous, may also be complicated with other diseases of the skin. Lastly, the formation of pustules is at times preceded, and attended, by inflammation of the mucous membranes.

§ 216. The duration of pustulous affections is very variable; some, as variola, vaccina, varicella, &c. have constantly

an *acute* march. Favus, cuperosa, mentagra, &c., are always *chronic* affections.

§ 217. (c.) Four of the pustulous phlegmasiæ, variola, varicella, vaccina, and vaccinella, are contagious. Others are not so, as ecthyma cuperosa, and impetigo. Bateman thought the tineæ (*Porrigo*) contagious. Tinea annulare is so (*Porrigo scutelata.*) Favus and mucous tinea must be the subjects of future researches. These three diseases are very distinct, and ought not to be designated under the same generic term.

§ 218. (d.) Of all inflammatory alterations *vesicles* bear the nearest affinity to *pustules.* These differ from the former by being more inflamed, and by more frequently leaving cicatrices behind, and by other characters already described. Pustulous are easily distinguished from papulous, tuberculous, squamous inflammations, &c. However, the diagnosis of pustulous diseases does not present the same facilities at their different stages of development. In some cases, it is impossible to establish it on a first inspection. The little *red spots,* or elevations by which pustules are first announced, are never characteristic; the pustules themselves are not well marked until arrived at their *summum* of development; lastly, the *crusts, erythematous spots, ulcers,* and the *tubercles* which succeed to them, have not always, in each species, well marked external characters.

§ 219. (p. and t.) The general treatment of pustulous inflammations, acute or chronic, must be founded on the same principles as that of all cutaneous phlegmasiæ. Each species present peculiar indications, which will be pointed out when treating of each disease.

VARICELLA.*

Syn.—*Varicella,* Willan. *Variola Spuria. Variola Lymphatica. Chicken-pox.*

§ 220. I place varicella at the head of the list of pustulous phlegmasiæ, as it appears destined, by the double form it affects, to establish a natural transition from vesiculous to pustulous diseases.

§ 221. Varicella is an acute, contagious inflammation, announced by vesicles or pustules, which dry up from the fourth

* Willan, *On Varicella.* 4to. Lond. 1806.—Bérard, (M. F.) and Delavit *Essai sur les Anomalies de la Variole et de la Varicelle.* 8vo. Montpellier, 1818.

to the seventh day of their formation, generally leaving small red spots, but rarely cicatrices on the skin.

§ 222. (s.) The invasion of varicella is preceded by slight fever, which lasts from twelve to forty-eight hours. The febrile state is often scarcely perceptible; a little confusion and headach, not hindering the children from following their accustomed amusements. The precursory symptoms, however, are not always so mild. In some cases, all the symptoms of a violent gastro-intestinal irritation are present: acute pain in the epigastrium, nausea, vomiting, &c.; and this state will continue for three or four days. The eruption usually appears early on the second day of the fever, rarely on the third, and still more so on the fourth. It may be slight or considerable. It is quickly developed, and extends indiscriminately over all regions of the body, most often, however, on the posterior part of the trunk. It exhibits various characters, which may be separated into two principal forms: *vesiculous* and *pustulous* varicella.

§ 223. *Vesiculous* varicella (*chicken-pox.*) This variety, commonly distinct, is sometimes confluent.* It is characterised, the first day of its eruption, by small, red, oblong, flat spots. The next day, a prominent vesicle is observed at the centre of them, containing a fluid perfectly limpid and colourless, or of a citron hue. On the second day, these vesicles have a diameter of about a line and a half; their base is sometimes inflamed. The third day, the colour of the lymph is yellowish, but this is the only change it undergoes. The fourth day, those vesicles which have not been accidentally broken, diminish in size and shrivel towards their circumference. On the fifth, few of them are intact; a small crust adherent to the skin is formed at their centre, and a small quantity of opaque lymph is inclosed by their circumference. On the sixth day, small yellowish and brownish crusts wholly occupy the place of the vesicles. On the seventh or eighth day, the crusts fall, leaving on the skin red spots, without depression, which remain for some days.

Distinct vesiculous varicella is in general attended with but slight derangement of the digestive functions or circulation; when *confluent*, the general symptoms are much more marked.

If the eruption of the vesicles has been successive, and

* Ring, *A Case of Confluent Chicken-pox, illustrated by a coloured Engraving.* (Med. and Phys. Journ. 1805, p. 141.)

succeeded or followed by lesions more grave than usual, this disease may endure two or three weeks.

§ 224. *Pustulous* varicella. The precursory symptoms are more grave in this variety. They, at times, even equal those of semi-confluent small-pox in intensity.

Pustulous varicella is met with under three principal modifications, which more or less approach variola. I shall designate them according to the form of the pustule, as *conoid*, *globulous*, and *umbilicated* pustulous varicella.*

1°. *Conoid* pustulous varicella. The pustules characterising this variety are rapidly developed. In the course of twenty-four hours, small red spots, like fleabites, appear on different regions of the body, and are transformed into *pointed* pustules, like those of variola in their first stage. The following day, they contain a sero-purulent humour at their summit; their base is less hard and inflamed than in small-pox. The second, they are distended with pus, and the base is more inflamed. The third and fourth days, they remain nearly in the same state. On the fifth, they shrivel and dry at their summit. About the sixth day, they are transformed into yellowish prominent crusts. From the seventh to the ninth day, the crusts become detached, some of them leaving small depressed cicatrices. The eruption may be developed successively, so as to prolong its duration to twelve or thirteen days from the date of invasion.

2°. *Globulous* pustulous varicella is characterised by small red spots, more extended than those of the preceding variety, and which, in the space of twenty-four or thirty-six hours, are transformed into large globulous pustules, their base not being exactly circular, but sometimes inflamed; they contain a thick puriform humour. The third and fourth days, the eruption spreads over the different regions of the body; on the fifth, the pustules become rounded, and the areolæ of a deeper colour; the sixth day, the summit of many of the pustules dries up; they fade and shrink at the circumference.

* Several of these varieties of *pustulous* varicella have been described under the names of *modified variola*, *variola after inoculation*, *variola after vaccination*, and more recently under the name of *varioloid* disease. However, this latter term has been especially applied to *umbilicated* pustulous varicella.—See Thomson, *An Account of the Varioloid Epidemic, &c. with Observations on the Identity of Chicken-pox with Modified Small-pox.* 8vo. London, 1820.—Gregory, (G.) *Cursory Remarks on Small-pox as it occurs subsequent to Vaccination.* (Med. Chirurg. Trans. vol. xii.)—Luders, *Essai Historique sur les Varioles qui s'Observent chez les Sujets Vaccinés.* 8vo. Altona, 1824. (*Ext. Arch. Gener. Med.* vol. viii.)

The seventh and eighth days, desiccation makes progress, and the ninth and tenth, the crusts become detached, leaving deep red spots on the skin, and at times even cicatrices.

3°. *Umbilicated* pustulous varicella. This variety has not been so well studied as the foregoing. It is developed under two very remarkable conditions; 1°, in individuals who have been inoculated at the same time for small-pox and vaccina; 2, in persons who have been variolated, inoculated, or vaccinated, and are subsequently submitted to the influence of a variolous epidemic, or fresh variolous inoculation.*

The precursory symptoms of this variety of varicella are very analogous to those of small-pox; it is always preceded by more or less serious irritation of the digestive organs. The third or fourth day from invasion, the eruption appears on the trunk, face, or limbs, by small red elevations, resembling fleabites. On the same or following day, these elevations become more prominent, and contain a sero-purulent humour at their summit. The third or fourth day, they assume the umbilicated form, which variolous pustules arrive at only at a more advanced period. The pustules of umbilicated varicella are flattened, circular, have a central depression, and are surrounded by a small rose-coloured circle. They are about two lines in diameter; when pressed, they present the same feel of resistance as wax, to the finger, and if one or more apertures are made with the point of a lancet, the nearly solid humour they contain does not exude. At first, of a pale rose-colour, about the fifth or sixth day, they become of a dull white. The seventh day, most of the pustules remain of the same form and colour; but some, particularly those of the face, have their centre already occupied by a small brown or yellowish crust. On the eighth day, the pustules are entirely superseded by lamellous lenticular crusts. Most of these become detached from the skin, and beneath them are discovered some small, circular, depressed cicatrices, and numerous small, red or violet-coloured spots, often evident for months after the disappearance of the disease. Lastly, about the tenth or eleventh day, the fall of the crusts continues on different regions, where the appearance of the eruption has been tardy.

The eruption of umbilicated pustulous varicella is some-

* Thompson, (J.) *Historical Sketch of the Opinions entertained by Medical Men, respecting the Varieties and the Secondary Recurrence of Small-pox.* 8vo. London, 1822.

times preceded and accompanied by symptoms of violent gastro-intestinal inflammation, but rarely by those of laryngotracheitis, so frequent in variola. The skin, particularly of the face, may be strongly injected, as if erysipelatous, and the seat of very painful heat and tension. The number of pustules may be very considerable; they are even, at times, developed on the mucous membranes of the mouth and genitals.

The umbilicated pustules which characterise this variety are nearly always mixed with others, as *globulous* pustules of a line in diameter, filled with whitish opaque fluid. They acquire very irregular forms, when several of them unite at their edges. Lastly, all the varieties of pustules which varicella presents are sometimes seen in the same individual; but then, there is almost always some one form which predominates.

§ 225. Varicella may coexist with any cutaneous phlegmasia. Variola, inoculated during the existence of varicella, runs through its course without being influenced by the latter. When varicella and variola are inoculated together, if the former is developed, it is but imperfectly. Varicella and vaccina, inoculated in conjunction, appear together on an individual not previously vaccinated or variolated, and run through their respective stages without influencing each other in the least. However, these experiments have not been sufficiently often repeated to affirm that the same result will hold good with the vesiculous and the pustulous varieties of varicella.

§ 226. (c.) Varicella is common to all ages; yet it is almost exclusively met with in children and adults. It is contagious, but much less so than variola. Vesiculous is less contagious than pustulous varicella. According to some authors, varicella constitutes a distinct affection, *sui generis*. Bateman, Messrs. Thompson, Bérard, and many others of whose opinions I partake, look upon its varieties as but modifications of small-pox. This idea is supported by the following facts: 1°. Inoculation with variolous matter has sometimes given rise to the development of varicella, particularly, when it has been serous. 2°. In all variolous patients, some pustules are met with similar to those characteristic of the varieties of varicella, which I have just described under the names of *conoid*, *globulous*, and *umbilicated*. 3°. The first appearance of varicella has exactly the same date as that of variola. 4°. There is never an epidemic of varicella without variola, and *vice versa*, never of variola without varicella. 5°. The pro-

duction of varicella seems to depend on the feeble action of small-pox virus, in persons who have had neither vaccina or variola; or on a modification of its action, when more energetic, caused by the previous development of variola or vaccina. Thus varicella is seldom remarked in individuals neither vaccinated nor variolated, except in epidemics of benign small-pox; on the other hand, in the most fatal epidemics of variola, as that of Montpelier, in 1819, and that of Paris in 1825, the development of vesiculous or pustulous varicella was not observed, in general, except in persons who had been previously vaccinated or variolated. 6°. Lastly, when a great number of individuals, inoculated, vaccinated, or variolated, are inoculated with variolous matter, most of them commonly contract varicella.

§ 227. (D.) Whether the different varieties of varicella be, or not, modifications of variola, it is not the less necessary to establish the external characters which distinguish them. The most striking, and most general, of them is, the *shorter duration of the vesicles or pustules* in varicella. In fact, the duration of the vesicles or pustules, *conoid, globulous,* or *umbilicated,* is usually from six to eight days only; that of the pustules of variola, from twelve to fifteen. The small red spots of varicella, on the first day of their appearance, feel to the finger like small *flat* seed. At the same stage, the elevations of small-pox are red, *globulous,* and transmit a different sensation, which may be compared to that of touching a *round* seed; and the sanguineous injection is much stronger and deeper. In varicella, the serosity or pus fills the vesicles or pustules the first or second day of the eruption. In variola the formation of the serosity is slower, and only takes place at the *summit* of the pustules. The pustules of varicella have but one form through their different stages; they are *conoid, globulous,* or *umbilicated;* those of variola are at first accuminated, and afterwards become umbilical. Lastly, in varicella, the eruption is not so simultaneous as in small-pox; some vesicles and pustules appearing, in the former, sometimes, at the same time that the desiccation of others has commenced.

Besides these general distinctions, each variety of varicella possesses peculiar characters, distinguishing it more or less from small-pox.

1°. The *serous* and transparent *vesicles* of *chicken-pox* cannot be confounded with the *pustules* of small-pox. The latter, in the early days of their formation, present a marked serous

and transparent point at their summit; but the body of these elevations are not serous, like those of *chicken-pox*; they become purulent, and assume the umbilicated form the sixth or seventh day of the eruption.

2°. Notwithstanding its pustulous form, *globulous* varicella is easily distinguished from variola, the pustules of which, at first accuminated, then umbilicated, are never constantly globulous. When they do so exist in a variolous patient, they are always accidental and few in number.

3°. *Pustulous conoid* varicella does not resemble the pustules of small-pox except at its commencement; for if the latter are at first conoid, they afterwards become umbilicated, at an epoch when the pustules of conoid varicella become dry.

4°. Lastly, *umbilicated pustulous* varicella, of all the varieties, approaches nearest to variola, from which it really differs only by its more rapid progress, and by the areolæ of the pustules being less inflamed, and by rarely leaving cicatrices on the skin.

§ 228. (P.) The prognosis of varicella is more favourable as the eruption is less considerable, and the attendant gastro-intestinal inflammation is less intense. *Chicken-pox* is, of all the varieties of varicella, the most benign. Pustulous umbilicated varicella, on the contrary, is that in which the inflammation of the skin, stomach, and intestine, is usually most severe. With respect to danger, conoid pustulous, and globulous varicella, constitute two intermediate, between the two preceding varieties. However, it is possible that inflammation of the stomach and intestine may be more severe in a case of *chicken-pox* than in a case of pustulous varicella, and that the former may, in consequence, be attended with more danger than the latter.

§ 229. (T.) The treatment of varicella must be chiefly directed to the accompanying gastro-intestinal inflammation, or to other phlegmasiæ which may supervene in its course; and the cutaneous affection may be left to itself. Thus, when varicella is distinct and apyretic, it only requires repose, spare diet, and the use of diluent drinks. The development of the eruption may, on the contrary, be attended by symptoms of inflammation of the stomach or intestines, such as nausea, vomiting, stomachic pains, &c. and it may be necessary to apply leeches to the epigastrium. Lastly, in *umbilicated pustulous* varicella, the eruption is sometimes so considerable on the face, that bleeding from the foot is required. A determination towards the lower extremities should be after-

wards kept up by the frequent use of pediluvia, or the application of sinapisms to the feet. Tepid baths may be employed during convalescence.

§ 230. It used to be the fashion to purge patients at the conclusion of varicella; it is now ascertained that the custom is, at least, useless.

§ 231. English pathologists have made a more particular study of varicella and variola than the physicians of the continent; but Willan and Bateman erred, when they asserted varicella to be always *vesiculous*. Their description even of varicella appears incorrect, not only in this respect, but also in the short duration which these two authors have assigned to *globulous* and *conoid* varicella. Two cases published, one by MM. Bérard and Delavit, and the other by Darcet, in which the elevations of varicella presented these two forms, cannot be recognised as of the varieties admitted by Willan; the description I have given of it appears to me more accurate.

VARIOLA.*

Syn.—*Variola*, Willan. *Febris Variolosa*. *Small-pox*.

§ 232. Variola is a contagious, acute inflammation, affecting at the same time the gastro-pulmonary mucous membrane and the skin. It shews itself externally, from the third to the fourth day of the invasion, by pustules, at first pointed, then umbilicated, which, after twelve or fifteen days' duration, dry, and terminate by small irregular cicatrices.

§ 233. There are two very distinct species of variola: one is known under the name of *natural*, the other, of *inoculated* small-pox.

§ 234. Natural variola presents four different stages, which are called the *incubation*, *invasion*, *eruption*, and *desiccation* of the disease. Sometimes the pustules are few, thinly scattered, and disseminated over the whole surface of the body; at other times they are very numerous, and, so to speak, agglomerated, and united by their edges touching each other. The former of these dispositions has been called *distinct* small-pox, the other is known as *confluent* or *coherent* variola.

§ 235. (s.) *Distinct* variola is always preceded by symptoms of gastro-enteritis. It shows itself from six to twenty

* Rhazes, *De Variolis et Morbillis*.—Destouches (Hyacinthe,) *Dissert. sur la Variole*. 4to. Paris, 1817.

days after the absorption of variolous matter (*incubation.*) The first day of the *invasion* there are more or less prolonged shiverings, alternating with flashes of heat, general disorder, and loss of appetite. On the second day, distaste for food, nausea, heat; sometimes epigastric pain, particularly on pressure; sensation of heat in the pharynx and stomach; ardent thirst, and desire for acid drinks; more or less redness of the point of the tongue, the middle and base of which is covered by a white or yellowish coat; then cephalalgia, drowsiness in children, and a disposition to sweat in adults; frequency of pulse and respiration; agitation; pandiculation, and pains in the back, loins, limbs, and joints. These symptoms last three or four days, and, according to their intensity, announce gastro-enteritis, with or without inflammation of the larynx, bronchia, or brain; and then succeeds the *eruption.* Small red, isolated, distinct points, resembling fleabites, appear, usually on the fourth day of the invasion, on the lips, face, neck, chest, abdomen, and limbs. The following day, these elevations increase in number, become more prominent, as if papulous, and their summit becomes vesiculous and transparent. The third and fourth days of the eruption, the pustules are observed on the skin, and sometimes on the mucous membrane of the mouth, pharynx, eyelids, prepuce, or vulva. The pustules of the membranes differ from those of the skin, by the small quantity of pus effused between the epithelium and mucous body, suddenly penetrating, and softening the former. If the small, white, circular spots are raised, which are one or two lines in diameter, the pustules are observed, but there is usually no pus found beneath the epithelium. In the intervals which separate the cutaneous pustules, the skin becomes red and tumefied, on account of their number. These pustules feel hard to the touch. The contained fluid becomes thick and yellowish. If they are opened, the matter that exudes is like honey in colour and consistence. This humour is not long in losing its shining whiteness and becoming quite purulent. The pustules acquire then a well-marked umbilicated form. At the same time, the skin becomes red and tumefied. This tumefaction is more considerable on the face than on other parts, as the pustules are usually more numerous there; and the face becomes tense, painful, and burning hot. Secondary fever now arises, (fifth day of the eruption,) and during suppuration. The tumefaction of the face is first observed on the upper lip and nose; then on the lower lip, cheeks eyelids, and temples. At this time a slight salivation

is established, even when there are no pustules in the mouth. This state continues till the eleventh or twelfth day (eighth of the eruption.) Now *desiccation* takes place, the tumefaction of the face diminishes, and the pustules dry. The crusts fall commonly about the fourteenth or fifteenth day. Those of the hands are formed and detached a day or two later. One particular and very remarkable circumstance may accelerate the march of some pustules; this is, inflammation of the tissue on which they are developed. Thus, when the subjects of psoriasis, lichen, or chronic eczema, are affected with variola, the pustules which are formed on the already inflamed parts, run through all their stages usually in eight days.

After the fall of the crusts, *circular spots* of a red-brown colour are seen on the skin, and there are always small cicatrices of a more or less irregular form, particularly on the face. These spots are sometimes the seat of a furfuraceous desquamation.

§ 236. In *confluent* variola, the precursory symptoms are usually more grave; the vomiting more violent, repeated and obstinate cephalalgia is more intense, attended by delirium, pain in the loins, convulsive motions, and prostration. This double affection of the head and stomach, if not combated, may cause death before the development of the eruption. This takes place the second or third day, rarely on the fourth, and still more rarely on the fifth. It is commonly *simultaneous*, seldom *successive*. The pustules are small, and project very little beyond the surface of the skin; but are very numerous, particularly on the face, flatter, and closer together than in *distinct* variola, and confounded at their circumference. The face is swelled, as in erysipelas. Afterwards, the crusts form a sort of mask, covering the whole face, and are more humid than the isolated crusts of the former species. Very acute fever, sometimes convulsive motions, and other grave cerebral symptoms, become developed. A peculiar, faint, disagreeable odour is exhaled from the body of the patient, who experiences a sensation of pain and tension over the whole skin. These symptoms go on increasing till the fall of the pellicular crust which covers the face; this takes place about the fifteenth or twentieth day. At the commencement of this stage, that is, toward the end of suppuration and commencement of desiccation, some patients fall suddenly into a state of coma, and even die in twenty-four or thirty-six hours. On the fall of the mask, no cicatrices are observed on the skin, but it is soon succeeded by furfuraceous scales, which leave

marks and ulcerations more or less profound, and cicatrices, which disfigure and alter the expression of the countenance.

Besides these alterations of the skin, other symptoms show that the mucous membranes themselves are deeply affected. In children, diarrhœa, which is observed at the beginning, continues till the end of the disease. Ptyalism is abundant; and the mouth, pharynx, and sometimes even the larynx, is covered with pustules. They are seen on the free edges of the eyelids, and at times on the surface of the transparent cornea. This membrane softens, ulcerates, and is, rarely, perforated. After the cure of the disease, part, or the whole of the cornea, remains opaque. I should however add, that it is almost always at the period of desquamation that ophthalmia is observed, and that most frequently it is not pustulous.

§ 237. Independently of inflammation of the mucous membranes, which should be looked upon as one of the elements of variola, it may be complicated with rubeola, scarlatina, petechiæ, or spontaneous ecchymosis *(variola nigra,)* with croup, pneumonia, and more rarely, with hæmoptysis, meningitis, &c. which may supervene during the eruption, desiccation, or after the fall of the crusts. Erysipelas sometimes shows itself on the legs; furuncles, and phlegmous on the arms and thighs; ecthyma on the limbs; lastly, chronic inflammation of the intestines, often prolongs convalescence, and may prove fatal.

§ 238. *Inoculated* variola* differs in some respects from natural small-pox, and, in others, it approaches to *umbilicated pustulous* varicella. This variety of small-pox is produced by causing the virus of variola to penetrate the skin by means of friction; or by applying the virus to the mucous membrane, or to the skin deprived of its epidermis; or lastly, by introducing it into the skin, or subcutaneous cellular tissue, by means of punctures or slight incisions.

§ 239. On the first day, and sometimes the second of insertion, no change is observed in the punctures, which are usually made in the arm. The second or third day of inoculation, an itching may be felt to precede the appearance of small spots of an orange-red, like fleabites. The third day, these extend. The fourth, the redness increases, and they are the seat of slight shootings. The punctures become prominent and lenticular. The fifth day, the smarting is more

* Dezoteux et Valentin, *Traité Historique and Pratique de l'Inoculation.* Paris, an viii.

pungent, and inflammatory symptoms commence. The sixth day, the pustules contain, at their summit, a *transparent serosity*. On the seventh, they become whitish and depressed at their centre; and there is pain along the inner side of the arm; the pustules become phlegmonous, and are surrounded by a purplish areola. The eighth day, there are slight shiverings, then heat, more or less violent cephalalgia, prostration, anxiety, nausea, and sometimes vomiting for twenty-four hours, and drowsiness. The ninth, the inflammation of the axilla and inner part of the arm diminishes; the tint of the areola fades and disappears; the pus, drying and uniting with the neighbouring crusts, forms one large thick crust, which falls about the twentieth or twenty-fifth day from inoculation. Under these conditions, a large deep cicatrice is observed, at the point of inoculation, similar to that of the cautery.

Independent of this local variola, a second eruption appears about the twelfth day from inoculation, and subsequent to some functional derangements, analogous to those which precede the development of natural small-pox, (§ 235;) other pustules, more or less distant from the punctures, are seen on the face, neck, trunk, and limbs. These are ordinarily but few in number; more rarely the eruption is confluent. This secondary eruption is completed by the thirteenth or fourteenth day of inoculation. The pustules rise, become full, and then depressed, like those of natural small-pox. A purplish areola circumscribes their base; they are full of pus; their surrounding edge is discoloured at the time that their centre grows white; the pus afterwards assumes a yellow tint; a small, dark point is observed on the summit of the pustules, and the areola disappears; lastly, they shrivel; the pus dries, and forms greyish-brown crusts, which leave deep red-brown spots behind them, and often superficial cicatrices.

§ 240. Inoculated variola presents some varieties: 1°, the secondary eruption may not take place, and the inoculation not be in the least preservative; 2°, more rarely, there are no pustules developed at the punctures, and the secondary eruption is not developed; 3°, the secondary eruption may be divided into several successive eruptions; 4°, lastly, the progress of the eruption may be so accelerated, that, in eight or nine days, the variola runs through all its stages, and in this respect approaches varicella; or again, it may be more tardy than usual.

Inoculated variola is commonly distinct; the stage of suppuration benign. This variety is sometimes complicated with

the exanthematous inflammation, described as roseola, (§ 47.) It is not so frequently as natural small-pox associated with grave inflammations of the mucous membranes.

§ 241. (A. R.) Cotugno* well knew the structure of variolous pustules. When umbilicated, if incised vertically, so as to divide them into two equal parts, proceeding from without to the centre, we observe: 1°, a whitish line, formed by the thickened epidermis; 2°, a purulent layer beneath; 3°, a reddish line formed by the inflamed reticular body; 4°, beneath this, the chorion not altered; 5°, lastly, in the centre, of most of the pustules, a small whitish body, the superior and filiform extremity of which is implanted into the middle of the umbilicus of the pustule, while the inferior extremity is swelled, and adherent to the inflamed reticular body. Cotugno regards this disposition as constant; however, I feel assured it has exceptions. Indeed, I have seen pustules exhibiting three of these filamentous bodies: one, central and shorter, and two others, more eccentric and elongated. It has also occurred that, in some umbilicated pustules, I have not found this body, on the nature of which several opinions have been set forth. Some regard it as a pilous follicle, from being enlarged at its deep extremity, and sometimes traversed by a hair. Velpeau asserts having observed a small hole in the centre of variolous pustules, even when they first appear, which, he says, is easily taken for the orifice of a follicle. It would be right to endeavour to inject these follicles in the dead subject. If a portion of variolous skin is macerated, it is found that the filaments which unite the epidermis to the dermis, are not enlarged or swelled at their bases, except at the points where pustules are developed. This small body has likewise been supposed to be nothing more than a papilla of the dermis, which has become enlarged in consequence of inflammation of the skin; but this seems less probable than the preceding supposition.

When two or three pustules are united by their adjacent edges, it is almost always found that the anatomical structure of each pustule can be distinguished on dissection. *Conoid* and *globulous* pustules are also met with in variola, similar to those which characterise two of the varieties of pustulous varicella; but in some of these pustules the filament proper to variolous pustules is found.

Lastly, the skin of the face and posterior part of the trunk

* Cotunni, *De Sedibus variolarum Syntagma*. 12mo. Viennæ, 1771.

is generally much injected. The mucous membranes exhibit inflammatory alterations, not less remarkable. The conjunctivæ, the mucous membrane of the nasal fossæ, of the mouth, pharynx, larynx, trachea, broncha, of the prepuce in man, and vulva in woman, &c., are commonly found injected, and present rudiments or traces of pustules. The mucous membrane of the nasal fossæ is of a vivid red, and covered with a thick yellowish mucus. The palatine vault and surface of the tongue present grey exudations, or small *debris* of the epithelium. The mucous membrane of the mouth is of a violaceous red, which colour sometimes extends to the muscles of the tongue. The pharynx is covered with yellowish mucus, under which the mucous membrane appears of a violet red colour. In confluent variola, also, the interior of the larynx and trachea, constantly present unequivocal traces of inflammation. This mucous membrane is of a violaceous red, and covered with 1°, small white, or greyish circular spots, from a half to two lines in diameter, having a central, red point, and deprived of the epithelium; and 2°, some other spots of various forms and dimensions, probably, consecutive to coherent pustules. This supposition is the more probable, as M. Chaussier,* in dissecting the body of a woman who died the fourth day of the eruption of confluent small-pox, found in the larynx and trachea a number variolous buttons (pustules), *similar in form and size to those which existed on the skin.* These pustules were not confined to the trachea; they existed even in *the primary bronchial ramifications*, in the mouth, pharynx, and commencement of the œsophagus. I must confess, however, that variolous pustules of the mucous membranes have always seemed to me to differ in many respects from those of the skin, and the assertion of M. Chaussier requires explanation. I have never seen in the trachea, larynx, or broncha, pustules, like those of the tegument, that is, formed by concrete pus, effused between the mucous body and epithelium; the pustules of mucous membranes are never covered by crusts; lastly, they are not usually followed by cicatrices. I have not met with variolous pustules in the œsophagus, stomach, or intestines, but I have always observed these parts to be inflamed. It is not so common to meet with alterations in the other viscera. Yet in variolous patients, who have had symptoms of acute meningitis and encephalitis, the brain has been found phlogosed, and its membranes

* *Bulletins de la Faculté de Médecine de Paris*, tom. iv. p. 14.

injected; also, pseudo-membrane has been observed on the arachnoid, citrine or sero-sanguinolent effusion of the cerebral anfractuosities, in the different ventricles, and in the arachnoid cavity of the spinal marrow.

§ 242. (c.) Variola is contagious; communicated by contact mediate and immediate; the contagion extends through some distance in the atmosphere, in the direction of the wind. The contagious character is developed during the suppuration of the pustules, and remains till desiccation. It does not appear to undergo any modification from the disposition of the individual; the pus of a confluent variola may communicate a distinct one, and *vice versa*. Variola spares neither age, nor sex, nor even the fœtus. It is met with in all climates and seasons. It affects the same individual but once; if we are allowed to doubt the cases related by Foreest, P. Borel, Diemerbroëck, Deháen, &c. or those more recently published by physicians, who do not appear to have made the whole of the varieties of varicella sufficiently their study. Small-pox is sometimes sporadic; more frequently epidemic; it usually commences its ravages in the spring, reigns during summer and autumn, and disappears in winter.

§ 243. (d.) The eruption of variola is easily distinguished from that of other pustulous diseases, particularly from that of ecthyma, and from artificial pustules, produced on the skin by mechanical irritation, and which have been most improperly designated as *false inoculated variola*. There is no real difficulty in the diagnosis, except in indicating precisely the characters which distinguish distinct small-pox from confluent pustulous varicella. These differential signs have been pointed out (§ 227.)

§ 244. (p.) The gravity of the prognosis depends on the number of pustules; the degree of cutaneous inflammation, particularly that of the face; on the extent and intensity of the phlegmasiæ of the gastro-pulmonary mucous membrane; and on the permanent or temporary nature of the cerebral congestions. A favourable, or unfavourable prognosis, cannot be formed without an attentive examination of the principal symptoms. In confluent variola, the danger is less imminent if the eruption is *successive*. It is then composed of a series of separate variolæ, thus permitting nature and art to act with advantage. If, on the contrary, the eruption is *simultaneous;* if the pustules appear at the same time on the face, neck, limbs, and trunk, this disease is the most grave to which the human species is liable. Death is then frequently

the immediate result of the double phlegmasia of the mucous membrane and of the skin; and if this fatal result does not happen, convalescence is frequently prolonged by obstinate ophthalimæ, otitis, cæco-colitis, or other inflammations. The older the patient, the more intense are the symptoms of gastro-laryngo-bronchitis, and the graver the prognosis. The premature development of the eruption, and small size of the pustules; their flattened form, irregularity of their progress, and their complication with petechiæ, have been also remarked as unfavourable signs. The danger is thought to be extreme, when the elevations contain a transparent serosity instead of pus; and all hæmorrhages which supervene during suppuration are unfavourable: these observations are true, where these phenomena coincide with internal lesions of the viscera, or mucous membranes. Under other circumstances, caution should be taken to guard against a too unfavourable prognosis.

§ 245. (T.) The treatment should have for its end, to combat at the same time the inflammation of the skin, and that of the mucous membranes which accompanies it, and the different lesions which precede or follow its development.

In *distinct* variola, the cutaneous inflammation is not considerable, and that of the gastro-pulmonary mucous membrane rarely presents a high degree of intensity. However, as there is not always a constant relation between the degrees of these two phlegmasiæ, it may happen that *distinct* variola is attended with lesions sufficiently serious to require the most active treatment.

When the cutaneous and other inflammations exist in a slight degree only, it is sufficient to place the patient in pure air, in a large room, and mild temperature. If the symptoms which precede the eruption, and which are usually those of inflammation of the digestive organs, are at all intense, leeches must be applied to the epigastrium, and the abdomen be covered with emollient cataplasms, mucilaginous clysters must be administered, spare diet, and acidulated diluent drinks, &c.; in a word, the gastro-enteritis must be treated appropriately. If the inflammation does not yield, is associated with laryngo-tracheitis, and their intensity prevents the development of the pustules on the skin, the lancet must be had recourse to, unless it is preferred to apply leeches to the epigastrium, or anterior part of the neck. When the eruption is complete and the internal inflammation arrested, it is necessary to watch the course of these phlegmasiæ; their

symptoms will decrease, and at last disappear, by the use of spare diet and diluent drinks.

§ 246. The treatment of *confluent* small-pox offers several indications. The whole surface of the skin is inflamed; the mouth, nasal fossæ, conjunctivæ, pharynx, larynx, trachea, bronchia, the stomach, intestines, and sometimes the brain and its membranes, are the seat of inflammatory alterations more or less grave, and require the most active and energetic treatment. The inflammation of the skin should be treated by general bloodletting, the application of leeches, by the employment of oily and emollient embrocations, by unction with cream or cerate, by temperate baths, 17° R.* This last measure I have employed with equal success in scarlatina, and in confluent variola. The pustules of the face should be punctured with the point of a needle, to give issue to the contained pus, which should be absorbed with a sponge dipped in some emollient decoction.

To diminish the violence of the eruption and the symptoms attendant on it, it has been proposed to expose the patient to the influence of cold air, to plunge him into a cold bath, to practise *irrigation*† over the body, or ablution with cold water. This treatment never causes the disappearance of the pustules, as some pathologists were led to believe; but it may have an unfavourable influence on the laryngo-bronchitis, which always accompanies confluent variola. Some have thought to prevent the maturation of the pustules by bloodletting, carried to a considerable extent. M. Janson says, indeed, that leeches having been applied to the neck of a young woman who had confluent small-pox, they caused such an abundant hæmorrhage that the patient was in much danger, but that most of the pustules were aborted. This fact does not justify, certainly, the attempt to abort, by copious and repeated bleedings, the pustules of distinct or semi-confluent variola, as they may be cured by less active, and therefore less dangerous means; but is it not better to treat coherent variola, attended by erysipelatous swelling of the face, cerebral congestion, laryngo-tracheitis, &c., by large bleedings, than to oppose it by small losses of blood, or to stand by, a simple spectator of its progress to a fatal termination? I can, now, hardly conceive how I have hesitated to make free use of the lancet under such circumstances, where I most deci-

* 93° F.

† The meaning of the author is, to allow the water to run in small streams over the body.—T.

dedly should have drawn a pound of blood from the arm had erysipelas of the face alone existed; that is, an inflammation twenty times less considerable.

M.M. Bretonneau and Serres have proposed to abort the pustules by cauterising them at the outset with the nitrate of silver.* M. Bretonneau advises the pustules to be punctured, and their point removed, with a needle of gold or silver charged with the lapis infernalis. M. Velpeau proposes the summit of the pustules first to be removed, and then for them to be touched with the point of a pencil of lunar caustic; or a stilet, charged with this substance, to be plunged into the cavity of the pustules, which are to be afterwards cauterised with a stick of nitrate of silver. The plan of M. Serres is simply to cauterise the pustules with the nitrate of silver, pointed and held in a portecrayon; or to cauterise them *en masse* by a small brush dipped in a solution of the caustic, which may contain from fifteen to forty-five grains to a table-spoonful and a half of water; the cauterisations to be repeated if necessary.

If the pustules are cauterised *individually*, the first and second day of their eruption, they are really aborted. Towards the seventh day of the disease, the cauterised epidermis rises in plates, without leaving any perceptible cicatrix. If cauterisation is postponed till the third day, it does not often succeed; lastly, if this operation is delayed till the fourth or fifth day, it exercises no influence over the progress of the pustules, which are then followed by cicatrices.

Cauterisation *en masse* is less painful, and more expeditious than the preceding. The latter consumes whole hours to cauterise the pustules of the face only, in confluent variola. But cauterization *en masse* scarcely ever aborts the pustules, even when practised the first or second day of the eruption. It seems rather to suspend the progress of the maturation; but when the crust of cauterisation is detached, traces of the pustules are found beneath, which have continued to run through their course.

To sum up: 1°, cauterisation *en masse* should be rejected, *individual* cauterisation can only be useful on the first or second day of the eruption; 2°, the operation should be confined to those parts on which it is wished to avoid having

* Serres, *Méthode Ectrotique de la Variole Confluente.* (Arch. General. de Med. 1825.)—Valpeau, *Note sur l'Emploi des Caustiques, comme Moyen d'Arrêter l'Eruption Variolence.* (Arch. General. de Med. tom. viii.)—Meyraux, *Méthode Ectrotique de la Variole.* (Annal. de Méd. Physiol. tom. viii.)

cicatrices; for the pain attending it, and the reaction which follows, lead me to think that the cauterisation of a great number of pustules would be more likely to cause, than prevent, cerebral affection; 3°, lastly, the only real advantage of *individual* cauterisation, practised in time, being to prevent the formation of cicatrices, the ectroctic method appears more applicable to the pustules of the face in distinct and semi-confluent variola, than to the coherent pustules of the more grave form of the disease.

The inflammations of the mucous membranes which accompany variola, opthalmia, coryza, stomatitis, laryngo-tracheitis, &c., require antiphlogistic treatment, *uti institueretur si variolæ non adessent* (Cotugno;) but these *variolous* inflammations do not yield so readily to bloodletting as erythematous phlegmasiæ, not depending on miasmatic poisoning, or the inoculation of a virus.

When encephalitis is complicated with confluent small-pox, which is not so frequent as has been lately supposed, the nocturnal exacerbations of this disease are nearly always attended by delirium and agitation, which are attributable to cerebral congestion. After the proper employment of the lancet, I have often combated this symptom with success by the continued and repeated application of ice to the head, at the same time that the feet have been enveloped in emollient cataplasms.

§ 247. During convalescence, the inflammation of the skin, the development of furuncles or ecthyma, the continuation of diarrhœa, &c., require, independent of careful regimen, the use of tepid baths, simple or emollient.

§ 248. From time immemorial, in Georgia, Circassia, Egypt, Hindostan, &c., inoculation has been practised to render variola less fatal. This operation, long unknown in Europe, was performed for the first time here in 1673, by Timoni and Pilarino,* in an epidemic which ravaged Constantinople. Notwithstanding the opposition which is always made to discoveries, this method rapidly spread, and was generally adopted thoughout Europe, till Jenner proved that the insertion of *cow-pox* had immense advantages over that of variola. (§ 249.)

* Timoni, *Historia Variolarum quæ per Ineisionem Excitantur.* Constant. 1713.—Pilarino, *Nova et Tuta Variolas Excitandi per Transplantationem Methodus.* 12mo. Venetiis, 1715.

VACCINA.*

Syn.—*Vaccination,* Willan. *Variola Vaccina. Inoculated Cow-pox.*

§ 249. This disease is sometimes seen on the udders of cows in the form of pustules, and is known in England by the name of *cow-pox* (*vérole de la vache.*) The humour of these pustules, inserted into the skin in man, produces a similar eruption, to which has been given the name of *vaccina.* Its development is a preventive from small-pox.

§ 250. Vaccine pustules appear three or four days after the inoculation of the virus; about the seventh or eighth day they contain a viscous transparent fluid, deposited in a cellular bag; on the eighth day their circumference has a raised edge, they are depressed in the centre, and are surrounded by an inflamed areola; lastly, the contained humour is transformed into a brownish crust, which becomes detached about the twenty-fifth day, and leaves on the skin a characteristic foveolated cicatrix.

§ 251. Individuals of all ages may be inoculated with vaccine virus. Infants have been vaccinated even a few hours after birth. This operation ought, however, unless an epidemic of variola exists, to be postponed for some days in newborn children, particularly if they have any acute gastro-intestinal affection; this would be aggravated by the febrile action which vaccination gives rise to. Menstruation or pregnancy does not contraindicate this operation; lastly, the development of vaccina may take place in all seasons, although its progress may be more rapid under the influence of an elevated temperature.

§ 252. Healthy individuals require no preparation for vaccination; yet, in adults and old persons, it is sometimes necessary to subdue the rigidity of the skin by means of baths, lotions, or the application of poultices, the day before insertion. In children of weakly constitution and lax fibre, it may be requisite, on the contrary, to rub the skin with a napkin, rather briskly, previous to the operation. By these means we may succeed in vaccinating individuals, on whom the attempt has been made several times in vain.

* Jenner, *An Enquiry into the Causes and Effects of the Variolæ Vaccinæ.* 4to. London, 1793.—Husson, *Recherch. Histor. et Médicales sur la Vaccine.* Paris, 1803.—Sacco, *Trattato di Vaccinaz. con Observaz. sul Giavardo e Vajuolo Pecorino.* 8vo. Milano, 1809.

§ 253. Some circumstances may prevent the success of the operation; such as the existence of acute inflammation of the viscera, or a more or less considerable flow of blood, caused by the punctures being made too deep. It is always unsuccessful in persons who have had small-pox, or have been previously vaccinated. In a few subjects, some hidden causes may oppose the development of vaccina. In infants only three or four days old, vaccination generally fails twice out of three times, while it succeeds in ninety-nine cases out of a hundred after the age of six weeks.

§ 254. (c.) Vaccination may be effected by means of blisters, incisions, or punctures.

1°. *Blisters* have the double inconvenience of producing an irritation which tends rather to impede than favour the adoption of the virus, and of causing an inflammation which sometimes terminates in obstinate ulceration.

2°. The method of *incision* is frequently followed by the development of spurious pustules. It is only useful when the supply of matter consists of threads which have been soaked in it. A superficial incision, of a line or a line and a half in length, is to be made on the skin, so that little or no blood is drawn. Into this incision about a line of the saturated thread is to be introduced, which is then to be covered with a piece of gummed silk, retained in its place by a bandage. In two or three days this apparatus may be removed, and, if absorption has commenced, the thread also.

3°. The mode by *puncture* is less painful than the preceding, and more certain in its result. Three punctures are usually made on each arm by a needle, or a small cannulated or common lancet. If inoculation is practised from arm to arm, which is always to be preferred, the virus should be taken from the vaccine pustules the fourth day of the eruption. The following characters are then present: 1°, when several apertures are made in the same pustule, with the point of a lancet, the matter *slowly* exudes, under the form of small *globules*, of a silvery hue; 2°, more abundantly spread over the areola, this fluid resembles in appearance the moisture which snails leave behind them in crawling; 3°, it is viscous, and with difficulty mixed with blood; it is tenaceous, like a syrup, between the fingers; sticks to the lancet, or to glasses placed on the pustule, and quickly dries in the air, forming a grumous, gummy coat on the instrument; renders threads impregnated with it stiff, and when they are dry, and are

folded, it falls off in scales of a vitreous aspect and consistence.

§ 255. After having taken on the point of a lancet or needle a drop of the vaccine fluid, the vaccinator seizes with his left hand the back part of the arm of the subject he is about to vaccinate; he puts the skin on the stretch, and with his right hand he introduces the instrument into this membrane, keeping it in an horizontal position, till a small drop of blood comes away. The operator then applies the thumb of his left hand over the puncture, allowing the instrument to remain a moment in the wound, moving it slightly, and then withdrawing it under the pressure of the thumb, as if wiping it.

§ 256. If vaccine lymph is only to be procured on a thread, rag, or between glasses, it will be necessary to dilute it with the smallest possible quantity of water, by stirring it for a short time with the point of the needle, or lancet, till the mixture acquires an appearance almost oleaginous. When using vaccine matter preserved in a glass tube,* it is necessary, in the first place, to break off its two extremities. One of these ends is then adapted to another tube, of straw or glass; and after having fixed the other on a plate of glass, then blow gently through the tube till about a line of vaccina remains in it. This is afterwards to be inserted with a needle or lancet, as in the operation from arm to arm.

§ 257. (s.) At the time each puncture is made, there is nearly always seen, at the point of insertion, a slight, red, superficial circle, from six to twelve lines in diameter, which disappears in a few minutes. This first phenomenon is not, as has been asserted, an indication of the success of the operation: it is attendant on all punctures. When the circle is effaced, the puncture rises in the form of half a lentil, slightly red. This remains a longer time than the previous circle; but, like it, disappears in a few minutes. Till the third or fourth day, the vaccinated part presents no alteration. At the end of this time the inflammatory stage commences:

* These small tubes, invented by M. Bretonneau, are six lines in length, and capillary at their extremities. To charge them with vaccine, several punctures should be made in the vaccinal pustules, and the finest ends of the tubes applied successively to the little drops of lymph. When about a line of the tube is filled, the two ends are to be closed hermetically, by holding them over a lamp. To transport these tubes, it is only necessary to put them in a quill, sealing it at each end. Vaccine lymph thus collected, will preserve for years its fluidity and contagious property, if not exposed to a too elevated or an extremely low temperature.

there is, distinctly perceptible to the touch, a slight hardness at the point of puncture, and a small red elevation is not long in being discerned. On the fifth day this elevation becomes circular, and assumes the umbilicated form. There is some itching experienced. The sixth day, the red tint of each elevation becomes clearer; the sac, surrounded by a red circle of half a line in diameter, enlarges, and the centre of the pustule becomes more depressed. On the seventh day, the pustule increases in size, the sac flattens, and assumes a silvery aspect; the redness becomes deeper, and the central depression reaches to very nearly its external edge. The eighth day, the volume is still increased; the contained matter has a more or less deeper tint, but sometimes remains of the same colour. The narrow red circle, which, till now, has surrounded the pustule, has a less vivid tint, the inflammation spreading to the subcutaneous cellular tissue. On the ninth day, the circular swelling is larger, more elevated, and fuller of matter; the red circle, the irradiations of which were similar to wheals, assumes a more uniform rose-colour, and a beautiful areola is formed. The tenth day, the circular bag of the pustule enlarges; the areola extends, and acquires one or two lines in diameter, and the skin on which it is developed is sometimes much tumefied (*Vaccinal tumor.*) Its surface appears to be granulated and slightly *pointed*, and a number of small vesicles, filled with a transparent fluid, can be observed on it through a lens: it is a true acute eczema *rubrum*. The patient feels an acrid heat, sharp itching, and weight in the arm. The pain sometimes extends into the axilla. This inflammation is frequently accompanied by febrile excitement, announced by pandiculation, yawning, alternate paleness and redness of the face, and acceleration of the pulse. The eleventh day, the areola, the vaccine tumour, the swelling and central depression of the pustule, are in the same state. At this epoch, the vaccinal pustule, which projects from one to two lines beyond the level of the skin, resembles a large lentil, the sides of which have been raised by puncture. Its colour is pearly, its diameter from two to five lines; it is hard to the touch, and offers the resistance of a body closely confined to the skin. The whole of this time, the vaccine fluid is contained in a collection of small cells, in almost the same manner as the vitreous humour of the eye is enclosed in its cellular membrane. On the twelfth day, the period of desiccation commences; the central depression is changed into a crust; the contained fluid, till now limpid, becomes turbid

and opaline; the areola turns pale; the vaccinal tumour disappears; the epidermis peels off. The thirteenth day, desiccation progresses, and reaches from the centre to the circumference. The sac turns yellow, and collapses, when desiccation commences. The pustule, till now cellular, only forms a single cavity; if opened, it shrivels up, and furnishes a thick, yellowish, puriform matter. The areola becomes a circle of a purplish tint. The fourteenth day, the crusts are horny, and of a yellowish colour, resembling barley-sugar. The surrounding circle decreases in size, and follows the order of diminution of the vaccinal tumour. From the fourteenth to the twenty-fifth day, the solid and yellow crusts acquire a deeper shade, approaching mahogany, and nearly always preserve the umbilicated form. As the swelling subsides, the crust projects still more beyond the level of the skin; it falls off from the twenty-fourth to the twenty-seventh day, and leaves a deep cicatrix, marked with little points, resembling the depressions observed in honey-combs.

§ 258. The development of vaccina is not always thus regular: 1°, the inert stage may be prolonged till the twenty-second or twenty-fifth day, or may end in two or three days; 2°, irregular pustules are sometimes formed by the union of two pustules approaching too near each other; 3°, vaccine virus occasionally produces, in the same individual, vaccina and varicella; 4°, vaccinal pustules may be developed on parts that have not been inoculated; it is almost always on inflamed surfaces, and those deprived of their epidermis, upon chronic eczema, excoriated lichen, mucous tinea of the face, &c., that these secondary pustules are developed. They are produced by accidental and subsequent inoculation, which the patient causes by his fingers; after having scratched the pustules of insertion, other secondary pustules are the result of general infection; 5°, lastly, in negroes and mulattos, the inflammatory areola is but slightly marked, the skin exhibiting only a coppery tint, and the cicatrix is reddish.

§ 259. Vaccina is a very benign disease: but may be accidentally complicated with inflammations more or less serious. In new-born subjects, it reacts forcibly on the intestinal canal. When the pustules are very numerous and much inflamed, axillary ganglionitis, eczema, irregular pustules, roseola, erysipelas, phlegmon, even gastro-enteritis, are sometimes complicated with vaccina in children. The direct inoculation*

* That is, inoculation from the vesicles of the cow.—T.

of *cow-pox* has frequently caused these complications in adults.

§ 260. (D.) Vaccina cannot be confounded with those accidental pustules which have very improperly been called *false vaccina*, and which may be produced at any time by introducing pus, or any other liquid stimulant, beneath the skin. These pustules are developed one or two days after the puncture has been made; they are unequal, and elevated into a point. Their summits are yellowish from the commencement, their texture fragile, not bearing the slightest pressure; the pus they contain exudes, and is dried up by the third or fifth day. The consecutive crusts are yellow, soft, and frequently moistened by an ichorous matter. These pustules, in fact, have neither the course nor the umbilicated form of vaccinal pustules. *Vaccinella* has more analogy with vaccina; like the latter, it is characterised by one or several circumscribed pustules, flat and slightly depressed. The contained humour, if inserted into another individual, causes the development of similar pustules; but it differs from the vaccina by the greater rapidity of its course; by a less degree of inflammation existing in the sac, and areola; by the yellow tint of the contained fluid; by a mere spot remaining on the point it has occupied, instead of a faveolated cicatrix; lastly, by not being a preventive to small-pox.

Regarding their form and progress, vaccinal pustules bear great analogy to inoculated small-pox. Like the latter, they are developed a few days after the insertion of the virus; are circular and umbilicated, and their duration is about three weeks; but they differ from small-pox by the contagion not being transmitted by the atmosphere. These two diseases seem to be opposed to each other, since their simultaneous inoculation produces a modification of their external characters.

Vaccina being nothing more than *cow-pox* developed in man, it is not surprising that the pustules of the former resemble those of the latter, and that vaccina inserted into the dug of the cow should produce *cow-pox*. But it is somewhat remarkable, that the humour of the small pustules of *grease*,* *(eaux aux jambes)*, the progress of which and its external characters differ greatly from those of *cow-pox*, should give rise to the development of *cow-pox* and *vaccina*,† when introduced into

* In the horse.—T.

† Loy, *Account of some Experiments on the Origin of the Cow-pox.* Lond. 1802.

the system of the cow and man respectively. Notwithstanding the difference of their external forms, the identity of *cow-pox* and *grease* is thus demonstrated; while *cow-pox* and variola, the pustules of which bear such a striking resemblance to each other, appear to be of a different nature, since the inoculation of small-pox in the cow not only does not produce *cow-pox*, but is not even followed by any specific result.*

§ 261. (P.) Not only is vaccina, in general, a mild disease, but it may exercise, under some circumstances, a salutary influence. Like several other external inflammations, it has sometimes caused the cure of ophthalmia, chronic otitis, and bronchitis; lastly, vaccine virus, inserted on chronic inflammations of the skin, may, by changing the mode of irritation, produce the removal of these affections.

§ 262. (T.) Vaccina, if free from all complication, requires no treatment. It should be allowed, uninterruptedly, to go through its natural stages. The pustules should be protected from all friction and pressure, which may alter their structure before the period at which the anti-variolous property is developed. After the crusts have fallen, the administration of a purgative, often desired by the patient or his friends, is, at least, harmless. If an extensive phlegmon, or erysipelas, or intense inflammation of the axillary glands, gastro-enteritis, &c., becomes complicated with vaccina, these different affections must be treated by bloodletting, and other appropriate measures. After their cure, the vaccination should be proved by a second insertion of the virus.

§ 263. In case of an epidemic of small-pox, I should not hesitate to vaccinate a second time persons who were doubtful whether the former vaccination was fully developed, even if they carried a foveolated cicatrix on their arms; for this may accidentally succeed to vaccinella, or, at least, to vaccina interrupted in its progress by friction, &c.

§ 264. It is proved that if the progress of vaccina is disturbed by pressure, &c., so as to prevent it from running through all its stages, it will not be preservative from variola. A natural inference of this fact seems to be, that numerous punctures should not be made in all the pustules developed in the same individual, when the vaccine lymph is collected; and that when only a single pustule exists, it is prudent to leave it intact. It is probable that the irritation produced

* Voisin, *Mémoire sur la Vaccine*. 1801.

by puncturing may be followed by the same effects as compression, &c.

M. Husson* does not say whether the pustules, altered by continued pressure, were, or not, followed by foveolated cicatrices. Dr. Hamel shews that these cicatrices may follow vaccina interrupted in its progress, and which is not preservative; or that it may be developed twice on the same individual, which appears less probable.

VACCINELLA.

Syn.—*Modified Vaccina.*

§ 265. I designate under the name of *vaccinella,* a pustulous phlegmasia of the skin, which the insertion of vaccine virus, of *cow-pox,* or of *grease,* sometimes produces in individuals who have previously had small-pox. It may be also produced by the inoculation of variola and vaccina closely following each other; it is occasionally developed in man by the inoculation of spurious cow-pox. This disease bears the same relation to vaccina that varicella does to variola.

§ 266. *Vaccinella produced by the inoculation of vaccina in individuals previously variolated.*† When those who have been the subjects of small-pox are vaccinated, it usually is not productive of any result, and the punctures soon heal up; but sometimes a *vaccinal eruption* is developed, *modified,* both in its external characters and progress. This cannot be better exhibited than in those cases of varicella which the insertion of variolous virus produces in some vaccinated individuals; or than in those cases in which inoculated or variolated individuals are submitted to the influence of a new inoculation of variolous matter. Whichever of these takes place, the progress of this modified vaccina is as follows:

From the first to the third day the punctures inflame; pustules form, generally resembling those of vaccination. Their edges are flat, unequal, and not distended by the contained humour, which is always of a limpid yellow, and small in quantity. The areola, at times pretty vivid, is rarely so large as in vaccina, and is later in its appearance. During this stage, the patient usually experiences an insupportable itching in the punctures; the axillary glands become enlarged

* See Work cited.

† *Rapport de la Commission Medico-chirurgicale Instituée à Milan.* Paris, an. x.

and painful, cephalalgia supervenes, and sometimes irregular accessions of fever. The inflammatory stage is very rapid; there is neither tumour nor circumscribed induration, as in vaccina; and if there is tension about the wound, it is irregular and superficial. The crusts, well formed about the seventh or eighth day, do not fall so soon as those of vaccina; they occasionally present the same appearance, with this only difference, that they are not so large, or thick, and leave no cicatrix, but only a kind of spot on the skin.

2°. *Vaccinella produced by the accidental insertion of cow-pox in a subject who had been variolated.* Jenner* reports that he saw in a farm, five persons who had previously had small-pox, contract vaccina, by coming into contact with cows suffering under the disease; but he adds, that it was incomparably more benign than in ordinary cases.

3°. *Vaccinella from the inoculation of grease, in a variolated subject.*† At the beginning of the year 1801, Mr. Loy saw an eruption on the hands of a farrier, who had previously had small-pox. This eruption appeared not long after the man had dressed a horse affected with *grease*. It consisted of distinct, round pustules, containing a limpid fluid, resembling the vesicles of a burn, having in their centre a small black spot, and which were surrounded by an areola. In the whole duration of the eruption, no fever was manifested.

4°. *Vaccinella from the inoculation of variola, a short time subsequent to vaccination.*‡ When the variolous and vaccine virus are inserted at the same time, they reciprocally modify the action of each other. The vaccine pustule thus produced is smaller than usual, its progress more tardy; the areola scarcely perceptible, or formed prematurely. On the other hand, the variola is altered, and it appears under the form of hard, glistening pustules.

5°. *Vaccinella produced by spurious cow-pox.*‖ "We frequently see," says Jenner, "ulcers and pustules spontaneously developed on the teats of cows; particularly in the spring, when they change their food. These pustules may be transmitted to those persons employed in milking; but they are always of a much more benign character than those of true *cow-pox*, and do not protect from variola."

§ 267. (D.) Of all these eruptions, one only has been well

* Vide Work cited.
† Loy, *Account of Experiments on the Origin of Cow-pox.* 1802.
‡ Willan, *On Vaccine Inoculation.* 4to. Lond. 1806.
‖ Jenner,—Tellegen, *Dissertatio de Variolis Vaccinis.* Groningæ, 1801.

studied, viz. that produced by vaccination, in previously variolated individuals. The characters which distinguish vaccina from vaccinella have been already described (§ 260.) These also differ from the accidental pustules which have been denominated *false vaccina*, or *false variola*, (according as they have been produced by pus taken from vaccinated or variolated subjects,) by their progress, and umbilicated form.

Other varieties of vaccinella have been rather indicated than described, and their history requires to be duly studied.

§ 268. (P. and T.) None of these inflammations protect from variola; they are always benign, and require no particular treatment.

ECTHYMA.*

Syn.—*Ecthyma*, Willan. *Pustulous Scall.*

§ 269. Ecthyma is a noncontagious inflammation, characterised by large pustules, raised upon a hard circular base, of a bright-red colour. These pustules, called *phlyzaciæ* by Willan, are always distinct; they most frequently appear in a successive form, on several regions of the body; they become covered by brown, thick, adherent crusts, under which a new epidermis, or cicatrix, is formed; they more rarely terminate in ulceration and tuberculous induration.

§ 270. Ecthyma presents different appearances, according to the age of the patient, the degree, and more or less rapid march of the inflammation; the influence exercised on the production and duration of the pustules, by some concomitant lesions, led Willan to distinguish four varieties (*Ecthyma vulgare, E. infantilis, E. luridum, E. cachecticum,*) which may, to a certain extent, be justified, as each is connected with some peculiar conditions. Notwithstanding, I do not consider these varieties sufficiently well founded, for my adoption; the two following divisions of the disease appear preferable: *acute* and *chronic* ecthyma.

§ 271. (S.) *Acute ecthyma.* In its most simple and rare form, ecthyma is announced upon some region of the body, most frequently the neck or shoulders, by the appearance of red, circumscribed elevations, perceptible to the touch. Pus is soon distinguished at the summits of them, and their bases are very inflamed. They then become transformed into large voluminous pustules, elevated on hard circular bases, of a

* Willan, *On Ecthyma.* 4to.

deep red in young subjects, and livid in old persons. These pustules, the successive eruption of which is completed in three or four days, are always at a certain distance from each other. Their summit usually gives way one or two days after their formation, and gives issue to a purulent matter, which becomes a brownish, greenish crust, adherent to the skin. In this mild form, these crusts become detached in one or two weeks, leaving behind them livid red spots, and at times, small cicatrices, which, in size, approach those of variola, being, however, more superficial.

Acute ecthyma is accompanied by pretty sharp lancinating pains. The lymphatic glands in the neighbourhood of the pustules sometimes inflame and tumefy. This pustulous inflammation is occasionally attended by chronic phlegmasia of the digestive organs, which may continue after the disappearance of the eruption. It is rarely that this form of ecthyma is accompanied by functional disorder of the circulatory system.

§ 272. *Chronic ecthyma* is much more frequent than the preceding, and is always composed of successive eruptions, manifested on the neck, scalp, limbs, or even the face, at more or less distant epochs. The pustules have the same characters, and pass individually through the same stages as those observed in a single eruption of *acute* ecthyma. Each pustule is developed, becomes red, suppurates, and is covered by its crust, in fact, goes through all its different stages, independent of the others; some pustules are formed at the moment others are suppurating, drying, cicatrizing, or becoming transformed into tubercles. In the space of a few months there are thus formed several eruptions of phlyzaceous pustules, perfectly independent of each other. As well as the successive mode of eruption, prolonging the duration of ecthyma, other circumstances may tend to increase it. Thus the pustules sometimes acquire very large dimensions, their bases more prominent and extended, are analogous to those of furuncles, the subcutaneous cellular tissue is also inflamed, and they become hard and violaceous, (*E. luridum*, W.,) their summits rupture in the course of eight or ten days, giving out a sanious or sanguinolent discharge. The small *ulcerations* caused by the rupture of the pustules, extending beyond their primitive dimensions, are covered by brown or blackish crusts, usually very adherent. These crusts are surrounded by a livid, red areola, which at times remains after they have fallen; as they commonly do in a few weeks. Spots of a

deep-red colour, and violaceous cicatrices, remain on the points of the skin which the pustules have occupied.

When the crusts are torn off before the time they usually become detached, ecthyma is frequently followed by small ulcers with callous edges, and from the surface of them a sanious fluid is poured out. These are generally indolent ulcerations, and sometimes remain in the same state for seven or eight days.

Lastly, when the pustules continue a long time without ulcerating, they are often followed by violaceous tubercles; and may so deeply affect the skin as to leave irregular cicatrices behind them. The successive eruptions which constitute chronic ecthyma are principally observed in weakly and badly-nursed children, (*E. infantilis*, W.;) in old persons whose health has suffered from hard labour, abuse of spirituous liquors, &c. (*E. cachecticum*, W.) When the pustules are few in number, when the successive eruptions take place at epochs sufficiently distant from each other, and the disease is not complicated with lesions of internal organs, chronic ecthyma is not attended by the general morbid phenomena designated, collectively, under the name of febrile action. If, on the contrary, the eruptions are full, and follow each other quickly; if the pustules are much inflamed, and acquire large dimensions; if they ulcerate, &c., then febrile excitement is present, in proportion to the inflammation of the skin. The morbid phenomena produced by gastric or intestinal irritation, such as anorexia, epigastric pain, irregular alvine excretions, cephalalgia, pains of the limbs, lassitude, diminution of muscular power, &c., are almost always observed in the course of chronic ecthyma, varying in their intensity according as the causes of the disease affect more or less powerfully the mucous membranes, or the organs of innervation. More rarely, concomitant inflammation of the conjuctiva, and mucous membrane of the pharynx, has been observed. Lastly, chronic ecthyma may be complicated with other inflammations of the skin and the subcutaneous cellular tissue, more particularly with furuncles. The duration of this form of the disease, according to the number of successive eruptions, is sometimes three or four months. The accompanying lesions may be removed, either before, or not till subsequent to the disappearance of the pustules.

§ 273. (c.) Ecthyma attacks all ages and constitutions; but is most frequent in adults. Persons of a sanguine experiment appear to be peculiarly predisposed to it. It is seen at

all seasons; but oftener in the spring than any other time of the year. Bad nourishment, cold, and damp habitations, and want of proper clothing, are the common causes of this disease, which is mostly confined to the lower classes of society. Ecthyma is neither contagious, nor transmitted by inoculation. Willan says that artificers who handle metallic substances have their hands affected with this disease. A previous, or existing inflammation of the skin, may cause its development. It often succeeds to variola, confluent psora, and more rarely to rubeola, scarlatina, leech-bites, and other cutaneous phlegmasiæ. Ecthyma may be connected with inflammation of the stomach or intestines, and sometimes with diseased lungs. These relations of ecthyma with internal affections, indicated by some morbid signs during its course, are still further confirmed by the knowledge of a great many of its causes, the influence of which in its production is generally admitted. Such are, in children, bad alimentation, the action of cold and moisture; and in adults, the abuse of spirituous liquors, excesses in diet, the habitual use of bad aliment, disordered digestion, &c. Lastly, in women, ecthyma is most frequently developed during pregnancy. According to some authors, it may also be produced by prolonged moral causes, such as watching, anxiety, &c.

§ 274. (D.) Whether ecthyma is acute or chronic, or consists of a single or several successive eruptions, its large pustules always present well-marked external characters. They cannot be confounded with the small pustules of impetigo, cuperosa, mentagra, and tinea. The pustules of ecthyma are neither umbilicated, like those of variola, nor multilocular, like those of vaccina; neither are they contagious. If ecthyma is more easily confounded with pustulous syphilitic disease, this uncertainty in its diagnosis can only arise in cases where the eruption takes place in a slow and successive manner. However, syphilitic pustules are rarely surrounded by so large an areola as those of ecthyma; they have also more tendency to ulcerate than the latter, which in their form approach rather to the nature of small furuncules. Besides, the differential diagnosis of these two diseases is rendered easier, in some cases, by an accurate history of the case, and the presence of some other concomitant lesions of a syphilitic nature; lastly, by the beneficial or other effects of mercury.

Itch has no analogy with ecthyma, except it is complicated with pustules, or when the vesicles which characterise it are accidentally transformed into pustules. In ecthyma, the pus-

tules are seldom numerous; their appearance is successive, the progress of each being independent of the others. In psora, on the contrary, the accidental pustules are developed on the most inflamed points, and are always mixed with the small vesicles characteristic of the complaint. The pustules are more agglomerated than those of ecthyma. They are frequently seen on the back of the hand, between the fingers, particularly between the thumb and index-finger, and they are accompanied by itching; while the pustules of ecthyma produce a lancinating pain, approaching that caused by furuncles. Itch is vesiculous and contagious; ecthyma is pustulous, and not transmissible by mediate or immediate contact. Ecthyma has frequently been confounded with furuncle; but the inflammation, in the former, spreads from without to within, and even when it extends to the subcutaneous cellular tissue, it never gives rise to the formation or expulsion of a core, as in furuncle.

§ 275. (P.) The prognosis of ecthyma necessarily varies according as it consists of one or of several eruptions at more or less distant intervals: according to the nature of the concomitant lesions, to the more or less advanced age of the patient, the possibility, or not, of restraining the causes which have produced it, &c.

§ 276. (T.) If the single eruption characterising *acute* ecthyma only consists of some scattered pustules, if they exist independent of all complication, the treatment should be confined to the use of diluent drinks, simple warm or cold baths, or the decoction of bran; and the patient should be kept on a mild, regular diet. If the eruption is more abundant, if the subject of it is young and vigorous, general bleeding is indicated, and the use of cold or temperate baths more or less frequently, according to the degree of the cutaneous inflammation.

§ 277. Each of the successive eruptions which constitute chronic ecthyma, present the same indications as the single one in the acute form of the disease. However, the health of persons affected with this variety has frequently been injured from want of proper and wholesome food, and bloodletting must be employed with much caution, and proper nourishment should be a principal part of the treatment. Mineral, saline, or sea-water baths, may be substituted for the common bath with advantage. In the case of an infant at the breast being the subject of chronic ecthyma, the quality of the milk should

be examined, changing which is often indispensable to the success of the treatment.

§ 278. It is almost superfluous to add, that when chronic inflammations of the mucous membranes coincide with ecthyma, they are to be carefully attended to. Here I may observe, that laxative and bitter drinks are to be administered only in cases in which no symptom of gastric or intestinal irritation exists. Bateman has recommended in a too general manner feruginous preparations, and those of cinchona, serpentaria, &c. sarsaparilla, and antimonial compounds. When ecthyma is produced by the use of bad nourishment, abuse of spirits, or excess in diet, these medicines are certainly noxious; administered with the view of giving tone to, and strengthening the stomach and bowels, they constantly aggravate the inflammation by which these organs are affected; and if, during their employment, the cutaneous inflammation diminishes or disappears, it is most frequently owing to the increase of the gastro-intestinal irritation which these remedies have caused.

§ 279. Willan and Bateman have given a good description of ecthyma. Several accounts have been published of *eruptions of a great number of small furuncules*, of *crustaceous button-like dartre, singular disease of the skin*, &c., through the obscure descriptions of which the characters of ecthyma may be perceived: but of what utility are materials of so equivocal a nature?

CUPEROSA.*

Syn.—*Acne Simplex, A. Indurata, A. Rosacea,* Willan.
Gutta Rosacea. Rose-drop.

§ 280. Cuperosa is a chronic inflammation of the skin, characterised by the successive eruption of small isolated pustules, the bases of which, more or less hard, are surrounded by an inflamed areola; they are scattered over the cheeks, nose, forehead, and sometimes even on the ears and superior part of the neck.

§ 281. (s.) 1°. In its more simple form, (*Acne simplex*, W.) cuperosa is announced by some red pustules on the face. Their successive development takes place without local heat, or any other sensation than a slight formication of the skin; each pustule is formed, suppurates, and dries, independent of

* Alibert, *art.* Cuperosa, *Dict. des Sciences Médicales.*—Biett, *art.* Cuperose, *Dict. de Médecine.* 18 vols.

the rest. The progress of suppuration is slow in the small pustules of cuperosa; it is not till towards the middle of the second week that their summits grow thin and become perforated, and then covered by a very small, thin light crust, produced by the desiccation of the seropurulent humour. These pustules are frequently intermixed with small black points, more or less prominent, formed by a thick, solid unctuous humour, accidentally accumulated in the follicles of the skin. When these small points are numerous and close together, the skin of the nose has a fat, oily aspect, and that of the cheeks becomes rough and unequal (*Acne punctata*, W.)

2°. The pustules of cuperosa are sometimes larger, more numerous, and closer together; they are conoid in form, and have large hard bases; they are of a violet-red colour, are indolent, and suppuration takes place at their summits only after some weeks' duration. They are at times collected into groups, so close together as to appear to form a flattened tumour; the pustules are most inflamed in adults, particularly in those of a sanguine experiment. They are aggravated by the slightest excess of regimen, or by remaining long in an elevated temperature, &c. Under these different influences they run rapidly through their stages, but commonly succeed each other in great numbers. In this variety (*Acne indurata*, W.) the vascular tissue of the dermis is more deeply affected, and the subcutaneous cellular tissue itself sometimes participates in the tumefaction of the skin. On their disappearance, most of the pustules leave a livid tint on the skin, and a depression which is never effaced.

3°. Another variety of cuperosa belongs more especially to mature age (*Acne rosacea*, W.) Some red spots, developed on the nose and cheeks, become the seat of a disagreeable itching, after the ingestion of strong wines or spirituous liquors. They soon enlarge, and become transformed into small pustules, not very numerous at first, but which multiply and succeed each other without intermission. The skin on which they are developed remains habitually injected, and retains a violaceous red tint, which is brighter around the pustules. The points on which they have been renewed several times become tumefied and indurated; the small superficial veins are dilated, and give a bluish cast to the skin; the features are enlarged, and the expression of the physiognomy is altered, and assumes a disagreeable aspect.

§ 282. Besides these fundamental differences in the form, number, and progress of the pustules, cuperosa presents innu-

merable shades, according to the extent it occupies, its duration, and the nature of the affections complicated with it. Sometimes the pustules, few in number, are isolated, and leave behind them only a slight redness on the skin. At other times they are numerous, succeed each other rapidly, cover the whole face, and extend even to the neck. When cuperosa arrives at this degree of intensity, it is frequently followed by red or violaceous tubercles, more or less voluminous; the conjunctivæ are inflamed; the gums become painful and tumefied; and the teeth loosen, after this chronic inflammation of the mouth. Lastly, in more rare cases, cuperosa does not extend beyond the alæ of the nose, on which are elevated rugous livid tumours. All the elementary tissues of this organ swell, so as to give it double or treble the dimensions which it usually has.

§ 283. (c.) Cuperosa is generally seen in men from thirty to forty years of age. *Acne punctata*, however, is more particularly observed in youth; men of mature age, and old people, are seldom affected with it. The sanguine temperament of youth, and bilious temperament of adult age, predispose to cuperosa. Its connexion with chronic inflammation of the stomach and alimentary canal, is frequent, and easily detected. Its dependence on an affection of the liver is more rare and difficult to ascertain, notwithstanding the old and repeated assertions to the contrary. Women, more frequently the subjects of cuperosa than men, are usually affected by it at the age of puberty, and on the cessation of the menses. This eruption may also supervene on the suppression of the menstrual flux, and disappear on its return; or it may coincide with simple dysmenorrhœa. Cuperosa is seldom aggravated by pregnancy; but often decreases or disappears during gestation. This disease is hereditary, and may be transmitted to several generations successively. It has been supposed that cold, damp climates, have a marked influence on the development of this eruption, as it is more frequent in the north of Germany and in England, than in meridional countries; but this may be explained by the abuse of spirituous liquors, indulged in by the people of the north, which is a less equivocal cause than their climate.

The excesses of the table, some vicious habits, more or less acute moral affections, certain occupations which require a long continuance of the same attitude, causing a determination of blood to the head, are the common causes of cuperosa. Lastly, the contact of certain paints and astringent liquids,

the use of cosmetics, practised by women in the decline of life, are more direct and immediate causes, the action of which is particularly evident when there is no predisposition to the disease.

§ 284. (D.) The pustules of cuperosa are easily distinguished from those of other diseases. They never have the dimensions, nor the adherent crusts, of the pustules of ecthyma. They are never covered by large thick crusts, like those of impetigo, or the varieties of tinea. The *pustules* of cuperosa cannot be confounded with the *papulæ* of lichen. The small light crusts formed on the summits of the pustules of cuperosa, are very distinct from the thinner, and more extensive crusts of chronic lichen, which may readily be mistaken for epidermic scales. The development of syphilitic pustules or tubercles is rarely confined to the face; they are most usually observed on all regions of the body at the same time, or, at least, on a considerable portion of its surface. This circumstance sufficiently distinguishes them from cuperosa. When syphilitic pustules occupy, exclusively, some parts of the face, they are commonly seated around the alæ of the nose, and commissures of the lips, and are almost always uneven and fissured, having the appearance of vegetations. They are distinguished too, by their shining surface and coppery colour. The tubercles of lupus, *(dartre rougeante scrophuleuse,)* at first superficial, and but slightly elevated, might be confounded with the tubercles which sometimes succeed to the pustules of cuperosa; but those of lupus enlarge more slowly, assume a livid tint, extend from the nose to the cheeks, and destroy, in ulcerating, all the subjacent tissues; thus rendering a mistake impossible.

§ 285. (P.) Cuperosa is curable when the subject of it is young, the eruption recent and slight, and the pustules not very numerous. On the contrary, when it shows itself in adult age, is connected with chronic affection of the digestive organs, or when it is hereditary, of long standing, and of large extent, the best treatment rarely succeeds in preventing the development of the pustules, or causing the resolution of the tubercles.

§ 286. (T.) In persons affected with cuperosa, the diet should consist of white meats, fresh vegetables, and ripe juicy fruits; they should carefully abstain from fatiguing exercise, excessive study, and from remaining in places of high temperature. If the patient is young and sanguineous, the pustules numerous and confluent; if the tubercles are inflamed

and unite at their bases, bleeding from the foot, and the repeated application of leeches, behind the ears, to the temples, and alæ nasi, is generally useful. Ambrose Paré* advises copious bloodletting, as being efficacious. "A patient attacked with *rose-drop*," says he "should be bled from the basilic vein, then from the forehead, then from the nose; and should have leeches applied on different parts of the face. He should also be cupped on the shoulders." If cuperosa depends on the suppression of the menses, or of a hæmorrhoidal flux, leeches should be applied to the vulva, or anus, at the period of the usual appearance of these evacuations. The employment of diluents, whey, cooling diet, clysters, tepid baths, bran lotions, and internally, of tepid milk, bitter almond emulsion, decoction of quince-seed, assists the good effects of this treatment. It is seldom, however, that purely antiphlogistic treatment completely cures cuperosa, and we are obliged to resort to some *external means*, the efficiency of which has been proved by long experience. The ancients made frequent use of liniments, of which turpentine, vinegar, soap, myrrh, &c. were the base. At the outset of cuperosa, when the pustules are few, isolated, or not much inflamed, and in graver cases, after having bled freely, it is preferable to employ lotions of distilled rose-water, lavender, &c. mixed with about a sixth part of alcohol, according to the state of the pustules. Solutions of the dento-chloruret of mercury† are also useful.

The mineral and sulphureous waters of Barèges, Aix in Savoy, Cauterets, &c. administered as lotions, baths, and vapours, are very beneficial in old cuperosa.

The nitrate of silver and hydrochloric acid have sometimes been employed, to cause chronic cuperosa to take on the acute form. These applications should, in general, be preceded by bloodletting, and made so as not to affect the skin too deeply, or they may be followed by erysipelas, ulceration, and indelible cicatrices.

Aqueous vapour *en douche* is useful, after bleeding, to facilitate the absorption of the tubercles in this disease. Directed for twelve or fifteen minutes on the face, it produces a fluxility, rendering the skin softer, and smoother to the touch. The action of vapour baths, is more general and less useful.

The resolution of the tubercles may be attempted by

* Paré (Amb.) *de la Goutte Rose*, lib. xxvi., chap. xlv.

† ℞ Rose-water, Oj Eau de Cologne ℥i. Corros. Sublim. gr. viij for lotion.

repeated unctions with the ointments of the proto-chloruret of ammonia, or proto-sulphate of mercury.*

Ambrose Paré and Darwin advise that obstinate cuperosa should be combated by the application of blisters over the face, but caution should be taken in using these means.

To obtain a permanent cure, it is always necessary to continue the treatment for sometime after the disappearance of cuperosa; cold sulphureous applications, *en douche* and *en arrosoir*,† are very efficacious in restoring the skin to its natural state.

§ 287. When cuperosa was looked upon as a depurative disease, the use of purgatives and vegetable juices, such as cochlearia, beccabunga, sage, &c. was recommended. It is now generally thought, at least, useless to load the digestive organs with these remedies. If it is complicated with gastro-enteritis, or chronic hepatitis, their action will certainly aggravate these internal inflammations, which ought to be combated by means adapted to their seat and nature.

§ 288. Ambrose Parè gives a case of obstinate cuperosa, treated successfully by the application of a blister to the face. The treatment employed by this celebrated surgeon has been too much extolled, and we possess other agents less painful, less dangerous, and equally efficacious. (§ 286.)

MENTAGRA‡.

Syn.—*Impetigo.*

§ 289. Mentagra is a cutaneous inflammation characterised by the successive eruption of a number of small acuminated pustules, similar to those of cuperosa on the chin, submaxillary regions, and lateral parts of the face.

§ 290. (s.) The development of mentagra is usually preceded by a feeling of tension and heat on different points of the chin. The pustules, announced by slight smarting, are observed, at first, under the form of small red points, which gradually grow more prominent. Towards the second or third day of their formation, their summits become white, and enlarge; but it is seldom they exceed a millet-seed in size. From the fifth to the seventh day, each pustule spontaneously

* ℞ Ammoniat. Protochlor. Mercury 3i Lard. ℥ij M. for ointment.—℞ Mercury Sulphate of — 3ss Lard ℥i for ointment.—℞ Fresh butter ℥iij, White wax melted 3iij, Red precipit., Camphor, of each 3iss M. for ointment.

† Sprinkled by a common watering-pot.—T.

‡ Biett, *Art. Mentagra Dict. de Médecine*, 18 vols.

breaks; its walls shrivel; but there is a slight exudation which produces a thin, slightly adherent crust. This unites at its circumference with the epidermic scales detached from the inflamed skin around the pustules. The inflammation does not extend beyond the reticular body, and cicatrices are never formed. In young persons the pustules are usually numerous and close together, sometimes the whole surface of the chin and lateral parts of the face are covered with them. The inflammatory circle which surrounds them is lost, they unite in groups, and the attendant inflammation being more acute, the painful tension of the parts they occupy is more marked, their progress more rapid, and the consecutive crusts more adherent. If several pustules unite and become confounded in their development, the inflammation may at once penetrate the whole dermis, gain the subcutaneous cellular tissue, and produce phlegmon. The skin is sometimes so deeply affected and tumefied as to assume the appearance of humid vegetations. The bulbs of the hair of the beard frequently participate in the disease, and a more or less considerable portion of the chin is deprived of hair. Its destruction is temporary; new hairs, at first light and feeble, reappear, and soon regain the colour and size of those which have fallen.

In most cases, mentagra, like cuperosa, is composed of several eruptions, succeeding one another at greater or less intervals. When pustules are developed several times on the same place, the inflammation penetrates the dermis and subcutaneous cellular tissue, producing indurations, which are not long before they assume the form of tubercles. These are seen particularly in persons of delicate constitution, in whom pustulous inflammation is never followed by complete resolution. When the eruptions are numerous, intense, and close together, the tubercles multiply and extend over the whole chin. New pustules form on the tubercles, or in the interstices between them, and thus obscure the primary cha racter of the disease. It is now that the confused mixture of tubercles, crusts, pustules, and scales, give to mentagra its disgusting appearance. Arrived at this stage, it is always a serious disease, and difficult of cure.

§ 291. (c.) Mentagra is not contagious; it more particularly attacks men, young and adult, of a sanguine or bilious temperament, and who have a great deal of beard. It is, above all, developed in those who are exposed to high temperatures; as cooks, founders, sugar-bakers, &c. Excesses of

diet and the abuse of spirituous drinks, and spiced meats; want of cleanliness, some irritating applications, the use of a dirty or blunt razor, &c. seem to favour the development of this disease. It is rarely seen in women, and is complicated with cuperosa.

§ 292. (D.) It is important that mentagra should be distinguished from other inflammations which may appear on the chin, particularly from ecthyma, impetigo *figurata*, from pustulous or tuberculous syphiloid disease, and from furuncle. The pustules of ecthyma are larger and more inflamed than those of mentagra. The crusts are of greater extent, thicker, and more adherent. (§ 271.) The psydraceous pustules of impetigo *figurata* are not acuminated like those of mentagra; they differ also by their more prompt or acute development, and by their being disposed in groups. In mentagra they are more frequently isolated and distinct; in impetigo *fig.*, they are grouped and more numerous. In the latter disease, they break about the third or fourth day, and the sero-sanguinolent humour which escapes, is quickly transformed into extended yellow crusts, which increase in thickness in a few days. The pustules of mentagra do not break till about the fifth or seventh day, and the crusts are thin, slight, and insulated. These distinctive symptoms, however, are more obscure when the eruption is very considerable, its march more acute, and the pustules close and confluent. Syphilitic pustules are seldom manifested on the lower part of the face only; they are always seen on the alæ of the nose, on the forehead and commissures of the lips. Those of mentagra, on the contrary, confined to the chin, and usually to the lower part of it, are acuminated and insulated on vivid red bases, showing more acute inflammation. Syphilitic pustules are flatter, and have tawney, copper-coloured, and almost furfuraceous bases; they are not preceded by itching, nor by the painful tension which announces mentagra. Arrived at the tuberculous stage, mentagra may be easily confounded with syphilitic tubercles. Those of mentagra, however, are conoid, and their bases appear to penetrate the whole substance of the dermis, and to extend as far as the subcutaneous cellular tissue. Syphilitic tubercles are rounder at their summit, shining, and seem to push up the superficial layers of the dermis. The pustulous and tuberculous state of the skin in syphilis, is also more general, and is mostly accompanied by chronic inflammations of the throat and conjunctiva; and is almost always preceded by obstinate nocturnal cephalalgia, presenting a group of

symptoms altogether different from those of mentagra. In furuncle, the inflammation spreads to the cellular tissue, and there is a core discharged by an aperture which always produces a cicatrix; in mentagra, the inflammation first attacks the skin, the pustules yield only a small quantity of pus, never a core, and by an aperture only interesting the epidermis, and which is soon effaced.

§ 293. (P.) The prognosis of mentagra presents such difficulties, that it is frequently impossible for the most experienced practitioner to judge the termination of this disease. At times, when the decrease in number of the pustules, and of the violaceous tint of the inflamed skin, seem to announce an approaching cure, new eruptions, of greater or less extent, are observed to supervene without any known cause. At other times, when fear is entertained that a considerable eruption, which extends over the whole chin, may endure for many years, it is found to yield readily to antiphlogistic regimen and treatment. In general, the most obstinate cases are those in which the pustules and primary form of the disease continue in the chronic state. In this point of view, mentagra may be considered as one of the most intractable diseases of the skin.

§ 294. (T.) The first step on the development of mentagra, is to cut the beard quite close with a pair of curved scissors, the action of the razor always aggravating the inflammation. If the disease is recent, and appears in a healthy vigorous subject, and the pustules are so close as to cause a more acute inflammation, local bleeding must be effected and repeated, with the precaution of placing the leeches beyond the limits of the eruption. If mentagra reappears after remission, general bloodletting must precede the renewed application of the leeches. The employment of bloodletting, local and general, must depend, however, on the strength of the patient, on the intensity of the inflammation, and on the extent and frequency of the pustulous eruptions. Baths, topical emollients, mucilaginous and acidulated drinks, seconded by spare diet, are particularly indicated. When the digestive organs present no sign of irritation, causing a slight revulsion towards the gastro-intestinal mucous membrane by small doses of calomel, the sulphates of soda, potash, or magnesia, may be advantageous.

§ 295. In mentagra of long standing, and when tuberculous induration has occurred, local bleeding may still be useful; but it must not be carried to the same extent, and only practised in strong healthy subjects. In weak individuals,

and those of lax fibre, it is never beneficial. When the tubercles are softened under the continued employment of emollient applications, resolvent ointments may be used, of which those of the proto-nitrate,* deutoxyde,† and proto-chloruret‡ of mercury, are the best. Sulphureous and alkaline ointments may be used for the same purpose. Their use must be suspended, should new pustules arise during it. Aqueous vapour *en douche* is often successfully employed, to soften tubercles and favour resolution. The sulphureous waters of Barèges, Cauterets, and Aix, may be applied in the same way. Lastly, obstinate mentagra of long standing is sometimes ameliorated by cauterisation, either with the concentrated acids, or a solution of caustic potash, which changes the action of the diseased parts. Laxatives are often beneficial in the treatment of chronic mentagra, developed in young robust persons. Men in the decline of life, and those of weak constitution, are more advantageously treated by bitter and ferruginous preparations. In several cases, the muriate of gold rubbed on the tongue and gums, has caused or accelerated the cure of obstinate mentagra. Mercury is very efficacious, even in persons who have not been previously affected with syphilis.

IMPETIGO.‖

Syn.—*Impetigo*, Willan. *Lepra Squamosa. Running Tetter.*

§ 296. Impetigo is an apyretic, noncontagious inflammation, characterised by small pustules, agglomerated or distinct, called by Willan *psydraceous;* the humour of which, after their rupture, dries under the form of yellow lamellous or prominent crusts.

§ 297. (s.) Impetigo exhibits two principal forms: the psydraceous pustules are at times disposed in groups, (*I. figurata*, W.) or again, they are scattered over the parts they occupy. (*I. sparsa*, W.) Each of these forms may be *acute*, or *chronic*, according as it consists of one, or of several eruptions.

§ 298. Impetigo *figurata*, (*dartre crustacée flavescente*,

* ℞ Nitrat. of Merc. ℈j, Spermacet. Oint. ℥i, M. ointment.

† ℞ Butter, ℥iij, white Wax ℥iij, Red precipit. Camphor. a.a. ℥iss, M.

‡ ℞ Lard —— ℥i, Protochlorur Merc. ℥i, Flour of Sulphur ℥iss, Ess. Bergamotte gr. x M.

‖ Willan, *Practical Treatise on Impetigo.* 4to. Lond. 1814.

Alibert,) usually attacks young persons of a lymphatic temperament. It may appear without any precursory symptoms, or may be preceded by those of gastro-enteritis, epigastralgia, general uneasiness, lassitude, &c. It is most usually seated on the face, and almost always in the centre of the cheeks; it may spread over the whole molar region, advance to the commissures of the lips, and form a circle round the chin. It has been developed on the neck, trunk, and limbs.

1°. At the outset of impetigo *figurata, of the face*, one or more small red spots are observed at first, very light, but distinct, and which become more and more marked. They are the seat of considerable itching, and each of them is soon covered by yellow, psydraceous, confluent pustules, disposed in various sized groups, generally circular, and surrounded by an inflamed rose-coloured circle. These pustules, which are neither prominent nor acuminated, are attended by heat and sharp itching, amounting to smarting. They burst about the fifth or sixth day, and yield a yellowish humour, which, drying, form crusts of a peculiar yellow.

These crusts are semi-transparent, slightly furrowed, and resemble fragments of dried honey, or the gummy juice yielded by some trees, in appearance. A considerable exudation continues from beneath the crusts, which are thus increased in thickness. Their circumferences are red and inflamed, and if forcibly torn off, the reticular body of the skin is seen denuded and inflamed. When *I. figurata* is developed in young and robust persons, and when the inflammation is slight, its duration does not extend beyond two or three weeks. The morbid secretion of the skin decreases gradually, and so ceases. The crusts become drier and drier, and at last fall, leaving red spots covered by a furfuraceous epidermis, which has been formed beneath them.

2°. Impetigo *figurata* of the face may become *chronic*. The psydraceous pustules are then developed successively: groups of new pustules form near the yellow crusts of the older ones; or the secondary pustules appear round the circumferences of the first, or crustaceous groups, increasing their size. In lieu of spreading superficially, the inflammation may penetrate the whole thickness of the skin, and even affect the subcutaneous cellular tissue. When the crusts have fallen, fresh exudation gives rise to new incrustations, and this is repeated several times. The crusts generally become thinner and thinner; the inflammation assumes, in appearance, the squamous form, and the surface of the skin

remains shining and furfuraceous as long as the reticular body is inflamed.

When this form of the disease is thus far on the decline, if it is treated by irritating applications, or if the patient's constitution is deteriorated, the inflammation becomes aggravated, and may continue for several months, or even years. After repeated attacks of this disease, the affected parts become fissured, and sometimes even ulcerated to more or less extent.

3°. Impetigo *figurata* of the face, usually seated on the molar regions, is sometimes developed on the upper lip, immediately below the septum nasi. In this case, the humour of the pustules may dry under the form of a conical crust, which has been compared by a certain pathologist to the stalactites found in some grottos, and he has designated this rare and unimportant variety of impetigo under the name of *crustaceous stalactiform dartre.*

4°. Impetigo *figurata* of the limbs is much more rare than that of the face. The pustules and crusts are commonly circular on the hand and forearm; they are larger on the lower limbs.

§ 299. Instead of being disposed in groups and circumscribed, the pustules may be scattered (*I. sparsa*) over the neck, shoulders, face, and ears; but more frequently on the limbs.

1°. *I. sparsa* of the lower extremities is always a tedious disease. A single limb may be affected, or both at the same time. It is characterised by small yellow pustules on the instep, ankle, and in particular, on the outer side of the leg. They are attended by an insupportable itching. The pustules burst, and give out a seropurulent humour, which gradually concretes into yellowish, humid, lamellous crusts, not so large or thick as those of *I. figurata.* The rough and shining epidermis soon assumes a red tint, which it receives from the inflamed reticular body. A considerable oozing continues for sometime from beneath and around the crusts; they then diminish and become dry. But when the dry crusts are about to be detached, a fresh eruption frequently supervenes, attended by morbid heat and itching. These eruptions of pustules are repeated at different intervals, and at last cover the whole limb, from the knee to the ankle and dorsum of the foot. The crusts then become large and adherent, forming one thick yellowish crust. When dry they are rough, like the bark of a tree. (*I. scabida*, W.) The motions of the limb are difficult and painful. This large crust soon cracks, and becomes furrowed by fissures of greater or less extent. A seropurulent yellowish humour exudes from the fissures,

forming new concretions. If this large crust becomes partly or wholly raised by the use of emollient applications, the denuded and inflamed reticular body pours out a new secretion, which is followed by another incrustation.

Arrived at this stage, *I. sparsa* of the limbs is very obstinate, particularly in old and weakly subjects, and those of sedentary habits. The inflammation extends to the toes; penetrates the dermis and roots of the nails, which become altered and detached. Ulcers and œdematous enlargement of the limbs are the consequences of this disease. The ulcers are generally situated about the ankles. Their cavity is irregular, furnishing a seropurulent humour; their edges jagged, violaceous, and often covered with psydraceous pustules, full of a sanguinolent serosity, or by yellowish crusts.

When the progress of this inflammation is arrested the crusts always dry. After their fall, the skin has a red tint, bluish at some points; at others, delible cicatrices are left, reddish or violaceous.

2°. *I. sparsa* of the upper extremities usually occupies the forearm; it differs from that of the lower limbs only by being more rarely complicated with œdema and ulcerations, when it passes into the chronic state.

3°. This variety may be also developed on the face, neck, ears, and even on the scalp. It has been described under the name of *tinea* by some writers, who have made two diseases of the same affection, according to the regions of the body on which it has been developed. Mucous tinea itself is, perhaps, only a variety of impetigo?

§ 300. The local symptoms of impetigo may be associated with others. This inflammation is at times accompanied by gastro-intestinal phlegmasia; the lymphatic glands near the pustules may be engorged and tumefied; lastly, the itching and morbid heat of the skin is sometimes such, as to disturb sleep, and the exercise of other functions. But, one of the complications most important to be studied, is that of the pustules of impetigo with the vesicles of eczema, (*E. impetiginodes*, W.) This vesiculo-pustulous affection is generally very serious. When developed on the upper limbs, it is frequently observed round the wrists, extending over the backs of the hands, and phalanges of the fingers to the roots of the nails, spreading at the same time from the forearm to the elbow-joint, and sometimes even to the nucha and face, &c. Several eruptions of vesicles and pustules take place successively. The former remain transparent for some days, and

are slower in their progress than the psydraceous pustules. The eruption is attended by much heat and insufferable itching; it supplies an abundant seropurulent humour, drying under the form of yellow lamellous crusts. The skin becomes red and fissured; the epidermis thick and yellow; finally, after a time, the inflammatory symptoms diminish, and the crusts become detached, but the skin, at the end of these repeated eruptions, continues for a long time hard, dry, squamous, and inflexible.

§ 301. (c.) Impetigo is not a contagious disease; its causes are very obscure. Young persons of a sanguine or lymphatic temperament, whose skin is fine and delicate, sometimes have their faces affected by it, after exposure to the burning sun of a hot summer. Adults are more frequently attacked by it than either children or old persons. Impetigo may be caused by the development of other inflammations of the skin; it is particularly observed to follow repeated attacks of lichen *agrius*. It sometimes coincides with inflammatory affections of the digestive organs. This complication is most frequently met with in children during dentition. Lastly, it has been known to supervene after excessive or violent exercise.

§ 302. (d.) The small pustules of impetigo are easily distinguished from the larger ones of variola, vaccina, varicella; from those of ecthyma, and the artificial pustules produced by tatarized antimony, or by the inoculation of pus, &c., should its other characters not be sufficient to do so. The distinctive characteristics of impetigo, cuperosa, and mentagra, have been already pointed out. Among pustulous diseases then, it remains to describe only the characters which establish the line of separation between impetigo and the various species of tinea. The small pustules of tinea *favosa* are never humid, like those of impetigo; they are covered by a yellow dry crust, of a cup shape. The small pustules of tinea *annulare* (porrigo *scutulata*, W.) are disposed more in groups, like those of *I. figurata;* but the humour from them is contagious. *I. figurata* is usually developed on the face and in adults, annular tinea is seen almost exclusively on the scalp, and in children. It is more difficult to establish a clear line of demarcation between the pustules of tinea *mucosa* (porrigo *larvalis*, W.) and those of impetigo *sparsa*. Some pathologists maintain that these are two distinct diseases; that porrigo *larvalis* is contagious, while *I. sparsa* is not. Others suppose the contagion of mucous tinea not to rest on irrefragable proof, and that the difference be-

tween the two, results from the different texture of the skin of the regions on which they are developed, and the not less remarkable difference in the ages of the subjects of attack. Impetigo is distinguished from itch, by the pustules of the former yielding an abundance of ichorous matter, which becomes transformed into yellow prominent, or lamellous crusts, When the vesicles of psora become pustulous, or are complicated with accidental pustules, they are larger and more elevated than the small psydraceous pustules of impetigo. The red squamous spots consecutive to the formation and fall of the crusts of impetigo may be distinguished from primary squamous inflammations, such as lepra and psoriasis, by the squamous plates of the two latter diseases not being accompanied by any oozing, and never being preceded by pustules or crusts.

§ 303. (P.) The prognosis of impetigo is, in general, less grave than that of lepra, lichen *agrius*, chronic eczema, &c. Acute impetigo usually terminates in two or three weeks; its duration, when chronic, varies according to the number of pustules, and that of the successive eruptions, to the extent of the crusts and ulcers, and the degree of other inflammations complicated with it.

§ 304. (T.) Impetigo should be treated by general depletion at its commencement, and whenever it is attended by redness of the skin, and a considerable eruption of pustules. The use of tepid baths, lotions of tepid milk, decoction of bran or mallow, almond emulsion, or the decoction of digitalis and poppy-heads, and slight unction with the oxyde of zinc, or acetate of lead ointment, contribute to diminish both the inflammation and the morbid secretion.

When the inflammatory action is subdued, the crusts should be detached, by directing the steam of hot water upon them. This has the advantage also of preventing a new formation, by exciting the skin to a salutary action. This plan should always be adopted soon after the crusts of impetigo are formed, whenever the skin is much inflamed. *I. figurata* usually yields to the employment of the vapour-bath only. Vapour *en douche* directed upon the skin before the formation of crusts, that is, in the pustulous stage of impetigo, or even when inflammation exists to a certain degree round the crusts, on the contrary, is almost always injurious.

When unattended by gastro-intestinal phlegmasia, saline purgatives, as the supertartrate of potash, or very acid lemonades, may be employed with success in impetigo, to cause a temporary revulsion towards the intestines. This practice, however, is injurious if the cutaneous affection is complicated

with gastro-enteritis; leeches must then be applied to the epigastrium and margin of the anus.

§ 305. In *chronic* impetigo, recourse must be had to frequent and repeated bleeding from the neighbourhood of the inflamed parts, to the application of emollients and sedatives, and aqueous vapour *en douche*. This strictly antiphlogistic method, aided by laxatives when the state of the alimentary canal admits of their use, is decidedly the most successful. Afterwards, when the skin is but little inflamed and irritable, and, above all, in old and enfeebled subjects, the sulphureous waters of Barèges, Löech, Cauterets, or sea-bathing, are beneficial. Under the same circumstances, the application of the ung. hyd. nit. or of caustics, is useful.

§ 306. Different preparations, some mild, others powerful, such as the juice of sarsaparilla, sulphur, cinchona, the nitrate of potass, and antimonials combined with sulphur, Plummer's pills, and arsenical preparations, have been prescribed in chronic impetigo. Under this treatment, and particularly after the long continued use of antimonial and arsenical preparations, we have seen the most obstinate, grave, and intractable impetigo cured, without any serious or permanent derangement of the digestive organs being the consequence. But some caution is necessary in the employment of these energetic measures; as, no doubt, they may possibly produce chronic and latent affections much more serious than the cutaneous disease for which they have been prescribed.

§ 307. Willan has made too many varieties of impetigo: his *I. scabida* should be joined with *I. figurata; I. erysipelatodes* is nothing but the eczema *impetiginodes* of the same author; lastly, *I. rodens* is really but a variety of cancerous ulcer, the edges being covered by accidental psydraceous pustules.

If impetigo is a disease but little known to some practitioners, this is attributable, at least in a great measure, to the confusion which reigns in the nomenclature of cutaneous diseases; for impetigo is neither a rare affection, nor one the characters of which it is difficult to describe or observe. On reading attentively the works of our classic authors, there will be found but a small number of correct observations under the term impetigo; and that this designation has been indiscriminately applied to numerous diseases of the skin; and lastly, that some cases of impetigo have been published under various denominations, such as *crustaceous dartre, affection of the skin, simulating lepra, &c.*

§ 308. I suggest, as the subject of farther research, some experiments made by Dr. Thompson on the external application of prussic acid, in the treatment of impetigo. The results of these trials would have been more conclusive, if other medicines had not been employed in conjunction with the prussic acid, as this circumstance has rendered it impossible to appreciate justly the effects of this powerful remedy.

TINEA.*

Syn.—*Porrigo*, Willan. *Scall.*

§ 309. Under the generic terms of *tinea* and *porrigo*, some indiscriminately designate all inflammations of the hairy scalp, while others restrict the application of these expressions to some affections which they consider as varieties or species of the same disease. The number of these varieties varies according to the different notions of nosologists, whose nomenclatures and descriptions are rarely comparable. One author has called the diseases described here under the names of *eczema, impetigo, psoriasis, &c.* all *porrigo*; another admits *furfuraceous, amiantaceous* tinea, &c., without indicating the characters which distinguish these affections from numerous others, designated under the vague and indeterminate name of *dartres.* To avoid so inconvenient a mistake, I have thought it better to classify the observations which I have made on inflammations of the hairy scalp. Thus, pityriasis, psoriasis, lepra, impetigo, chronic eczema, and syphiloid disease, developed on the tegument of the cranium, have been classed among these respective diseases, the nature of which is not at all altered by their being developed on a part covered with hair. According to this analytic method, I am induced to admit four species of tinea: *T. favosa, T. annulare, T. granulata*, and *T. mucosa.* I must premise, however, that I regard these four pustulous inflammations as perfectly distinct from each other, and not as species or varieties of the same disease. Their individual existence rests on characters as marked as those of any other pustulous inflammation of the skin. Of the tinea, some are contagious, others not; this alone destroys all supposition of the identity of the nature of these diseases. Lastly, they can still less be considered varieties of the same

* Murray (J. And.) *Programma de Medendi Tineæ Capitis Ratione.* 4to. Gottingue, 1783.—Willan, *Practical Treatise on Porrigo or Scald Head.* Lond. 1814.—Alibert, *Description des Teignes*, fol.

affection, from the fact of their being found complicated with one another. I use the generic term of *tinea*, only because it has been so long in use, and not as indicating any identity between diseases which does not really exist.

TINEA FAVOSA.*

Syn.—*Porrigo Favosa*, Willan. *Favus. Porrigo Lupinosa*

§ 310. Tinea favosa is a chronic contagious inflammation of the skin, characterised by very small pustules, the summits of which soon become converted into yellow very adherent crusts, depressed into a cup-like shape. These, according to the dispositions of the pustules, are sometimes isolated and circular; at other times agglomerated, forming large incrustations, the edges of which project and turn upwards, while their surfaces present small depressions.

§ 311. (s.) Tinea favosa shows itself more especially on those regions of the skin which lay over dense and thick cellular tissue; it is usually developed on the scalp, and sometimes extends to the temples, eyebrows, and forehead; more rarely to the shoulders and lower parts of the scapulæ, to the elbows and forearm. I have seen it occupy the whole posterior surface of the trunk down to the sacrum, extend to the knees and external and upper part of the legs, in a child twelve years old, whose scalp was not affected.

1°. When tinea favosa is developed on the *hairy scalp*, it appears, at first, under the form of very small pustules, scarcely perceptible to the naked eye, and hardly elevated beyond the level of the skin; their summits are covered by yellow crusts almost as soon as they are formed. These pustules contain but a minute drop of yellowish humour, which does not escape from them, but dries up. They are surrounded by a small rose-coloured circle. The crusts enlarge, become depressed, and assume the cup-like form. They gradually increase in size, but always preserve the circular and depressed form proper to them; they may even acquire five or six lines diameter. Sometime after the first pustules are formed, others appear near them, or on the scalp. When favous pustules are numerous and confluent, the crusts become confounded at their edges, forming, by their aggregation, incrustations of very considerable extent. Sometimes even a sort of incrusted cap covers the whole head, on which the cup-

* Gallot, *Recherches sur la Teigne*. Paris, 1805.

like depressions may still be observed. This has been compared to the honeycomb in appearance, (*favus*,) to the depressions observed on lupin-seeds, (porrigo *lupinosa*,) or the little cups of the lichen which covers certains trees. If the crusts are not very old, they are yellow, or yellowish, in colour. As they become old and dry, they turn a clearer and whitish yellow; they wither, break, and are detached from the scalp, under the form of a powder resembling pulverised sulphur. They then cease to assume any regular form. They are in general very adherent to the skin, from which they cannot be detached without causing the flow of some drops of blood. The odour given out by the pustules and crusts of tinea favosa is as disgusting as their aspect. This odour singularly approaches that of the urine of the cat. When the crusts are detached by means of emollient cataplasms, the odour is changed, becomes faint, nauseous, and analogous to that of bones when boiled with their ligaments, and the crusts are re-formed with all their characteristics.

The skin situated between the groups of pustules, or crusts, is sometimes healthy, but more frequently affected by chronic erythema, which is followed by furfuraceous desquamation.

When the crusts of *recent* tinea favosa are softened, and removed by poultices, the skin still has a predisposition to the disease. Small, lenticular, reddish, superficial excoriations correspond to the situations of the favous crusts. The reticular body is inflamed and denuded, but not ulcerated, even at the points where the crusts appeared as if embedded in the skin. The large impressions corresponding to the confluent crusts are less characteristic. The whole surface is soon covered by a viscous yellowish humour, which, in drying, assumes the form and dimensions of the primary crusts.

§ 312. The scalp presents other alterations according to the extent, acuteness, or duration of tinea favosa: 1°, it may have an erythematous or furfuraceous disposition between the crusts and pustules; 2°, small ulcers, of three or four lines diameter, may form beneath the isolated crusts, when the inflammation is of long standing; 3°, the skin, covered by large incrustations, may also exhibit ulcers and fissures of more or less extent; 4°, the bulbs of the hair, not at first implicated in the inflammation, always inflame when this becomes chronic; it is this that renders the treatment so long and difficult. Alteration and fall of the hair are the usual consequences of this disease, and the hair reproduced by the diseased bulbs is whitish, thin, and weak; 5°, if tinea favosa

continues for several years, and is not checked in its progress, it often gives rise to permanent, general, or partial baldness, the points from where the hair has fallen remaining smooth and shining; 6°, the skin may be altered and destroyed throughout its whole thickness; 7°, the inflamed subcutaneous cellular tissue has been known to become the seat of small depositions; 8°, in very ancient inveterate favous tinea, the inflammation sometimes extends to the periosteum and bones of the cranium, which have been found more or less altered.

§ 313. Pustulous inflammations of the scalp often affect the lymphatic glands of the neck and occiput. I have seen, however, individuals with very old tinea favosa, who have not had the glands affected. This secondary glanglionitis must not be confounded with that observed in scrofulous individuals who may become the subjects of tinea favosa.

§ 314. Lice are commonly produced in great numbers under the favous crusts. The surface of the scalp is so covered by them, that the entire mass seems as if agitated by their movements. These insects increase the intolerable itching of the pustules. Children derive a sort of pleasure from lacerating the scalp with their nails, but soon after suffer acute and painful smarting. The blood and humour, which exude abundantly, form, on drying, crusts of a different tint from the usual yellow one.

§ 315. Favus of the scalp may be accidentally complicated with opthalmia and coryza, but one of the most serious complications is certainly that with chronic inflammation of the stomach or intestines. I have also remarked the moral and physical faculties to be feebly developed in persons afflicted with tinea favosa.

§ 316. When this disease shows itself on *other regions* than the scalp, it assumes more or less a serious aspect. The inflammation, however, does not penetrate so deep; and does not so frequently terminate, when ancient, in ulceration. It is more easily cured, and is seldom followed by cicatrices.

§ 317. (AR.) Favous pustules are primarily confined to the reticular body of the skin, and their seat does not extend to the deep areolæ of the dermis, or to the pilous follicles, as some pathologists have thought. When tinea is very intense, or very old, the subjacent cellular tissue, the chorion, subcutaneous cellular tissue, pilous follicles, periosteum, and the bones of the cranium themselves, may become influenced from contiguity; but these consecutive lesions do not constitute

any essential character of the disease. Duncan was deceived when he thought the bulbs of the hair were the seat of tinea favosa; for they are not affected at the outset of favus, and may become so in other phlegmasiæ of the scalp. It must be remarked, however, that inflammation of the pilous follicles does exist in almost all ancient tinea favosa, and merits particular attention with respect to the modification it requires to be made in the treatment.

§ 318. (c.) Tinea favosa is the most common of all pustulous inflammations of the scalp. It attacks either sex indiscriminately, and is observed in all ages, but not in the same proportions. The greatest number of admissions made at the central bureau of hospitals, occur in the seventh, eighth, and ninth years of age, but particularly in the seventh.

This disease is contagious, and easily propagated among children by using the same comb or brush, particularly if small excoriations of the scalp exist. Want of cleanliness predisposes towards the disease.

§ 319. (d.) Tinea favosa has nothing in common with other pustulous diseases of the scalp, except the *generic* name which has been given to them all. No other disease is characterised by small pustules scarcely passing beyond the level of the skin, and which do not break; no other terminates in dry crusts of a cup-like shape, leaving red lenticular marks on the skin when the incrustations are removed. Persons have been known, with the hope of escaping military service, to simulate favus, by producing yellow circular crusts on the scalp by means of nitric acid; but these crusts are not cupped, and an observant practitioner would not be duped by the deception. When tinea favosa shows itself on other regions of the body, the same characters distinguish it. It differs from impetigo particularly by the crusts of the latter being rounded, and those of favus being depressed in their centres.

§ 320. (p.) Favus may disappear spontaneously, if abandoned to itself, after some months' continuance; but it is more commonly prolonged for years. It usually requires to be treated for a length of time; and its cure is more difficult in proportion to the extent of surface it occupies, and to the consecutive inflammations complicated with it.

§ 321. (t.) When spontaneously developed towards the decline of a serious affection, acute or chronic, or even when it attacks feeble and valetudinarian children, whose health is ameliorated on its appearance, it is proper, in these rare

cases, to postpone the treatment of tinea favosa for an indefinite period.

The different methods which have been followed in the treatment of this disease may be divided into two principal ones. In the first, it has been proposed solely to combat the pustulous inflammation of the skin, by rational or empirical means; in the other, *eradication of the hair*, with whatever object, is the principal condition of the treatment.

§ 322. Of all the plans of which the first division is composed, the *antiphlogistic and derivative* is the only one now thought to be useful. The number of cases to which it is adapted would be very considerable, if we were more frequently consulted a short time after the invasion of the disease. Bleeding is rarely required. Lotions of linseed-water and emollient cataplasms applied to the head, previously shaved, cause the crusts to fall, and diminish the inflammation of the scalp, but seldom produce a cure. This is frequently effected, when, in conjunction with these applications, blisters are applied to the arms, and kept open for two or three months. I made numerous trials of this plan in 1817; and, in recent cases, it may be employed with success, and is exempt from the dangers attached to most other methods. It should decidedly have the preference in the treatment of acute tinea mucosa and tinea granulata.*

After the suitable employment of these antiphlogistic and derivative means, the skin not being very irritable, sulphureous ointments and lotions are, of all external applications, the most constantly useful. It may be added, that tinea favosa seldom resists the successive action of tepid sulphureous baths, when it is developed on the trunk or limbs.

§ 323. But after the inflammation has extended to the pilous follicles, and this is nearly always the case in old favus, all methods not comprehending the avulsion or removal of the hair are ineffectual. This eradication of the hair is as necessary to the success of the treatment, as the extraction of the nail in certain cases of onyxis. This has occurred to practitioners and surgeons who have proposed the different *epilatory methods*. These are three: 1°, the hair may be violently torn up in masses, by means of a pitch cap applied over the

* The advantages of this method, in the treatment of the different species of tineæ, would have been more fully known and appreciated, if certain occurrences had not interrupted a series of experiments which I had commenced at the hospital St. Louis, in 1818, under the inspection of M. Biett.

scalp; 2°, the hair may be extracted with tweezers, or small forceps; 3°, the hair may be removed by the use of epilatory ointments and powders.

§ 324. The oldest of the *epilatory methods* consists in violently rooting up the hair by means of a pitch plaister, vulgarly called the skull-cap. To prepare this application, dilute ℥iv. of rye-flour in a pint of white vinegar; place it on the fire, keeping it stirring. Half an ounce of the deutocarbonate of copper (verdigris) in powder, must be added, and the compound allowed to boil slowly for an hour; afterwards, add four ounces of black pitch, the same of resin, and six of Burgundy pitch. When these are melted, throw in six ounces of Ethiop's antimonial in fine powder, (a mixture of mercury and antimony obtained by long trituration.) The mixture is to be agitated till it is of a convenient consistence. This plaister, spread on strong black cloth, is to be applied over the head, snipping the edges to make it fit closely. The crusts should be previously removed by the use of poultices, and the hair cut as close as possible with scissors. In two or three days the plaister is to be suddenly raised, in a contrary direction to that in which the hair grows, and a second put on, which, after remaining the same length of time, is to be removed in the same manner. The plaister is then to be renewed every second day, shaving the head when requisite. More or less of the hair is torn off with the plaister. The first dressing produces very great pain, but as the treatment proceeds this decreases. Still, after a month of this treatment, the pain is such as to cause children to cry frightfully when the cap is removed. After the third month, the pain becomes supportable: but what barbarous cruelty!

It cannot be denied that some cures have been obtained by this method, in cases which had resisted numerous remedies, and in which the rooting up the hair was indispensable; but in this cruel proceeding, the action of the skull-cap cannot be limited to the diseased hair, and the tearing up the healthy hair still farther irritates and inflames the scalp.

§ 325. To avoid the horrible pain experienced in rooting up a quantity of hair at once, it has been proposed to pluck out the hairs with small *forceps;* but this operation is in itself very painful, and much more tedious than the preceding.

§ 326. Of all the *epilatory* methods, that of Messrs. Mahon, who have charge of the tinea cases in the hospitals of Paris, is, without doubt, the most advantageous. It has evidently in

view; 1°, to cleanse the surface of the scalp, and keep it in the cleanliest state; 2°, to operate *without pain* the fall of the diseased hairs, and those whose follicles are inflamed.

Messrs. Mahon commence by cutting the hair to within two inches of the scalp, so that it may more easily be removed by the comb. They then detach the crusts by the use of lard, or of linseed poultices, afterwards washing the head with soap. These unctions and ablutions are repeated carefully for four or five days, till the surface of the scalp is perfectly cleansed.

The second part of the treatment now commences, when the object is to obtain, *slowly* and *without pain*, the avulsion of the hair, which is affected in so barbarous a manner by the skull-cap. On all points on which the disease is developed the epilatory ointment is applied every second day; this consists of ℥iv. lard and powder No. 1. This application is continued for six weeks or two months, according to the obstinacy of the disease. The days on which the ointment is not used, the small-tooth comb should be passed several times through the hair, which it easily detaches. After fifteen of these dressings, they sprinkle on the hair some pinches of the powder. The following day the hair is combed, and a fresh application of the ointment made. This treatment is continued for a month or six weeks. The first ointment is then replaced by a second, composed of the same quantity of lard and powder No. 3, which is applied in the same way for fifteen days or a month, according to the nature of the complaint.* After this time, the dressings are continued twice a week, till the redness of the skin entirely disappears. The head should be combed once or twice on the days between the dressings, taking the precaution of not using much force, and of smearing the comb with lard or oil.

§ 327. From the year 1807 to 1813 inclusive, four hundred and thirty-nine individuals of the female sex were cured of tinea favosa, at the central bureau of hospitals; the mean duration of treatment was fifty-six dressings. In the same lapse of time, four hundred and sixty-nine boys were cured in the same manner; the mean length of treatment was fifty-

* M. Chevalier, a distinguished chemist, supposes the powders Nos. 1, 2, and 3, of Messrs. Mahon, are a mixture of lime, slaked and almost carbonated; of silex, alum, and oxyde of iron, very probably contained in the lime; of a small quantity of subcarbonate of potass and charcoal. The quantity of charcoal varies in each powder. No. 1, of a grey colour, contains at least one-tenth part of charcoal; Nos. 2 and 3, of not so dark a colour, contain but a small quantity. The epilatory property of these powders is certainly owing to the lime and subcarbonate of potass which they contain.

three dressings. The hair, it is proved, grows again on the parts which have suffered this artificial baldness, and the epilatory powders of Messrs. Mahon cause no alteration in the scalp, or other organ.

It is proved, by cases registered at the central bureau, that this method has not only cured tinea favosa which had resisted several plans of treatment, but also other chronic inflammations of the scalp, in which the bulbs of the hair were consecutively inflamed. In 1808, Messrs. Mahon cured eight cases of tinea which had been ineffectually treated by the skull-cap; eighteen children who had been treated at the hospital St. Louis by the oxyde of manganese, for some years; nine others who had been treated at the Hospital for Children, by charcoal, for two years; in 1809, two children on whom the cap had been tried in vain; and up to 1824, a considerable number of cases, in which different plans of treatment had been unsuccessful, though some were of four and five years' standing.

§ 328. To resume. According as tinea favosa is confined to the reticular body of the skin, or extends to the pilous follicles, it should be treated by lotions and emollient applications made to the scalp; by blisters to the arms; by slight laxatives when the state of the digestive organs admit of it; or, lastly, by the epilatory method of the Mahons.

§ 329. A host of applications, some nearly inert: as charcoal and oxyde of manganese, oxygenated ointment, &c.; others, endowed with more active properties, as cataplasms of hemlock, dulcamara, nightshade, &c., or the Neapolitan ointment, the ointments of cantharides, of hydrarg. nitrat. protochloret of ammonia, deutochloret of mercury, &c. have been employed in the treatment of favus, in inveterate cases; but the results have been so unsuccessful as not to justify recommendation.

TINEA ANNULARE.*

Syn.—*Porigo Scutulata*, Willan. *Tinea Capitis.* *Ringworm of the Scalp.*

§ 330. This is a chronic contagious inflammation, characterised by *circular* groups of small pustules, which are commonly developed on the scalp. They dry under the form of thin slightly adherent crusts.

* Plumbe, *A Practical Essay on Ringworm of the Scalp, &c.* London, 1821.

§ 331. (s.) Tinea annulare shews itself by *circular* red and inflamed patches, upon which small pustules are elevated of a yellowish white, and having the centre general pierced by a hair. The circle gradually increases, acquiring from half an inch to an inch and a half in diameter. The humour of the pustules thickens, forming thin hard crusts but little adherent, and beneath which the skin is red and inflamed. In the space of two or three weeks, not only are the areas of the first groups extended, but new ones are formed, either spontaneously or from inoculation, caused by the child scratching its scalp. If this disease is left to itself, the pustulous groups become very numerous, and may unite at their edges, forming more or less irregular surfaces. Yet the circular disposition of the primary groups is still indicated by the arcs of the circles distinguished at the circumference of these irregular surfaces. The neighbouring skin becomes red and squamous. The inflammation frequently extends to the pilous follicles, and this is doubtless the reason that led Luxmore and Underwood to suppose the primary seat of this disease to be in the bulbs of the hair. The hair either breaks or becomes detached, is soon reproduced, and this again falls off if the skin continues inflamed, covered with squamæ, or is the seat of a new eruption of pustules. Baldness is permanent only in rare cases, in which the scalp is deeply ulcerated, or the pilous follicles destroyed.

Tinea annulare, abandoned to itself, may exist for several years, denuding in turn different parts of the scalp. As long as any redness or furfuraceous desquamation remains, the development of more pustules is to be feared. On the contrary, when the morbid redness of the skin disappears, when the reproduced hair is of the same colour and strength as the original, the cure is approaching.

§ 332. (c.) This disease usually attacks children from the age of two years to that of puberty. It is highly contagious. Willan has seen it propagated from one individual to fifty others, at the same school, in one month. On this occasion he censured, justly, the custom obtaining in some establishments of allowing several children to use the same comb. I attended a little boy five years of age with this disease, whose mother had several pustules developed on her fingers, from washing his head twice a day with an emollient decoction. Two sisters of this child had similar pustules form on the lips and fingers.

The insertion of the humour of tinea annulare is generally

followed by a pustulous inflammation confined to the punctures. Want of cleanliness, the existence of another phlegmasia of the scalp, such as psoriasis or pityriasis, predispose to the development of tinea annulare, which may appear spontaneously, without any contagious contact.

§ 333. (D.) The pustules and crusts of tinea annulare cannot be confounded with the pustules and cup-shaped crusts of favus. It differs from tinea granulata by the circular disposition of its pustules and crusts, and by their mode of extension; and by the contagious property of its humour. Bateman and Mr. Plumbe are wrong, in my opinion, in regarding tinea granulata as a variety of *ringworm* of the scalp. The pustules of impetigo *figurata* are disposed in groups somewhat like those of tinea annulare, but impetigo is not contagious.

§ 334. Tinea annulare is one of the most obstinate inflammations of the scalp.

§ 335. (T.) When tinea annulare is accidently developed in a child of the higher classes of society, we are usually called in, a short time after its invasion. In this stage, the antiphlogistic and derivative method will be successful. It was so in the case cited (§ 332.) The children of the lower orders are presented in a very different condition; the inflammation of the scalp has nearly always made considerable progress, before any rational treatment has been pursued, and has extended to the pilous follicles. Under these circumstances, I agree with Mr. Plumbe, contrary to the opinion of Willan and Bateman, that epilation is an indispensable step towards the cure. The inflammatory symptoms being subdued by the different means indicated in tinea favosa, (§ 322,) the hair should be removed from all the diseased parts. The proceeding of Messrs. Mahon is particularly applicable to intractable cases of tinea annulare; and is far preferable to rooting up the hair with the skull-cap, or epilation by means of forceps.

§ 336. Tinea annulare is but little known in France. The most modern pathologists have confounded it with tinea granulata. It does not appear in the tables of tineæ treated at the central bureau, although I have several times observed it in patients presented at this establishment.

§ 337. I am far from regarding inoculation* as conclusive in favour of contagion in tinea annulare. The pustules caused by the punctures were more voluminous than those

* In one particular case related.

proper to this disease. Similar pustules are sometimes produced by inoculating pus from a subcutaneous abscess. In this case,* five punctures out of six became pustulous; a similar experiment with the matter of impetigo had the same result, the punctures were effaced.

TINEA GRANULATA.†

Syn.—*Porrigo Scutulata*, Willan. *Scalled Head.*

§ 338. Tinea granulata is characterised by small pustules not so deeply implanted as those of favus, *irregularly* scattered over the scalp, which dry, and form grey or brown crusts not cup-shaped, and which are sometimes seen lying loose among the hair.

§ 339. (s.) Tinea granulata affects the scalp exclusively. It does not commonly cover such a large surface as tinea favosa. It is announced by small yellowish pustules, which successively appear at the posterior and superior part of the head. They yield a viscous humour, which thickens and dries by the contact of air, and becomes transformed into small crusts of a brown, or dull grey colour, resembling mortar coarsely powdered, or the plaster fallen from walls, and dirty from dust and humidity. These crusts never have the hollow cup-shaped surface of those of favus. They are gibbous, angular, and assume no particular form. When not softened by pus, they are of a hard stony consistence, cataplasms scarcely affecting them. They sometimes appear as if glued to the hair.

Tinea granulata gives out a faintish odour resembling that of rancid butter, or of cheese that has begun to putrefy. This odour is only perceptible when the crusts are still humid, and when there is a considerable oozing from the scalp. It diminishes as the crusts dry and acquire the hardness which makes them resemble gypsous or cretaceous matter.

The itching caused by tinea granulata is very acute, and is often increased by the production of a great number of lice.

This disease is sometimes attended by inflammation of the lymphatic glands of the neck. Poorer children, in which it is developed, frequently present unequivocal symptoms of thoracic, or abdominal inflammation.

The duration of tinea granulata varies from some weeks

* Vol. 1, page 521.

† Alibert, *De la Teigne Granulée*, fol.

to several years. It is only in the latter case that the bulbs of the hair become implicated, of which baldness to more or less extent is the consequence.

§ 340. (A.R.) But few pustules are found intact. Most of them have dried up; the crusts are not very adherent to the skin; the reticular body is red and inflamed. In chronic tinea granulata, the inflammation extends through the whole substance of the dermis, and the skin sometimes presents ulcerations of varied form and dimensions.

§ 341. (C.) Tinea granulata is rarely met with in adults; it more particularly attacks children, and, above all, the poor and dirty. It is not so common in hospitals as tinea favosa. At the central bureau, in a given number of cases, tinea granulata was found, relatively to tinea favosa, as 329 to 908. It must be remarked too, that, in this comparison, the cases of tinea annulare were comprised in those reckoned as tinea granulata, thus exaggerating their number.

§ 342. (D.) Tinea granulata differs from favus: 1°, by its pustules, which are always humid at the beginning, while those of the latter disease are dry, and never fluent; 2°, by the form of its crusts, which are irregular, cracked, rough, and unequal, having their summits projecting, instead of being depressed into the cup-shape, as in favus; 3°, by the contagiousness of tinea favosa, a character which appears never to belong to tinea granulata. These two diseases are so distinct from each other as never to be seen together on the same head, nor are ever changed the one into the other. The distinctions between this disease and tinea annulare and tinea mucosa, have been, or will presently be indicated. (§ 333.)

§ 343. (P.) Granulated tinea is generally more tractable than favus; but is a more serious disease than tinea mucosa.

§ 344. (T.) When tinea granulata is not very ancient, it may be treated by the *antiphlogistic and derivative* method, (§ 322,) particularly if the inflammation is at all acute.

If the disease has already existed for months or years, the crusts are dry, and like plaster, and the skin beneath them is but slightly inflamed, Messrs. Mahon's method is preferable. (§ 326.) This practice, applied indiscriminately to all cases of tinea granulata at the central bureau, whatever its age or intensity, was followed by a considerable number of cures. However, the duration of the treatment was at least ninety days, since the mean number of dressings was forty-five in each case.

TINEA MUCOSA.*

Syn.—*Porrigo Larvalis*, Willan. *Crusta Lactea. Milk Scall.*

§ 345. Tinea mucosa is a cutaneous inflammation, characterised by small pustules, disposed in irregular groups, developed on the face or scalp. They furnish an abundant humour, which covers and glues the hair into masses and layers. In drying, the pustules form thin lamellous yellow, or brownish crusts.

§ 346. 1°. Tinea mucosa *of the face*, (Porrigo *larvalis*, W.) usually appears on the forehead and cheeks. The small characteristic pustules are white, disposed in groups, and scarcely rise beyond the level of the skin. This soon acquires an erythematous tint; the pustules break about the fifth or sixth day, and give issue to a viscid yellowish fluid, which concretes into yellow or greenish crusts. New pustules soon form round their circumferences and in their neighbourhood. These break in their turn, and the secreted humour is effused over the skin. At the same time, a pretty considerable oozing is established from under the older crusts, increasing their thickness and extent. Abandoned to itself, several successive eruptions of pustules will occur at more or less distant periods; so that the whole face may be covered as it were by a mask, (*larva*,) whence the epithet *larvalis* assigned by Willan to this species of *porrigo*. The eyelids and nose are rarely affected by it. This pustulous disease may present different shades in its development, progress, and intensity. At times the inflammation is very acute, the secreted humour abundant, the skin of a deep-red beneath the crusts, fissured and excoriated on the cheeks, towards the commissures of the lips and the depression which separates them from the chin; on the contrary, tinea mucosa may present all the characters of a chronic inflammation; the pustules are few, their development slow and progressive, the oozing, at first but slight, dries, covering the skin with a brown crust.

Whether tinea mucosa be successfully treated or spontaneously heals, the following are signs of an approaching cure: diminished morbid secretion, and the crusts drying without being reproduced; the skin, provided with a very thin epidermis, remains for sometime erythematous, becoming the

* Willan, *On Porrigo Larvalis*. 4to.—Alibert, *De la Teigne Muqueuse*, fol.

seat of a furfuraceous desquamation. I have never observed the excoriations and fissures of tinea mucosa of the face to be followed by cicatrices.

2°. Tinea mucosa *of the scalp* is also announced by small pustules containing a whitish or yellowish humour. They break spontaneously, or in consequence of being exposed to friction, the child continually scratching itself. Very humid superficial excoriations form, from the surface of which a pale yellowish, or reddish humour, exudes abundantly, resembling honey in a very liquid state. This liquid, which glues the hair into masses and layers, is transformed into soft yellow crusts. If the disease is neglected, it invades successively nearly the whole of the scalp. The inflammation sometimes extends to the subcutaneous cellular tissue, which becomes tumefied, forming small prominent gibbosities: they are often seen near the mastoid apophysis: these small phlegmons are productive of much pain and tension, and commonly terminate by suppuration. Mucous tinea *of the scalp* left for a long time to itself assumes a chronic character, penetrates deeper, and the bulbs of the hair sometimes inflame, causing it to fall off to a greater or less extent.

3°. Lastly, mucous tinea may affect simultaneously the face and scalp, and may even spread to the nucha, ears, and shoulders.

§ 347. Tinea mucosa is always attended by itching, interrupting the patient's rest. I attended a little girl who scratched herself to such a degree every night, as to exhibit every day excoriations pouring out a considerable quantity of blood. This disease of the skin is, at times, complicated with inflammation of the conjunctiva, mucous membrane of the mouth, meatus auditorius externus, or nasal fossæ; it may also be accidentally associated with other inflammations, as aphtha, roseola strophulus, parotitis, gastro-enteritis, and chronic pneumonia.

§ 348. (c.) Tinea mucosa is not in the least contagious; it most frequently attacks children during the first or second dentition. In infants at the breast, the quality of the milk has a marked influence on the development of this disease. It is more frequently seen than the register of the central bureau would lead one to expect, the number of admissions for this disease, compared with cases of tinea favosa, being in the proportion of 71 to 908. The epilatory method, as exclusively employed at the central bureau, is rarely applicable to this disease.

§ 349. (D.) The fluent pustules of tinea mucosa cannot be confounded with the dry ones of favus. The large humid lamellous crusts of the former are very distinct from the circular cup-shaped crusts of the latter. The pustules of tinea granulata are larger than those of mucous tinea. They are succeeded by brown, granulated, round prominent crusts; while those of the latter dry under the form of yellow, thin lamellous crusts. Lastly, the peculiar disposition of the pustules and crusts of annular tinea, not only distinguish it from mucous, but from all other tineæ.

§ 350. (P.) The appearance of tinea mucosa may be always considered favourable, when it coincides with the decrease of any existing internal inflammation; but in cases where it constitutes a real complication, it is important to subdue it by rational treatment. The sudden cessation of the oozing of tinea mucosa is always a bad sign. It usually announces the invasion of some grave disease, or the exacerbation of some chronic inflammation.

Although the duration of this disease cannot be precisely assigned, it most frequently terminates quickly under judicious treatment. At the time, however, when the cure seems approaching, there may suddenly supervene an exacerbation of all the symptoms. Starck affirms that when the inflammation is on the point of terminating, the odour of the patient's urine becomes similar to that of the urine of the cat, and that the disease is prolonged indefinitely when this secretion preserves its natural odour. I am convinced this remark has numerous exceptions.

§ 351. (T.) In tinea mucosa the *antiphlogistic and derivative method* has incontestable advantages over every other mode of treatment.

When infants at the breast are affected with tinea mucosa *of the face*, the use of tepid baths, of emollient and mucilaginous lotions, with the decoction of mallow-root, milk, &c. is usually sufficient to moderate the eruption of the pustules, and by degrees to obtain a cure. In older children, or when the inflammation causes excitement and want of sleep, two or more leeches should be applied beneath the ears or lower jaw, according to the age of the child, and extent of the inflammation. Should this plan not be followed by a marked remission of the symptoms, a small blister should be applied to the arm, and kept open for a time.

When tinea mucosa is developed on the scalp, or at the same time on the scalp and face, the head should be shaved,

or, what is better, the hair cut close to the scalp with scissors with curved blades, and the head afterwards covered by an emollient cataplasm, which is to be frequently renewed. The head should be washed two or three times a day with linseed decoction, and if the general health is good, leeches, in numbers proportioned to the extent of inflammation, may be applied to the temples or nucha. If any small subcutaneous abscesses are formed, they should be opened by a lancet at their most dependent point. After a few days, a blister should be applied on the arm, and kept open till the cure of the inflammation is completed; this is usually the case in one or two months.

§ 352. In the treatment of tinea mucosa, it is better not to smear the inflamed parts over with zinc and saturnine ointments. Mercurial purgatives have been recommended, to cause a temporary revulsion towards the intestinal canal; this plan is often dangerous.

§ 353. In the chronic stage of the disease, the antiphlogistic and derivative method should be at once resorted to, and persisted in till the skin becomes rather irritable. Sulphureous lotions should be afterwards employed, or ointments of the nitrate of mercury, to change the mode of irritation of the diseased parts.

The epilatory method of the Mahons is only applicable to the few cases in which the follicles of the hair become inflamed. The cases treated on this plan have required thirty-nine dressings for their cure, that is, seventy-eight days.

§ 354. The diseases accidentally complicated with tinea mucosa, such as ophthalmia, otitis, &c. require to be treated appropriately, at the same time, as the cutaneous disease.

ARTIFICIAL PUSTULES.

§ 355. Many substances introduced into the tissue of the skin, or applied to its surface, give rise to the development of pustules of various forms and dimensions, but all resulting from *artificial* irritation. Several among them have already attracted the attention of some pathologists.

§ 356. *Pustules produced by the insertion of animal matter.* These were formerly designated as *false inoculated variola.* They are ordinarily acuminated, are more or less voluminous, and are produced by the insertion of variolous pus, altered by desiccation, or from other causes. Similar pustules have lately been called *false vaccina;* these have been caused by

the inoculation of vaccine pus, taken from the pustule after it has been turbid, opaque, or nearly dry. These accidental pustules are not contagious; they bear no analogy to variolous or vaccine pustules; but, on the contrary, nearly approach those in form and nature which are accidentally produced by an oxydised instrument impregnated with pus, putrid animal matter, or that secreted by certain insects. These pustules heal spontaneously in a week or two. They sometimes ulcerate, when the inflammation, aggravated by friction or topical irritants, becomes more intense and penetrates deeper. Cauterising their summits with the arg. nit. causes their bases to become less inflamed, and their cure more rapid.

§ 357. *Pustules produced by the external application of certain vegetable substances.* Several vegetable productions applied to the skin give rise to the development of pustules, simple, or complicated with vesicles and papulæ. An hydropic, whom I had desired to be rubbed with the extract of aconite (ʒss. rubbed down with ℥ss. of lard,) was shortly after attacked by an eruption of prominent pustules, full of a yellowish opaque fluid, and surrounded by a bright-red areola. They were mingled with solid papulous elevations, slightly prominent, and not containing any liquid. The skin, in the intervals between these elevations, preserved its natural tint.

These accidental pustules may become excoriated. Viat mentions the case of a man whose face remained a long time excoriated, from being rubbed with the juice of the *euphorbia cyparissias.*

§ 358. *Pustules produced by the application of some inorganic substances.* The most remarkable are certainly those produced by the tartrite of antimony. As to form and dimensions, they are somewhat analogous to variolous pustules. Jenner* has indicated under what circumstances it may be proper to provoke the development of this pustulous inflammation. As it is not my object here to consider it in a therapeutic point of view, I shall only observe that hooping-cough is one of the diseases in which it has seemed to me the most uniformly successful. The following case will give a good idea of the mode of development and external characters of this eruption:

A coachman, forty-five years of age, in La Pitié, had pulmonary catarrh, complicated with chronic laryngo-tracheitis. Independent of other measures, I ordered, 14th February,

* Jenner, *On the Influence of Artificial Eruptions in certain Diseases.* 4to. Lond. 1802.

1826, friction to be made morning and evening over the anterior part of the neck and superior part of the sternum, with ʒi of the tartar emetic ointment. On the 16th, in the morning, the following appearances were presented: 1°, flat pustules of the size of a lentil, filled with a purulent serosity, having small brown spots in their centres. These pustules, from their flat and umbilicated form, resembled those of small-pox. Their bases were surrounded by red areolæ of two or three lines diameter, which were gradually lost in the natural tint of the skin, or confounded with the areolæ of the neighbouring pustules; 2°, these were intermingled with other pustules of a semi-globular form. On the 19th, all these pustules were increased in size; the contained humour was whiter and thicker; the central brown spot of the flat pustules more depressed, larger, and of a deeper tint. The skin was the seat of a pretty sharp itching, which was announced by slight shootings about forty-eight hours after the first friction. On the 20th, the pustules were shrivelled, the central crust larger, the areolæ violaceous, and the itching less acute. On the 21st, the desiccation became more and more complete. In a day or two more, the crusts became detached, leaving small circular violaceous spots on the skin.

§ 359. Some variety is observed in the development of the pustules produced by the tartrite of antimony and potass. The rapidity of their formation is in proportion to the irritability of the skin, and the quantity of the tartar emetic employed. They are larger and more inflamed when the tartar emetic is applied without being incorporated with lard. In old people and weakly subjects, they are of a violaceous tint, and filled by a sanguinolent humour.

FURUNCULOUS INFLAMMATIONS.

§ 360. The areolæ of the dermis are filled by conical processes, furnished by the subcutaneous cellular tissue; these accompany the vessels and nerves running from the lower surface of the skin to its external surface, forming the mucous body. Inflammation of one of these prolongations gives rise to the development of hordeolum, or furuncle, the simultaneous and confluent inflammation of several of these appendices constitutes authrax.

§ 361. The tissue of the skin always participating in the inflammation of these prolongations of the subcutaneous cellular tissue, it has been thought necessary to dedicate a chap-

ter to furunculous diseases. It may be as well to add, that they have been placed by our most esteemed pathologists among the number of cutaneous diseases.

§ 362. Furunculous inflammations are three in number: hordeolum, furuncle, and anthrax. They commonly assume the acute form, and approach each other so nearly in the identity of their causes, seat, progress, and termination, that they may be regarded as simple varieties of the same inflammation. Abandoned to themselves, these inflammations always terminate by the expulsion of one or several *cores*. This is the name given to the little cellular cones of the areolæ of the dermis, when mortified and detached from the adjacent parts. This peculiar termination of furunculous inflammations is generally attributed to the resistance which the fibrous areolæ of the dermis offer to the distention of the inflamed cellular tissue, which thus experiences a real stricture.

§ 363. The development of furunculous inflammations is nearly always connected with the existence of some gastro-intestinal affection; they are rarely the effect of irritation applied directly to the skin.

§ 364. The three varieties composing this group are distinguished from other cutaneous inflammations, by their seat being in the interareolary cellular tissue of the dermis, and by their mode of development, which takes place from within outwards.

§ 365. Besides the indications common to all acute inflammations of the skin, furunculous phlegmasiæ present one peculiar to themselves; that is, the stricture of the cellular appendices, which extend through the areolæ of the dermis.

§ 366. Hordeolum and furuncle are two diseases so frequent, so generally known, and so mild, that a mere description of them is sufficient.

HORDEOLUM.

Syn.—*Stye.*

§ 367. Hordeolum is a small furunculous tumour of the eyelid, most frequently situated near the free edge of the upper lid, and towards the inner angle.

§ 368. (s.) Hordeolum may be *acute* or *chronic*. In the former case, it presents itself under the form of a tumour, of the size of a *barley corn*, oblong, rounded, prominent, of a deep-red, and at the summit of which a point of suppuration is soon observed. This little tumour, which is accompanied by acute

pain and considerable swelling of the eyelid, breaks, and gives issue to clear serous pus. The aperture of the skin soon closes, a new white point is observed on the tumour; at last a small *core* is expelled; and soon after, all the symptoms disappear.

In the latter case, the stye consists of a small, hard, red and rather indolent tumour, which, after continuing in the same state for several weeks, becomes the seat of more active inflammation, and then terminates like acute hordeolum.

§ 369. Whether acute or chronic, hordeolum offers two very distinct dispositions. Sometimes the small tumour projects on the external surface of the eyelid, scarcely at all interrupting vision, and the skin becoming perforated, the core escapes. On the contrary, it may project on the inner surface of the lid, irritating the globe of the eye by the friction it occasions. In this case, the mucous membrane of the lid softens, and becomes perforated at the most prominent point.

§ 370. (C.) Hordeolum almost always coincides with slight gastro-enteritis. It is often observed in persons addicted to the pleasures of the table, and the use of spirituous liquors. It occasionally assumes a periodical form. Women are frequently affected with it for months together, either just previous to, or during menstruation.

§ 371. (D. and P.) Stye differs from the other furunculous inflammations in its seat, by its small dimensions and slight consequence.

§ 372. (T.) Its progress may be arrested at the outset by the application of ice to the eyelid. But few persons will submit to this treatment, which perhaps, after all, is not certain to succeed. If much inflammation exists, poultices made with apple-pulp, or bread and milk, sooth the pain, and hasten the expulsion of the core; this may sometimes be effected, when it has been a long time retained, by gentle pressure made on the base of the tumour.

Stye, like furuncle, is liable to recur. The only way of preventing this is by subduing, by appropriate treatment and regimen, the gastro-intestinal affection, which has much influence over the development of this small tumour.

FURUNCLE.

§ 373. Furuncle is an inflammatory tumour, not very large, circumscribed, prominent, conical, hard, and very red, hot and painful, terminating by the expulsion of a core.

§ 374. (s.) Boils are most frequently seen on the buttocks, thighs, axillæ, back, nucha, and anterior part of the abdomen. Furuncle is announced by a small, hard conical tumour, of a vivid red, or violet colour; at first, not larger than a pea, but it may become the size of a large nut. The pain which accompanies the development of furuncle has been compared, with some truth, to that produced by the introduction of a gimlet into the skin. From the fourth to the eighth day, the tumour is elevated into a point; its summit becomes white, softened, and pierced by a minute aperture, which admits of the escape of a small quantity of sanguinolent pus. This perforation usually resembles one made with a very small stilet; in the larger boils it is scarcely a line in diameter, although the mortification of the cellular tissue extends several lines in depth and breadth. The core, formed by a small whitish cellular shred, is detached about the tenth or twelfth day. Whether expelled spontaneously, or in consequence of pressure, it leaves an open cylindrical cavity from the summit to the base of the tumour. The pain now ceases; the skin recovers itself; the cavity becomes effaced; and the cure is terminated by the twelfth or fifteenth day, leaving on the skin a very small, irregularly rounded, depressed cicatrix; at first, of a reddish or bluish tint, but afterwards resuming the natural colour of the tegument.

§ 375. One furuncle is frequently followed by several others, all running through their stages independent of each other. Their dimensions vary, but there is generally one much more voluminous than the rest.

§ 376. General morbid phenomena are observed only when furuncles are very large or numerous. If they are situated in the *perineum*, between the anus and scrotum, the emission of urine is, at times, painful; lastly, furuncles developed on the nucha, shoulders, and nates, often cause acute inflammation of the lymphatic vessels and glands of the cervical region, axilla, and groin.

§ 377. (c.) Friction with irritating ointments, want of cleanliness, sulphureous, mercurial, or alkaline baths, &c.; the acute attacks of cutaneous phlegmasiæ, as variola, ecthy-

ma, vesication, or the deeper inflammation produced by a seton, &c., may all give rise to the development of furuncles. They also frequently coincide with chronic affections of the digestive organs.

§ 378. (D.) Furuncle and stye differ from each other by the small size and exclusive seat of the latter. Regarding form and dimensions, however, the small furuncles of the skin of the penis and prepuce are quite similar to stye. In anthrax, the furuncles are agglomerated and confluent at some particular point; boils are either scattered or solitary.

§ 379. (P.) Furuncle is an unpleasant disease, but exempt from danger. It is at times salutary, when it supervenes during the latter stage of a chronic inflammation of the digestive organs.

§ 380. (T.) The ingenious experiments of Messrs. Bretonneau and Dumeril have shown that furuncles may be arrested in their progress by cauterization at their onset with the lapis infernalis. Although but little pain attends this operation, patients generally prefer having the treatment confined to the use of tepid baths, and emollient and narcotic applications. Furuncles seldom require the employment of the lancet for either bloodletting or incision. Poultices of bread and milk, with saffron, and diachylon plaister, are the topicals chiefly used in this disease.

When boils continue to succeed one another for a long period in the same individual, they may be got rid of by the administration of mild emetics and purgatives for a few days,* their revulsive action destroying the tendency of the cellular tissue and skin to produce this particular form of inflammation.

ANTHRAX.†

Syn.—*Anthracia. Carbuncle.*

§ 381. Anthrax consists of the simultaneous and confluent inflammation of several of the cellular appendices which fill the areolæ of the dermis; it is announced by a very hard, painful circumscribed tumour, of a deep-red colour, accompanied by a burning heat, and always terminating by the mortification of the cellular tissue, and the destruction of part of the skin covering it.

* And afterwards, the internal administration of the liq. potassæ.—T.

† Codet, *Dissert. sur l'Anthrax.* 4to. Paris, 1813.—Marjolin, *art.* Anthrax, *Dict. de Médecine.*

§ 382. (s.) Anthrax is most commonly developed on the nucha, back, parietes of the chest and abdomen, on the shoulders, nates, and thighs. At first, a small tumour appears, of a few lines in diameter, resembling a boil, the summit of which is sometimes covered by a sanguinolent bulla. Carbuncle may also present a much larger extent at its outset. Its progress is then rapid; and in eight or ten days, it may acquire as many inches in diameter. As the tumour enlarges, it also projects more, and extends in depth. It is very hard throughout its whole extent till the mortification begins to destroy the cellular tissue. The circumference still continues hard, and the base enlarging, even when the centre offers a sense of fluctuation. The violaceous tint of the skin does not disappear on pressure; the heat, at first acrid and burning, particularly towards the centre of the tumour, diminishes only when one or two apertures are formed; lastly, the pain, by turns gravitative and tensive, spreads towards the circumference of the tumour.

When anthrax is left to itself, the skin assumes a violet or bluish tint. At the end of a few days, this membrane becoming thinned and softened, is perforated at several points, giving issue to a small quantity of sanguinolent pus, and whitish flakes of mortified cellular tissue. The following days the inflamed skin successively softens at other points, new perforations are soon formed, from which a white or whitish core may be extracted. The mortified cellular tissue is never black, as in gangrene; the apertures enlarge, either by destruction of the skin, or by their accidental union. They all continue to yield a small quantity of thick pus, rendered sanguinolent by the rupture of a small artery or vein. If the skin is extensively perforated, the mortified cellular tissue is exposed, and exhales a fœtid odour, very distinct, however, from that of animal matter in a state of putrefaction. By degrees the eschars become detached, the suppuration more abundant, and the pus not so thick; and the pain, heat, and tension, diminish. After the separation of the sloughs, according to the region on which the anthrax is developed, the superficial aponeuroses are observed to be perforated, denuded, or lacerated; the skin at the circumference of the tumour is separated, thinned, bluish, and so much disorganised in some parts, that it is no longer capable of forming its proper attachments.

If the disease terminates favourably, the cicatrix is formed in part by the ulcerated surface, and partly by the union of the

separated skin. The cicatrix always irregular, pitted, and unequal, for a long time preserves an obscure red colour, bordering on brown. Thick bands are sometimes formed, occasioning deformity, and rendering certain motions difficult.

§ 383. Anthrax often appears without being preceded by any disturbance of the principal functions. At times, however, the patient complains, a few days before its development, of anorexia, lassitude, shivering, or other symptoms, produced by gastro-intestinal irritation.

Whenever anthrax is very voluminous, it is attended by more or less febrile action, intense excitement, insomnolency; the skin becomes dry; the urine deep-coloured, and discharged only in small quantity; the bowels confined, and head painful.

§ 384. The symptoms of anthrax may be complicated with several other phenomena, according to the region of the body on which it is developed. 1°, When anthrax occupies the lateral or anterior parts of the *neck*, the patient experiences dyspnœa, cough, and heat in the larynx and trachea; the face is tumefied, and cephalalgia is most intense: 2°, when situated on the parietes of the *thorax*, inflammation may be excited in the pleura or lungs, producing more or less grave symptoms: 3°, lastly, anthrax on the parietes of the abdomen is sometimes singularly aggravated by the sudden invasion of gastritis or peritonitis.

§ 385. Other cutaneous phlegmasiæ may be complicated with anthrax. But the most frequent is certainly that with furuncles; they often precede the development of anthrax, and are most usually observed around the circumference of the tumour.

§ 386. (c.) Children are not so liable to this affection as adults and old persons. It may be produced by the application of acrid and irritating substances to the skin; by puncture, or by want of cleanliness: it is often seen at the close of rubeola, small-pox, and other cutaneous inflammations. Like erysipelas, it also is observed to supervene after the prolonged influence of certain causes which act primarily on the digestive organs.

§ 387. Anthrax is quite distinct from the other furunculous inflammations. Boils open by a single aperture; they are neither so large, nor so conical as anthrax; and their eruption is usually successive. Anthrax is from its commencement a single tumour, larger, flatter, and has ultimately several perforations. It is not necessary, however, to exaggerate the distinctions between these two diseases. Anthrax

really consists in the aggregation of several confluent furuncles, as M. Dupuytren was the first to point out, in his clinical lectures. Before pathological anatomy had made known the true nature of anthrax, it was confounded with one disease, under the name of *charbon* (carbuncle,) and with another *(malign pustule,)* which, like carbuncle, belongs to a very different class of inflammations *(gangrenous phlegmasiæ,)* the distinctive characters of which will be hereafter indicated.

§ 388. If anthrax has not acquired very large dimensions, and is developed in a well-constituted individual, it presents no danger. It can only occasion death when very large, and situated on the paries of the splanchnic cavities, the viscera or membranes of which soon become inflamed. The prognosis is generally unfavorable with old people, in whom there commonly exists more or less serious lesions in one or several organs.

§ 389. (T.) Whatever the cause of anthrax, it should be attacked at its outset, and during its progress, by blood-letting, proportionate to the strength of the patient, and the intensity of the inflammation. Leeches should also be applied around the circumference of the tumour, and the bleeding kept up by the application of emollient fomentations, or of cupping-glasses.

Compresses dipped in very cold water, and frequently renewed, applied over the tumour, very much diminish the pain. These applications are far preferable to hot poultices and emollient lotions, which almost always augment this symptom, by keeping up and increasing the heat of the skin.

After the proper use of bleeding and cold applications, the best method of arresting the inflammation and stricture of the inter-areolary tissue, is by making a crucial incision crossing in the middle of the tumour, dividing it in its whole extent, or even extending a little beyond its circumference, and through its whole depth. The smallest anthrax usually requires two incisions, dividing it into four parts, and the size of the tumour may require many more. These incisions release the stricture in all points to which they reach; and the loss of blood which follows them diminishes the inflammation, preventing gangrene of the skin, and cellular processes not yet affected. This division also facilitates the issue of pus and the mortified shreds. It gives immediate ease to the

local pain and general symptoms; lastly, it abridges the duration of the disease.

The dressing consists in slight pressure made every day on the abscess, to expel the detached cores, and afterwards applying over the tumour pledgets of lint smeared with some greasy substance, and these, again, are to be covered by emollient poultices. When the ulcer is cicatrizing, it is sometimes necessary to remove the portions of separated skin, which are too much altered to re-unite with the subcutaneous cellular tissue. Lastly, the cicatrisation should be watched, that the cicatrix be regularly formed.

§ 390. At the commencement and during the progress of anthrax, the patient should be submitted to the antiphlogistic regimen. If the tongue is yellow or white, mouth bitter, and there is not much thirst, some practitioners advise the administration of an emetic or purgative. I never like to employ them under similar circumstances, as I have constantly observed the functional disorders, against which they have been directed, dissipate as the inflammation of the skin progresses towards a cure. It is almost needless to say that the diseases complicated with anthrax require to be treated according to their intensity and gravity, which are generally increased by the cutaneous phlegmasia.

§ 391. Several cases are given by M. Codet. M. Adelon had a case of anthrax on the paries of the abdomen, on the summit of which a large, flat, sanguinolent vesicle was developed at the outset, which caused my colleague and myself to suppose for a moment that it might be malignant pustule.

PAPULOUS INFLAMMATIONS.

Syn.—*Papulæ*, Willan. *Pimples.*

§ 392. This class of inflammations are characterized by *papulæ;* that is, solid resistant elevations, accompanied by more or less acute itching. Papules commonly terminate either by resolution or furfuraceous desquamation, and occasionally by small ulcerations.

§ 393. There are three kinds of papulous inflammations; strophulus, lichen, and prurigo: they might be reduced to two; strophulus appearing to be but a modification of lichen, in new-born infants, and those at the breast. I should now class them in this manner, were I not unwilling to introduce

a new arrangement in the history of papulous diseases, which Willan has described with so much minuteness and accuracy.

§ 394. (s.) Papules, most frequently scattered, are sometimes confined to one region, upon which they are developed in groups. The papules of lichen are red and inflamed; those of prurigo have nearly the same tint as the skin; the papules of strophulus are of a vivid red or dull white colour, like the spots of urticaria. The papules of lichen are scarcely the size of the head of a small pin; those of prurigo are somewhat larger; those of strophulus are of various dimensions. Papulous inflammations are in particular attended by an *itching* pain. Lichen may assume an acute or a chronic march; in prurigo the eruption always takes place in a slow and progressive manner; strophulus has very remarkable intermissions and exacerbations.

These three diseases may terminate by resolution, or desquamation; chronic lichen is sometimes followed by very intractable and serious excoriations.

§ 395. (A.R.) These small elevations present difficulties in the way of minute and analytic anatomical researches. Their division alone is sufficient to prove that they are hard, compact, solid, and, by consequence, very distinct from vesicles and pustules, which they resemble in form and size. Their opacity, and the impossibility of discerning any fluid in their interior, even with a lens, still farther mark their character; but none of these circumstances make known the elementary tissue of the skin, which takes most part in their formation. Some have supposed that papules are formed by the nervous papillæ of the skin, which accidentally acquire a larger volume; but this opinion seems the less founded on truth, inasmuch as papules are rarely developed on those parts of the skin where the papillæ are most distinct,—the palms of the hands and pulps of the fingers. Mr. Plumbe pretends that papules are produced by a very slight effusion of lymph into the tissue of the skin, with which this humour combines when not reabsorbed. It may be added, in favour of this opinion, that if the large papules of periodical strophulus are pricked deeply with a needle, and then strongly compressed between the fingers, a minute drop of transparent fluid is sometimes expressed; but from the papules of lichen and prurigo, by making even several punctures, I have never obtained any lymph by pressure, but merely a drop of blood.

§ 396. (c.) Strophulus is more particularly developed in

new-born infants; lichen in children and adults; prurigo in children and old people. None of these diseases are contagious; but individuals who have been affected by them are liable to renewed attacks at more or less distant periods, particularly after atmospheric vicissitudes.

§ 397. (D.) Papulous are very distinct from exanthematous inflammations, which present spots and not elevations; they are not less so from bullous, vesiculous, and pustulous phlegmasiæ, in which a serous, or purulent humour, is deposited between the epidermis and inflamed reticular body. To discriminate between the papules of lichen and prurigo, and the small vesicles of itch and eczema, it is requisite to examine the elevations with a lens, and to pay the greatest attention to these minute observations.

When papules have been destroyed by scratching, or replaced by furfuraceous spots or excoriations, the diagnosis of papulous inflammations is sometimes so obscure, that an opinion can only be given by waiting for the formation of new elevations, the papulous form of which will at once decide the nature of those that have preceded them.

§ 398. (P. and T.) Papulous affections are more or less grave, according as they affect an acute, or chronic march. Lichen *agrius* is one of the most obstinate of cutaneous diseases. It has been opposed, in turn, by mild, and energetic measures, the advantages and inconveniences of which will be considered when we come to treat of the disease against which they have been directed.

STROPHULUS.*

Syn.—*Strophulus,* Willan. *Gum Rash.*

§ 399. Strophulus is a cutaneous inflammation, frequently seen in infants at the breast, characterized by pruriginous papules, red or white, of variable size, appearing successively, and most usually on the face or limbs; they disappear, and return in an intermittent manner, and terminate by resolution or furfuraceous desquamation.

§ 400. (C.) Strophulus is seen in children at the breast, most frequently during the first two months, and at the period of dentition. This disease is sometimes produced by direct irritation of the skin, caused by clothing of harsh linen; by exposure to too great a heat, and want of cleanliness; but is

* Willan, *On Strophulus*, 4to., 1798.

more often symptomatic of gastro-intestinal inflammation, produced by excess of diet, food of a bad quality, dentition, &c.

§ 401. (s.) The papules of strophulus exhibit great variety in their colour, number, and arrangement. Willan designated each variety by a particular name.

1°. Some papules are of a *bright-red*, prominent, scattered over the cheeks, forearms, and backs of the hands, and mixed with erythematous patches of a greater or less extent (*S. intertinctus*, W.) These papules and red spots sometimes continue for several days, without any remarkable change taking place in the general health of the patient. The papules often disappear in the morning, reappearing in the evening again. When permanent, their surfaces, in the course of a week or two, present a slight furfuraceous desquamation.

2°. Others are small *white* papules, (*S. albidus*, W.) prominent, at times surrounded by a slight redness, and which are principally developed on the face, neck, and chest. These are, in general, more permanent than the preceding variety.

3°. The white papules of strophulus may be of the largest dimensions, and have no inflammation around their bases, (*S. candidus*, W.) Their surfaces are smooth, shining, and of a more opaque white than the adjacent skin. These large papules are commonly scattered here and there, at a great distance from one another, either on the loins, shoulders, or upper part of the arms.

4°. As well as these differences in their *colour*, and size, the papules of strophulus present two other peculiar dispositions. Thus, the eruption may be very considerable on the face, trunk, and limbs, (*S. confertus*, W.) The papules situated on the *face* are smaller and more confluent than those of *S. intertinctus*. Their colour is not so vivid, but they are generally more permanent. They terminate, in a week or two, by furfuraceous desquamation. The papules developed on the *trunk* are more especially situated on the back and loins; they are larger, and not so close together, as those of the face. If they are deeply punctured with a needle, a minute drop of serous transparent fluid may be expressed; this becomes absorbed as the inflammation decreases. On the upper limbs, neck, and shoulders, the papules usually form irregular groups. These are permanent and terminate, in desquamation. Those developed on the *lower extremities* are al-

ways the seat of acute itching. They are seen more particularly on the ankles, thighs, nates, and loins, in successive eruptions, which often continue for several months.

5°. Lastly, the papules of strophulus may appear on various regions, under the form of small circular groups, (*S. volaticus.*) In each group the number of papules is generally from six to ten; the elevations and their interstices are of an animated red. At the end of four or five days, they become dull, and terminate in furfuraceous desquamation, similar to when they are scattered, or confluent. These groups are developed successively, on the face, trunk, and limbs; and the eruption may be prolonged for several weeks.

§ 402. These different shades of the disease are often seen in the same child. The white papules of *S. albidus* may be intermixed with the red ones of *S. intertinctus;* lastly, the papules may be confluent on some points, as in *S. confertus,* while on others, the large distinct papules of *S. candidus* are seen.

§ 403. Whatever the form of the eruption, strophulus is always attended by much itching. This symptom is much increased by the heat of the bed; producing inquietude in children, whose sleep is thus interrupted and agitated. Different symptoms of gastro-intestinal irritation and of dentition are often associated with strophulus.

§ 404. (D.) The papules of lichen are either whiter or redder than the healthy surrounding skin; those of prurigo, when intact, have nearly the same colour as this membrane. In strophulus, each successive eruption takes an acute form; prurigo approaches more to the chronic character. It is not so easy to establish clearly the line of demarcation between strophulus and lichen. The difference observed in these two diseases results most probably from the different ages and conditions of the individuals affected by them respectively. Indeed, the papules of lichen are sometimes red, inflamed, distinct, or disposed in groups like those of strophulus; but the latter, more frequently than the former, exhibit periodical intermissions and exacerbations; while, on the other hand, strophulus never terminates by excoriation, like lichen *agrius.* Lastly, strophulus *confertus* is distinguished from spotted erythema, by the spots of the latter being joined together, not prominent, and unattended by papules.

§ 405. (P.) Strophulus in itself is not a dangerous disease; if symptomatic of gastro-intestinal inflammation, this alone makes it serious. These two inflammations sometimes alter-

nate with each other; the functional derangement of the digestive organs ceasing on the development of the papules. The duration of strophulus varies from a few hours to several days; the eruption may continue several weeks, if successive, according as the exciting cause is intermittent, temporary, or permanent.

§ 406. (T.) When strophulus is produced in a child of good constitution, by certain causes acting directly on the skin, (§ 400,) the evident indication is to protect the surface of the body from their influence. The itching may be temporarily relieved by rubbing the papules gently with cold salt water, or vinegar and water. These applications are useful even when strophulus is symptomatic of inflammation of the digestive organs. But in this case it is of most importance to combat the internal inflammation by appropriate diet, and the daily use of baths of decoction of bran at a moderate temperature.

§ 407. Cold baths diminish, and even quickly subdue, this papulous inflammation; but they aggravate the internal phlegmasiæ with which it is frequently complicated. The administration of purgatives is noxious. A few years ago, however, they were prescribed *to destroy the acidity of the primæ viæ;* they frequently produce obstinate vomiting and diarrhœa. Emetics and tonics (recommended by Willan) should equally be avoided; for it is of great importance not to irritate the digestive organs of children by active medicines.

§ 408. Strophulus is an eruption better known to mothers and nurses than to physicians. Those authors who have treated *ex professo* of the diseases of new-born infants have spoken of it only in a general way, or made mention of *boutons, rashes, elevations, tooth-rash, &c.*, which they have observed on the skin, as a frequent symptom of gastro-intestinal irritation. The details already given of the different appearances which strophulus may assume contain most of the peculiarities observed in individual cases. All the varieties of this inflammation should be studied, but should be not too much isolated from one another, as several may be successively developed on the same child at different periods.

LICHEN.*

Syn.—*Lichen*, Willan.

§ 409. Lichen is frequently met with in adults, and is characterised by the simultaneous or successive eruption of red pruriginous papules, scattered, or disposed in groups over the whole surface, or on some particular region of the body; this inflammation usually terminates in a furfuraceous desquamation, and, more rarely, in superficial, intractable excoriations.

§ 410. To render the description more minute, Bateman has noticed six varieties of lichen; five of these had been acknowledged by Willan. Each is distinguished by a particular disposition of the papules, or by some modification in the colour or intensity of the inflammation. These varieties are: *L. simplex*, *L. pilaris*, *L. circumscriptus*, *L. agrius*, *L. lividus*, *L. urticatus*, and *L. tropicus*. The latter comprehends all lichen developed within the Tropics, and aggravated by the effects of a high temperature, and does not really constitute a variety distinct from the others.

§ 411. (s.) 1°. Lichen *simplex* may be confined to one region, as the face, neck, or arms; or it may show itself first on the face or arms, and extend in three or four days over the trunk and lower limbs, particularly the lower and outer part of them. *L. simplex* consists of small red and inflamed papules, that is, *solid* elevations, not transparent, often acuminated, but containing neither pus nor serosity. This eruption is attended by a disagreeable sensation of formication, particularly during the night. These papules, irregularly disseminated over the skin, remain for seven or eight days; their colour then fades, and they end by desquamating. Although the individual duration of each papule may be only a week, *L. simplex* may continue for several months, or even some years. It then consists of several successive eruptions. While one is disappearing another is developed, and it thus affects some regions of the body after having left others. At the moment when the cure of this disease seems at hand, the papules may be reproduced by a change of atmosphere, some moral affection, or excess in diet. This eruption is not commonly announced by any febrile action. This is only the case when the eruption is considerable, or complicated with some

* Willan, *Lichen*. 4to. 1798.—Biett and Raige-Delorme, *art.* Lichen *Dictionn. de Médecine*. 8vo. Paris, 1825.

other inflammation. Willan was in error when he asserted that *L. simplex* was always preceded by febrile symptoms; and he explicitly announced this in the general definition which he gave of lichen.

2°. Lichen *pilaris*. This variety differs from the preceding only in the papules being developed on those parts of the skin which are covered with hair, the bulbs of which appear to participate in the inflammation of the skin: this is more deeply affected than in *L. simplex*. *L. pilaris* is almost always chronic, and is not unfrequently seen to continue for several years.

3°. Lichen *circumscriptus*. This variety is characterised by groups or patches of papules. These patches have an irregularly circular form, and a well-defined edge. They are observed more particularly on the back of the hand, forearm, ham, and on the trunk. The march of *L. circumscriptus* is nearly the same as that of *L. simplex;* it is not so obstinate as the latter. Some of the papulous patches remain stationary for a certain time, and then disappear; others extend gradually by the formation of a new circle of papules, which is added to those already in existence; they enlarge, and at last become confounded together. In general, these papules are less inflamed than those of *L. simplex*. They are often of nearly the same colour as the skin. At the time that the edges of the groups extend, their centres unite, preserving a pale rose tint, or a furfuraceous aspect. While the first groups are desquamating, new ones generally form, which terminate like the preceding, in furfuraceous desquamation. These successive eruptions prolong, more or less, the duration of the disease, according to their number.

4°. Lichen *agrius* really differs from the preceding varieties only in the greater degree of its intenseness. It consists of large groups of papulæ, very numerous and agglomerated, of a vivid red colour, and the inflammation extends to the surrounding skin. *L. agrius* is particularly observed in individuals weakened by age, misery, or excess. The eruption is often preceded by febrile excitement, which decreases, or ceases, as the papules are developed. These are accompanied by an intolerable burning itching, especially during the night, and are still farther aggravated by a kind of excitation. The itching sometimes arrives at such a pitch of torture, that the sufferer not only scratches himself with his nails, but seems to delight in tearing the skin with the hardest brushes. After this, the heads of most of the papules are torn off; the skin

becomes red and bloody; a transparent fluid oozes from the summits of the papules, and assumes, in concreting, an intermediate form between squamæ and crusts. This advanced and grave degree of lichen has been connected by Alibert with the excoriations of eczema, and placed under his description of *dartre squameuse humide.*

Lichen *agrius* is often preceded by febrile action, and frequently, during its course, the irritation of the skin extends to the gastro-intestinal mucous membrane. This comes on with pain in the epigastrium, nausea, vomiting, diarrhœa, and other functional disorders.

Lichen *agrius* is often presented to our notice. Its duration is not more certain than that of the preceding varieties. It may terminate in eight or ten weeks, or endure for several months or years, during which time the eruption has remissions more or less marked. Lastly, it is reproduced by atmospheric vicissitudes. When it has existed for a long time, or shown itself repeatedly on the same point, it may be succeeded by the pustulous inflammation described under the head of *impetigo.*

5°. Lichen *urticatus.* This variety, which Bateman places first, and which he has added to those admitted by Willan, has been thus designated, from some analogy it bears, in many points, to urticaria. *L. urticatus* shows itself more especially on the neck and lateral parts of the face, appearing and disappearing frequently at short intervals; it is often attended by febrile action. The papules which characterise it have an irregular form; they are inflamed, like the elevations produced by the bite of a bug or gnat, and are mixed with small inflamed pruriginous papules. As the earlier papules terminate by resolution or desquamation, others are successively developed on the trunk and limbs, becoming confluent, and forming small patches. *L. urticatus* is rare in young persons and adults. I have never observed it, except during the heat of summer, or in the spring-time. When developed in children, it is impossible to distinguish it from strophulus *candidus,* which appears to correspond with this variety of lichen in adults.

6°. Lichen *lividus.* Under this name Willan has described a papulous eruption, of an obscure red or livid colour. According to the same author, the eruption is seen principally on the limbs, and is unattended by any febrile symptoms. It is liable to be reproduced after having disappeared, and may then continue for several weeks. The papules are intermixed

with petechiæ. This species of lichen is rare; I have never seen a case of it.

7°. Under the name of Lichen *tropicus*, all the preceding varieties have been comprised, when developed in a high degree, and maintained by the elevated temperature of tropical regions. This papulous inflammation has been successively studied by Bontius,* Cleghorn,† Johnson,‡ &c., whose descriptions differ only in unimportant particulars. "In these climates," says Bontius, "when sweating has been excited, red rugous papules present themselves, and often cover the whole body from head to foot, and are accompanied by intense itching. This eruption seems to affect, in preference, persons recently arrived in hot climates; but the inhabitants are exempt from it. When the skin, after becoming the seat of an intolerable itching, has been torn by the nails, ulcerations often succeed, which are difficult to heal." Bontius advises the itching to be allayed, by covering the parts with rags soaked in vinegar and water, lemon-juice, &c. These applications, at first, cause some pain; but this passes off and the itching becomes more supportable.

Cleghorn expresses himself in nearly the same terms. "The cutaneous eruption called *prickly heat*, (chaleur piquante,) he observes, "is the same as described by Latin authors under the names of *sudamina*,§ and *papulæ sudoris*. It is so common in hot countries, that nearly all the inhabitants are subject to it, more or less, during the hottest part of the year. Children, however, are more frequently the subjects of its attack than adults or old people. This eruption consists of a great number of small round red elevations, sensible to the touch, which show themselves on different parts of the body, particularly after exercise. This eruption is usually regarded as a sign of good health. It has no other inconvenience than the frequent itching attending it; but, if repelled by the effort of cold, or sea-bathing, or imprudent diet, it may be followed by very grave symptoms. As soon as the retrocession of lichen is announced by general disorder, headach, increased heat, &c., bleeding should immediately be had recourse to,

* Bontius, *De Medicina Indorum*, cap. xviii.

† Cleghorn, *On the Diseases of Minorca*, cap. iv.

‡ Johnson, *On the Influence of Tropical Climates on European Constitutions*. 1821.

§ Under the name of *sudamina* has been also described a vesiculous eruption which ought to be classed with eczema.

followed by the employment of purgatives and cold acidulated drinks."

Dr. J. Johnson was himself the subject of Lichen *tropicus*. "It is impossible to describe," says he, "the extreme suffering produced by prickly heat. It is composed of itching, smarting, formication, and several other sensations difficult to define. During the first weeks of my arrival in India, I scarcely enjoyed an hour's sleep, without being obliged to leave my bed. Fatigued by the inexpressible irritation I experienced on the skin, I washed myself with cold water; but this was often followed by a violent paroxysm. In this disease, the skin of the thorax, of the neck, forehead, arms, and thighs, is covered by an eruption of very red papules, which, in general, are not larger than the head of a small pin. They sometimes disappear in a great measure during repose; but slight exercise, or warm stimulating drinks, readily produce them again."

Hillary advised the encouragement of the development of this inflammation of the skin, by the use of tea, coffee, &c. Johnson thinks, with reason, that this is of no utility; and to prevent the disease, he advises Europeans to clothe lightly, and to avoid all exercise during the heat of the day, to live temperately, &c. The sudden disappearance of *L. tropicus*, whenever Dr. Johnson has observed it, has been consecutive to the development of other diseases, more or less grave.

§ 412. Lichen has for its fundamental character, red inflamed papules. When other inflammatory alterations are manifested, conjointly with papules, they constitute true complications. Thus, small accidental *vesicles* are at times observed in the midst of the papules of lichen, particularly of *L. agrius;* these vesicles resemble those of eczema. These may deceive us as to the kind of disease present, unless we observe that the vesicles are formed subsequent to the papules, and are more rare than the latter. These vesicles ought to be regarded as a temporary complication, produced by the intenseness of the inflammation of the skin. Lichen is occasionally complicated with itch, when highly developed in young, sanguineous, and robust subjects. At times, psydraceous *pustules* become mixed with the papules, and cast much obscurity over the diagnosis. Crusts, more or less thick, and of greater or less extent, soon cover part of the diseased skin, and may cause lichen to be confounded with eczema *impetiginodes*. The papulous character of lichen is not frequently

to be recognised until after the disappearance of these accidental inflammations. I have seen lichen complicated w it ecthyma and furuncles, when the skin has been very irritable; it is frequently accompanied also by inflammation of the mucous membranes.

§ 413. Lichen, simple or complicated, is rarely transformed into any other phlegmasia. Sometimes, however, when it has existed for a long time on the same points, it does degenerate into psoriasis, or impetigo; but it more frequently terminates in a complete cure, leaving no traces behind it on the skin. There are none left, even when the eruption has been several times renewed, or has continued for a long time on the same region. On the points which the papules have occupied, the skin may present depressions similar to those left after pustulous diseases. The tegument acquires also a remarkable thickness and resistance.

§ 414. Independently of the numerous shades which lichen presents, according as the papules are scattered or disposed in groups, little or much inflamed, rare or confluent, it offers some peculiarities depending on the region of the body on which it is developed.

1°. Lichen of *the face* is common during summer in persons who are habitually exposed to the heat of the sun. The furfuraceous desquamation which announces the termination of it, has been described under the name of *dartre farineuse.*

2°. Lichen of *the limbs* occupies more particularly their outer and back parts; the skin of the inner parts of the arm and forearm, thighs and legs, is often intact, when that of the opposite sides of the limbs is covered with papules. The *arms* and *forearms* of cooks and forgers, constantly exposed to an elevated temperature, are often affected with *L. simplex.*

§ 415. (c.) Lichen attacks all ages; in infants at the breast it is substituted by strophulus. Choleric children, adults, and invividuals of a nervous irritable constitution, are particularly predisposed to it. The great heat of the atmosphere during spring and summer, has a very marked influence on its development. It is reproduced every year, in some subjects, during the hot seasons. *L. agrius* most usually attacks old persons, and people given to the abuse of spirituous liquors. Gastro-intestinal inflammations, and the causes of them, sometimes give rise to the development of this papulous inflammation. Lastly, an eruption has been known to supervene on the sudden suppression of blennorrhagia, possessing all the characters of lichen (*L. syphiliticus.*)

§ 416. (D.) It is impossible to confound even a very considerable eruption of *L. simplex* with any of the exanthemata. The *spots* of these eruptions and the *papules* of lichen are too dissimilar. The only affections with which *L. simplex* is liable to be confounded are psora and prurigo. In the latter, which is a papulous inflammation, the papules are larger than in lichen, and are of the same colour as the skin, not animated and red, as in the latter. Prurigo is attended by an ardent itching, while lichen ordinarily gives a sensation of tingling and formication; the patient suffering from the itching only when the body has been exposed to a great heat, or has been excited by some excess of regimen, particularly by the use of spirituous liquors. Itch is *vesiculous*, lichen *papulous;* two essentially distinct forms of inflammation. The vesicles of itch are almost always spread over the inner part of the arm, forearm, wrists, and between the fingers; the papules of lichen are usually situated on the outer and posterior parts of the limbs. In some rare cases, *L. simplex* occupies the hands, but the papules are ordinarily grouped on their dorsal face; while the vesicles of psora are more especially seen between the fingers. Papules, when confluent, are surrounded by small, fine, light scales; the vesicles of itch, by small crusts only. Lorry,* in treating of lichen, under the head of *papulæ*, has already pointed out the characters which distinguish it from itch. "Primo, a scabie differunt, quôd papulæ illæ, vulgo magis confertæ sint et elatiores; secundô, quôd rubicundæ magis et minûs aridæ sint; tertiô, quôd latiores sint, et sæpius recidiam patiantur quàm vera et legitima scabies; quarto, quod sæpe sanatis febribus superveniant; quintô, quod in furfur abeant notabile; sextô, demùm quod remediis sanantur a scabie curatione alienis."

Impetigo cannot be mistaken for *L. simplex*. When the patient has torn off the summits of the papules, there exudes indeed a small drop of a sanguinolent humour, which dries, forming a small black or brownish point; but never forms a real incrustation, like the fluid furnished by psydraceous pustules. Impetigo again, is characterized by small *pustules;* lichen is a *papulous* disease.

Lichen *circumscriptus* has characters usually so well marked, that it is impossible to confound it with other papulous or squamous phlegmasiæ. However, when lepra is approaching its cure, the scales may be taken for those of *L. circum-*

* Lorry, *De Morbis Cutaneis*, cap. iii.

scriptus. The skin regains its natural state in the centre of the scales; their edges are divided into innumerable small red points, projecting beyond the level of the skin; but on attentively examining these points, which have an irregular form, it is easily seen that they are not papulæ.

The diagnosis of *L. agrius* is rather difficult when the papules are so confluent that they become indistinguishable. Yet, at some point of the patches, papules may always be discerned, the presence of which decides the nature of the disease. The confluent and torn papules of *L. agrius* may be easily confounded with the superficial excoriations consecutive to eczema; but some elevations are constantly found intact in the neighbourhood of the excoriations, which at once characterize the disease; *papules* in lichen, *vesicles* in eczema.

The small pustules of impetigo are sometimes disposed in groups, like the papules of *L. agrius.* But in the latter, light crusts, difficult to be detached, only exist; while, in impetigo, the crusts are thick, and easily fall off. Psoriasis has characters very distinct from *L. agrius;* in fact, the successive desquamations which constitute the generic character of psoriasis coincide with a thickening of the skin, not at all observed in *L. agrius.* Besides, papules are not to be seen in the interstices between the isolated patches of psoriasis *guttata,* while they are always met with on the edges of the surfaces affected with lichen, even when most intense and irritated.

Lichen of the face is easily distinguishable from cuperosa; *L. agrius* has papules inflamed at the bases, and ulcerated at the summits. The pustules of cuperosa are also inflamed at the bases, but never ulcerate. Each contains a small drop of pus, while the papules of lichen are full, solid, and give out from their ulcerated points a sero-purulent fluid, which moistens their surfaces. The pustules of cuperosa are developed successively, and have an isolated march; the papules, uniting over an extensive surface, make simultaneous progress, become confluent, and are attended by a deep-seated irritation, which penetrates to the mucous body of the dermis, but rarely to the subcutaneous cellular tissue. In cuperosa, arrived at a certain degree of intensity, the irritation always extends to the cellular tissue, leaving durable marks. *L. agrius* of the face commonly occupies the forehead, cheeks, and lips; cuperosa is seated on the nose and cheeks. The latter is attended by a sort of tingling, which becomes more inconvenient after meals, near a fire, or in a warm room. The itching of *L. agrius* is more vivid and deep-seated; it at times becomes

intolerable during the night, or after the ingestion of some stimulating drink. The suppuration furnished by the small acuminated pustules of cuperosa is sometimes transformed into small light crusts, which are soon detached. The ulcerated *papules* of *L. agrius* of the face are also covered by small crusts, but they are thinner, more spread out, and mixed with epidermic scales.

§ 417. (P.) It is difficult to assign with any preciseness the duration of lichen. The simple variety produced by the heats of summer may continue from one to three weeks. When some unknown cause, acting directly on the skin, produces lichen, it is sometimes very obstinate, and may endure, whatever the disposition of the papules, for several months, or even years. Generally, lichen is the more troublesome, and yields with difficulty to curative measures, the more ancient it is, and when characterised by successive eruptions, and when developed in individuals of a more advanced age, or those in whom the constitution is deteriorated. *L. agrius* of the face is commonly very obstinate, and liable to frequent revivals.

§ 418. (T.) It would be easy to cite several cases of the cure of *L. simplex*, *L. circumscriptus*, and *L. urticatus*, in which this happy result has been obtained merely by submitting the patients to a mild and regulated diet. But it is absurd to suppose that the development of this papulous eruption can be beneficial to persons in health, whom it torments and irritates.

Whatever the form of lichen, whether the papules are scattered, or disposed in groups, if it is recent, acute, and not very extensive, cooling diet, slightly acidulated drinks, the use of cold or river baths, during summer, will suffice for its cure without any danger. Tepid and hot baths often increase the inflammation, particularly of *L. urticatus*. When the eruption resists this mode of treatment, recourse may be had to the internal administration of lemonades, strongly acidulated with nitric, muriatic, or, what is still better, the sulphuric acid. The vegetable acids, such as the citric and acetic, should be substituted for the mineral, if the latter irritate the digestive organs. When the papules are very numerous, agglomerated, and confluent, as in *L. agrius*, the antiphlogistic treatment must be more rigorous. If the subject is young, phlebotomy and local bleeding should be practised. General bloodletting is indispensable when the eruption is not confined to some determinate region, as the hands, face, &c. When leeches are applied, they should always be placed around the edge of the

eruption, as, otherwise, the irritation of their punctures may augment the inflammation. Topical emollients should be applied over the affected parts. Emollient lotions and fomentations, and gelatinous or mucilaginous baths, are useful, if the precaution is taken of administering them at a low temperature. The patient should be ordered cool acidulated beverages, and recommended to avoid the use of harsh linen, or thick clothing, which iritates and increases the external heat of the body.

The effects of these measures must be seconded by a more or less severe regimen, according to the state of the digestive organs. The patient must abstain from made-dishes and flavoured viands, spices, and alcoholic drinks; lastly, from all substances which stimulate the stomach, and afterwards cause a fluxionary movement towards the skin.

§ 419. When lichen is composed of several successive eruptions, and has become *chronic*, and the constitution of the patient is deteriorated from age or other causes, the practitioner should use all the means placed at his disposal by hygiene and pharmacology to strengthen the constitution. At the same time, he should endeavour to make an impression directly on the skin.

If lichen is of very considerable extent, and affects the tegument deeply, an ointment composed of a combination of sulphur, and the subcarbonate of potass or soda,* may be rubbed on the diseased parts with good effect. Cold emollient baths may be used at the same time. Vapour baths are beneficial, if the skin is very dry; but must not be too frequently repeated, if they irritate the skin.

Sulphureous baths, often recommended empirically, in diseases of the skin, are always injurious in acute, and rarely useful in chronic, lichen; they are never required except at the close of the disease; they may even cause the development of lichen; it is not rare to observe *L. agrius* manifested in persons who have employed sulphureous baths in the treatment of psora.

When not contraindicated by the state of the digestive organs, the mineral acids may be employed internally. In excoriated *L. agrius*, they diminish the humid secretion which takes place at the summits of the papules, calm the itching, and contribute to the cure of the disease. A temporary revulsion towards the digestive organs may be excited by slight purgatives frequently repeated; but caution must be taken

* ℞ Subcarb. Potass ℥ij. Aquæ ℥j. Ol. Olivæ ℥iv. Flor. Sulph. ʒv. M:

not to substitute, for the cutaneous inflammation, that of the mucous membranes, which is much more serious, and will inevitably result from the inconsiderate use of purgative medicines.

When chronic lichen continues, or is renewed, notwithstanding this mode of treatment; when it is situated on the face, or disseminated over a large surface, some pathologists advise the administration of arsenical preparations, and their long-continued use, if they produce no impression on their first employment. These remedies are so easily transformed into real poisons, that they appear to me applicable only in the very few cases in which all other means have failed, and when the disease has become so insupportable, that the patient, in despair, is willing to get quit of the eruption at all hazards. Before these energetic medicines are prescribed, great attention should be given to the state of the digestive organs; inflammation subdued, if it exists; and the dose should be increased very gradually; this should never exceed fifteen or twenty drops of Fowler's solution, nor ♏ xx. or ʒss. of that of Pearson, in twenty-four hours. The dose should be increased, or decreased, according to its effects, which should be narrowly watched. It is more prudent, however, not to expose the patient to the train of serious symptoms which may follow the use of arsenical preparations. It is as well to know the impotence of art against these obstinate diseases; a few years afterwards, they heal spontaneously, or by the aid of less dangerous remedies.

§ 420. Willan and Bateman have given a very accurate general description of lichen. Most French nosologists have confounded this disease with others, which terminate by *furfuraceous desquamation;* although very frequent, the disease is but little known in France. Under the name of *venereal papulous disease,* Mr. Carmichael has published several cases of lichen, developed in individuals labouring under contagious inflammation of the generative organs.

PRURIGO.*

Syn.—*Prurigo,* Willan. *Prurita.*

§ 421. Prurigo is a chronic inflammation of the tegument, characterized by papules of nearly the same colour as the

* Willan, *Description and Treatment of Cutaneous Diseases,* 1798.—De Chamberet, *Dissert. sur le Prurigo.* 4to. Paris, 1808.—Alibert, art. *Prurigo. Diction. Scien. Medicales.* Mouronval, *Récherches and Observat. sur le Prurigo.* 1823.

skin, accompanied by intense itching; they terminate by resolution, and in very small black circular crusts, when scratched with the nails.

§ 422. Prurigo may be developed simultaneously, or successively, on different regions of the body; or it may be confined to one point, (*general, P. local, P.*)

§ 423. (s.) *General* prurigo is presented under two principal forms, pointed out by Willan, and adopted by several pathologists.

1°. This affection (*P. mitis*, W.) is announced by a most troublesome itching on the shoulders, upper part of the chest, loins, belly, arms, or thighs, &c. If the affected parts are examined with the naked eye or by a lens, papules are observed, soft to the touch, larger and less pointed than those of lichen, from which they differ also in colour. The majority seem not to be inflamed, unless when irritated. They are not, like those of lichen, accompanied by shooting, but by a very acute and continued itching. These papules project so little beyond the surface of the skin, that, according to the common expression of patients, they seem as if situated between the *skin* and the *flesh*. The itching increases at bed time, or when the sufferer has been in bed some hours. It then is so much increased as to prevent repose. The itching may be excited or aggravated by the touch, or the friction of clothing; by the increase of external heat, caused by digestion, violent exercise, &c. This suffering has intermissions, at times, of three or four hours; above all, when the patient is much occupied.

Between the pruriginous papules there are observed small, thin, light circular *crusts*, of the size of a small pin's head, and of a brownish colour, the circumference of which sometimes appears as if folded. These small crusts, which become detached after a time, are formed by the desiccation of a small drop of blood or serosity, which has been effused on the summits of the torn papules. The papules of *P. mitis* are successive in their eruption, and if this disease is not combated by appropriate treatment, it may continue for several months.

2°. Prurigo may present a graver character, according to the intensity and obstinacy of its symptoms, (*P. formicans*, W.) The papules are then larger, but more obscure than in *P. mitis*, are attended by an intolerable and continual itching, which is, in general, the more acute, the paler the papules. They extend over the whole body, the face, feet, and palms of

the hands excepted; they are more particularly seated on those parts exposed to friction and ligatures, as the nucha, loins, thighs, &c. In the evening, and towards three or four o'clock in the morning, the itching is exasperated, and sleep suddenly interrupted. The hands of the patient are involuntarily carried to the diseased parts, and a crowd of disagreeable sensations are soon added to the previous itching. Some patients fancy small insects are creeping under the skin; others imagine they are being devoured by ants; this gave rise to Willan's denomination of *P. formicans*. Some feel as if the skin was pricked with burning needles; the patient scratches himself in a sort of rage, tearing the skin with his nails. The pruriginous sensation becomes redoubled, with an impatience and agitation difficult to describe. The sufferer quits his bed to walk about naked, and during the torments caused by the excessive itching, the muscles of the extremities contract, become rigid, and are distinguished beneath the skin in a very remarkable manner.

When persons attacked with this variety of prurigo express their opinion of the nature of the disease, they always speak of the *acrimony, ardour of the blood, a burning heat, &c.*

The summits of most of the papules are soon raised by the nails. The skin appears sprinkled with small thin black *crusts*, as in *P. mitis*. These crusts, which are easily observed on the surface, are more distinct than the intact papules; the latter being of the same colour as the tegument, and not readily recognised, from their small size.

In old age, (*P. senilis*, W.*) the eruption of papules is commonly more considerable than at any other period of life. The skin presents a greater number of furrows, and an abundant furfuraceous desquamation. The itching is insupportable, and more permanent than in *P. formicans*.

§ 424. Besides the characteristic papules, there are at times remarkable accidental lesions in prurigo, which vanish as soon as the exciting cause is removed. When persons afflicted with prurigo neglect cleanliness, pustules, vesicles, and furuncles, appear among the papules; the skin becomes more or less fissured, and sometimes acquires great thickness. When the disease is of long standing, particularly in old persons, the epidermis rises in small scales, or furfuraceous desquamation takes place, here and there, on the trunk and

* Sommer, *De Affectibus Pruriginosis Senum*. Altdorf, 1727.—Loescher, *De Pruritu Senili*. Witenberg, 1728.

limbs. Itch and impetigo may be accidentally complicated with prurigo; but it is erroneous to suppose, with Willan and Bateman, that they supervene as a termination to this disease. Some pathologists think that the state of the skin, in *P. senilis* is favourable to the production and propagation of *pediculi corporis*. Lastly, Willan pretends to have seen, in a case of prurigo, a peculiar insect; but he gives but a very imperfect description of it.

Independent of these accidental affections of the skin, general prurigo may be complicated with internal inflammation. In prurigo *formicans*, the eruption of the papules is sometimes preceded by pains in the head, general disorder, and epigastralgia. On the other hand, when individuals affected with prurigo are attacked by an acute disease, the papulous eruption is nearly always diminished in intensity, and sometimes entirely disappears.

§ 425. The duration of *general* prurigo varies from several weeks to some years. During this lapse of time, there are, ordinarily, very marked remissions. In women and children whose skin is fine and delicate, prurigo often disappears without leaving any traces on the skin; but when it has affected for a long time the thick, harsh skin of old people, the epidermis becomes detached under the form of a farinous dust.

§ 426. The margin of the anus and scrotum in man, and the vulva in woman, are the parts most frequently attacked with prurigo, when local.

1°. Prurigo *podicis* is characterised by true papules, similar to those of *P. formicans*. The skin of the margin of the anus, and inner parts of the nates, becomes rough, unequal, and scattered with papules of the same colour as the adjacent skin, and small blackish crusts form on those papules whose summits have been removed by the nails. These papules may be accidentally mixed with vesicles, or small psydraceous pustules, of a temporary existence. The itching of *P. podicis* is insupportable, more especially at night. Patients frequently cannot sleep until after having scratched themselves with a sort of furor. *P. podicis* is always obstinate, and of long duration. After the period of three or more months, the symptoms undergo a true remission; but are soon aggravated by any excess of diet. Women, at the turn of life, are particularly liable to this species of prurigo. When this variety is long neglected, the skin, from continued irritation, becomes harsh and squamous; and eczema *impetiginodes* sometimes succeeds to this papulous inflammation.

2°. Prurigo *scroti* may exist alone, or complicated with the last variety. It consists of the like papules developed on the scrotum, pubis, and sometimes even on the penis. When torn with the nails, these elevations are very painful. *P. pudendi muliebris* is characterised also by very distinct pruriginous papules, situated on the mons veneris and vulva. The mucous membrane of the latter sometimes presents a crowd of small solid elevations, rendering its surface rugous and unequal. This papulous affection is often attended by inflammation of the vulva and vagina, giving rise to more or less abundant leucorrhœa. In the description of *intertrigo*, Lorry* has drawn a very good picture of the symptoms and sufferings produced by prurigo of the genitals. "Morbus ille adultos ut plurimum, et primum pubertatis florem egressos adoritur, eosque qui caste viventes, ingenti tamen impetu ad venerem ferentur; mulieres etiam, sed marturius adoritur. Ejus ortus primo mitior est, et pruritu totus continetur. At pruritui illi tum in maribus, tum in fæminis jungitur ardor in venerem inexplebilis. Mores et præcepta repugnant, coercet virtus vivax, at manus indocilis ad has partes fertur, scalpendoque malum irritatur, et animus ipse in partem operis venit cum artuum tremore et palpitatione. Sedatur vulgò per plurimas horas malum, tuncque omnia tranquilla apparent, at recrudescit per paroxysmos, noctu potissimùm afficiens. Sævit autem eò vehementius, quò aut familiariter magis, aut proximiùs, cum fæminis mares, aut cum maribus fæminæ vixerint. Nec minores accipit vires a vino, piperatis, spirituosis, acribres alimentis, potu coffeæ, oleosorum spirituosorum, ita ut noverim viros qui numquam similibus tentarentur pruritibus, nisi una ex hisce causis accesserit, quas edocti experientiâ vitabant seduliùs. Progrediente malo partes ad aspectum maculosæ, maculis flavis vix suprá cutem extantibus distinctæ sunt; scrotum omninò rugosum est, ut et labia pudendorum in fæminis, et tempore paroxysmi prorsùs retractum. Erectio penis et libidinis ardens cupido mentem incendunt. Partes ille non eruptione lichenibus simili afficiuntur, sed epidermis rugosa olet, et alluitur liquore unctioso, non lintea maculante, non digitis adherente, sed ad sensum lubrico. Increscente malo pruritus enormes fiunt, per paroxysmos et summè violentos, et frequenter redivivos, ita ut nec pudor, nec reverentia regum a scalpendo divertant, et sæpe per intervallæ etiam paroxysmorum puncturæ acerrimæ acubus inflammatis per

* Lorry, *De Morbis Cutaneis*. 4to. p. 449.

cutem transactis morsu similes, in clamorum adigunt; hinc partes illæ rhagadibus, atque fissuris manu factis undiquè hiant. Ardor semper inest, et ad quemvis levissimum incessum exhalat humor olentissimus, fervente intereá æstro venereo."

§ 427. Prurigo *plantaris*. Alibert cites a case of a man 50 years of age, and of a healthy robust constitution, who was attacked by this variety. The eruption was suddenly developed, and arose to such a pitch, that in the street, or in society, the patient was obliged to take off his stocking and scratch his foot, till the itching was appeased. Another example of plantar prurigo is mentioned by the same author; but no papules are described as having been observed in these two cases; and as itching at the sole of the foot may be produced by many diseases, this variety of prurigo cannot be admitted till it shall have been established by more accurate observations.

§ 428. (A. R.) The anatomical researches made by Alibert and M. Mouronval have, in fact, been directed to the concomitant lesions of prurigo. One of the subjects died from retention of urine and pneumonia; another presented numerous inflammatory alterations in the splanchnic cavities. In a third, we are told that the papules had faded; death had been caused by gastro-intestinal and cerebral affections.

§ 429. (C.) The two extreme periods of life seem especially to be liable to prurigo; it is more frequently met with among the poor than the rich, and among men than women.

This papulous affection is often produced by a residence in low humid situations, and particularly by want of cleanliness. Other causes have been pointed out which are not so appreciable, such as bad nourishment, the abuse of spirituous liquors, seasoned and spiced meats, defect or irregularity of menstruation, grief, excessive fatigue, &c. It has generally been remarked that *P. mitis* supervenes in the spring or commencement of summer, while *P. formicans* is observed indifferently at all seasons of the year. *P. mitis* most frequently attacks children; *P. formicans* adults.

§ 430. (D.) The symptom of *itching* and *tingling*, in a greater or less degree, is common to most cutaneous diseases, particularly to urticaria, psora, eczema, strophulus, lichen, &c. Although this sensation has a peculiar character in prurigo, it cannot be said to constitute a pathognomonic symptom. The true character of this disease is an eruption of

papules, which in form and colour (the same as that of the skin) are different from those of lichen and strophulus.

When the papules have been destroyed by the nails, the nature of the eruption is more difficult of recognition, the small crusts of prurigo not being very distinct from those of lichen and itch; but in the vicinity of these altered papules some are always to be found intact, which thus decide the species of inflammation. In prurigo, the papules retain the tint of the skin, the vesicles of psora are more inflamed. The torn summits of the papules of prurigo are covered with slight scabs of dried blood; when the vesicles of itch have been destroyed, they are succeeded by a small thin yellowish crust. The latter disease is easily transmitted from one person to another; prurigo is not contagious. The itching of psora is not attended by any painful sensation. In prurigo it is burning, and patients tear themselves with a sort of cruelty. Prurigo is usually developed on the shoulders, back, neck, loins, chest, and limbs; rarely between the fingers, under the axillæ, in the hams, or folds of the arms. The itching of prurigo has exacerbations; that of itch is continuous. Prurigo sometimes gets well spontaneously; psora never, but is not so intractable. Prurigo may happen to be complicated with itch. Then the *acuminated vesicles* of the latter are distinguished among the *papules* of the former. Lichen, and other inflammations, may also be developed on the skin of individuals affected with prurigo. The diagnosis of these complex cases requires much attention.

Local prurigo cannot be confounded with itch; but it is important to distinguish it from some other affections, which are themselves attended by more or less itching. 1°. Ascarides situated in the rectum, hœmorrhoids, and slight inflammation of the large intestine, frequently excite acute itching around the margin of the anus; these diseases are to be distinguished from prurigo *podicis*, by the absence of papules, and the existence of other characteristic lesions. 2°. The itching produced by *pediculi pubis*, eczema *impetiginodes* of the bursæ, &c., must not be mistaken for that of *P. scroti*. The papules which characterise the latter are sufficiently distinctive. Examination of the genitals will always determine whether itching is caused by the papules of *P. pudendi*, ascarides, or non-papulous inflammation of the vulva, or pudendum.

§ 431. (P.) In children, prurigo is not a very obstinate

affection; but it is subject to frequent revivals. *P. senilis* is more grave, and sometimes resists the best combined treatments. Worn out by the continual itching, patients tear their skin with the nails, and by brushes, but the relief thus procured is soon succeeded by the most ardent itching, which sometimes drives them to despair. *P. podicis* and *P. pudendi muliebris* are generally very obstinate.

§ 432. (T.) Baths are, of all external remedies, the most constantly advantageous in *general P.* By their use alone, prurigo, produced by bad food and misery, is quickly cured. The baths should be used cool or tepid; too hot, they are injurious. They are peculiarly useful in *P. mitis* and P. *senilis.* Their use should be habitual and long-continued, even when followed by temporary aggravation of the symptoms. Baths cleanse the surface of the skin, rendering transpiration more free, and the itching gradually less.

Sufferers often experience a marked relief by plunging every day into an emollient bath, or one of decoction of bran, and remaining in for an hour. Baths, simple or emollient, are useful also in preventing the return of this disease.

After the use of simple baths, if the eruption still continues, alkaline and soap baths, such as those of Plombières, produce very good effect; and they leave no odour after their use, like sulphureous baths, which are also very efficacious. When these last irritate the skin, this effect is mitigated by the addition of gelatine, or by using them alternately with tepid baths. This external treatment almost always succeeds with *P. mitis* in children. Cold or tepid baths may be used under the same circumstances. Sulphureous fumigations have also been used with success; yet the irritation they produce often obliges their use to be suspended, or to be combined with that of tepid, vapour, or emollient baths. They should never be had recourse to with children.

If prurigo is of old standing, and the skin is harsh and thick, vapour baths may be employed; they are injurious, however, in young plethoric subjects. In children and old people, they have been known to produce syncope; and if not dangerous, they are, at least, debilitating.

It is seldom that any benefit results from the use of mercurial or sulphureous ointments, or from lotions of lime-water or corrosive sublimate. The itching is sometimes mitigated by unctions made with ointment of hellebore and hydrochlo-

rate of ammonia.* Mercurial lotions† are of occasional advantage in *P. formicans*, particularly if complicated with *pediculi*. Under other conditions, simple ablution with cool or tepid water procures relief.

§ 433. Of all the general remedies resorted to for the treatment of prurigo, bloodletting and diluent drinks, such as whey, veal broth, decoction of barley and dog-grass, lemonade, &c., are certainly the most useful. Bleeding is always indicated in young plethoric subjects. When the menses are suppressed in women, the application of leeches to the vulva will sometimes restore the secretion. Persons who have been accustomed to spiced meats and spirituous liquors, should be restricted for a time to vegetable diet, and the use of ass's or goat's milk.

§ 434. To give some idea of the discordant opinions of practitioners, it may be remarked that some have advocated the administration of emetics and purgatives at the outset of the disease; others recommend bitter potions, such as decoction of bardane, patience, infusion of wild chicory, chamomile, &c., the depurated juices of these recent plants, &c.; another class assert that they have found great benefit from the employment of sulphur alone, or joined with calomel, neutral salts, or active purgatives: much confidence must not be placed in the action of these remedies, which have nearly always been employed in concert with several others whose action on the skin is more remote, and with difficulty appreciated. In prurigo, as in most cutaneous diseases, it is necessary to act directly on the affected organ. (§ 432.)

§ 435. The varieties of *local* prurigo present some peculiar indications.

1°. Prurigo *podicis* is, in general, difficult of cure. When intense, it calls for the employment of local bleeding. In cases in which this does not appear imperiously called for, it is always followed by an amelioration of the symptoms, at least, for a time. Emollient poultices, warm or cold, suppositories of cocoa grease, and opiate clysters, are also useful in diminishing the itching. After, and sometimes prior, to the application of these remedies, in persons whose skin is not very irritable, gelatino-sulphureous vapours produce beneficial effects. Slight friction with a weak ointment of nitrate

* R. White hellebore ℥i, Hydrochlor. of ammon, ℈j, Lard ℥i, M.

† R. Rose-water Oj, Eau de Colog. ℥j, Sublimate gr. viij, dissolve.

of mercury, and lotions of dilute acetic acid, have also been employed. These applications are hurtful when the skin of the margin of the anus is excoriated, or even inflamed, between the papules.

2°. The treatment of *P. podicis* is applicable to *P. scroti.* Lotions with sublimate dissolved in lime-water, and unctions with mercurial liniments, recommended by Willan, are less useful, generally, than gelatino-sulphurous baths, lotions, and vapours.

3°. *Prurigo pudendi muliebris* should be treated, first, by bleeding from the foot, the repeated application of leeches to the vulva, and lotions and aqueous vapour impregnated with the juice of emollient and narcotic plants. Gelatino-sulphureous vapours are, without doubt, more useful in drying up and destroying the papules; but they should never be had recourse to at the commencement of the eruption. They then increase the inflammation of the vulva and vagina, which almost constantly exists in this variety of prurigo.

The patients should avoid soft seats and beds, which maintain too much heat in the affected parts. In the paroxysms which supervene at night, rags soaked in cold water may be kept constantly applied and renewed to the genitals.

§ 436. Willan has given a good description of prurigo. The later observations of Alibert and Mouronval are also interesting. It is only to be regretted that they have so frequently designated papules under the name of *boutons*, a vague expression, which has been indiscriminately applied to all elevations on the skin. They have confined themselves, also, to indicating the characters which distinguish prurigo from itch, without mentioning lichen as a papulous affection, and much more analogous to prurigo. Some cases, denominated *prurigo* by M. Mouronval, appear to be true *lichen;* such, in particular, are the five cases of his memoir, in which he says the buttons are *red* and prominent, or *disposed in groups*, so as to form *irregularly rounded patches.* There are also a few cases of prurigo to be found in different collections; one of the most remarkable is, that of a man whom Mr. Wilkinson* found sitting up naked in his bed, and tearing his skin with a comb; he had *P. formicans.*

* Wilkinson, *Remarks on Cutaneous Diseases.* London, 1822.

TUBERCULOUS INFLAMMATIONS.

Syn.—*Tuberculæ*, Willan. *Tubercles.*

§ 437. This class is characterised by *tubercles;* that is, by small, solid, circumscribed, indurated, resistant tumours, more voluminous than papules; and which, after several months' or some years' duration, terminate nearly always by suppuration or ulceration, to a greater or less extent.

§ 438. Tuberculous is one of the least frequent forms of inflammation. Tubercles sometimes succeed to the pustules of cuperosa and mentagra; but they may also be primary, and they then constitute the essential character of a small number of very grave and obstinate diseases of the skin.

§ 439. Tuberculous inflammations are three in number—lupus, cancer, and elephantiasis of the Greeks; and perhaps syphilitic tubercles, might be added to these; but I have thought it better to class them with the other forms of syphilitic eruptions.* Some pathologists have thought that lupus and cancer of the skin are not always tuberculous primarily; but they have not accurately described the phlegmasic forms under which they suppose these two diseases do commence. It is almost needless to remark, that this group of tuberculous affections is very different from the one which Willan and Bateman have designated *tuberculæ*, and which includes the most dissimilar alterations—carbuncle and warts, cuperosa and elephantiasis, furuncle and lupus, &c.

§ 440. (s.) Tubercles, sometimes solitary, are more frequently numerous. They are announced by projecting or flattened elevations, at times of the same colour as the healthy skin, or they may, from the first, present a red or violaceous tint. Tuberculous diseases almost constantly assume the chronic form; the tubercles remaining stationary for some months, or even several years, but, when accidentally irritated, undergoing a rapid increase in size. They then soften wholly, or in part, and terminate in *ulcerations*, which become covered with *crusts*, particularly if the ulcer is freely exposed to the air. These ulcerations may afterwards acquire a very great extent, causing an alteration in the parts situated more deeply under the skin.

Anatomically and physiologically, the tubercles of lupus,

* *Vide* Multiform Inflammations.

cancer, and elephantiasis (of the Greeks), present distinctions which will be presently indicated.

Tuberculous inflammations are occasionally complicated with other phlegmasiæ. In elephantiasis of the Greeks, the mucous membranes present an affection analogous to that of the skin.

§ 441. (AR.) The comparative anatomy of cutaneous and subcutaneous tubercles is, even now, very little known.

§ 442. (C.) The etiology of tuberculous inflammations is very obscure. None of these diseases are contagious. Lupus usually attacks individuals endowed with a scrophulous diathesis; tuberculous elephantiasis, very rare in France, is far less so in some other countries; and the tendency of cancer to be reproduced, without any appreciable cause, eludes all explanations which have been given of its mode of formation.

§ 443. (ɔ) Tuberculous are readily distinguished from all other cutaneous inflammations. They alone consist of small *solid organized tumours*, having a tendency to ulcerate. The dimensions of papules, and their pruriginous character, do not admit of their being confounded with tubercles. When the latter are wholly or partially destroyed, the consecutive crusts and ulcers still present peculiar characters; not only distinguishing them from other inflammations, but establishing the diagnosis of the species.

§ 444. (P. and T.) All the tuberculous are grave diseases, and difficult of cure. The tubercules and ulcerations of lupus are frequently very obstinate. Cancerous ulcers are more dangerous, and sometimes incurable. The solitary tubercles of cancer may be removed by the knife, or destroyed by caustic; but they are nearly always reproduced. Elephantiasis (of the Greeks) is a disease against which art has been hitherto unsuccessful, or its effects have been equivocal.

LUPUS.

Syn.—*Lupus*, Willan. *Noli me Tangere.*

§ 445. Lupus is characterised at its outset by one or more pretty large tubercles, generally rather oval, flat or prominent, of a red-brown or livid colour; they are indolent, and, after some months' or years' duration, terminate in ulceration, the ichorous humour from which concretes under the form of adherent, yellow, or brownish crusts, if exposed to the contact of the atmosphere.

§ 446. Lupus is most commonly developed on the lobe and alæ of the nose, on the cheeks, and sometimes behind the ear, on the chin, inner and lower part of the arm, and more rarely on other regions of the body. It is seated on the face eighty times out of a hundred.

1°. Lupus *of the nose* has more particularly attracted the attention of pathologists. It generally attacks scrophulous persons whose noses are flat and short, and whose lips are thick, hard, and tumefied. This variety of lupus nearly always begins by a solitary prominent tubercle being developed on one of the alæ of the nose, or on the lobe of this organ. This tubercle may remain stationary for several months, or even years, without causing any other uneasiness than a disagreeable itching. The skin surrounding the base of this tubercle, and, at times, even that of the whole nose, when several tumours exist, acquires a red violaceous tint. The alæ and lobe of the nose swell and become indurated; and the skin may be accidentally covered with small psydraceous pustules, similar to those of impetigo, which dry, under the form of yellow or greenish-brown crusts. After a certain time, more or less considerable, but usually very distant, a prominent point is observed on the surface of each tubercle. A very small quantity of pus collects in the interior; the skin breaks, and ulceration ensues. A serous acrid pus oozes from the surface of the ulcer, the edges of which swell and become indurated; at the same time, the neighbouring skin acquires a more intense red and violaceous tint. In the course of some months or years, the inflammation makes more or less considerable progress. New tubercles form on the cheeks, near the nose, or on the upper lip, and terminate in ulcerations, which become covered with crusts like the preceding, and a general inflammatory action seems to be established over the whole base of the nose; this ulcerates on several points, and is covered by brown or yellow crusts, which are renewed as soon as they are detached, or fall off.

After having destroyed the skin and subcutaneous cellular tissue, the inflammation extends in depth, ruptures and destroys the muscles; attacks the lateral cartilage of the nose and the septum of the nasal fossæ, the entrance of which appears closed by a mass of dry yellow crusts. The surrounding skin is always red and livid, even to a considerable distance. Lastly, the whole nose may be destroyed by the progressive ravages of this inflammation. Nothing more is then to be distinguished, in the situation of this organ, than a large

triangular opening, divided into two by the remaining portion of the septum.

Lupus of the nose, at its outset and during its progress, may be complicated by similar tubercles being developed on the chin, lips, and cheeks, or with chronic inflammation of the conjunctivæ and eye-lids.

2°. The tubercles of lupus may be developed *on the cheeks* when none exist on the nose. These tubercles continue in the latent state for a very long time; a purulent point afterwards forms. The humour they contain dries under the form of a yellow, whitish, and prominent crust, beneath which ulceration extends from the centre towards the circumference, increasing more laterally than in depth. The skin adjacent to these crusts has almost always a violet tint.

In some graver cases, similar tubercles have been successively developed over the whole face, have suppurated, ulcerated, and become covered with thick yellow-brownish crusts. The healing of these ulcerated tubercles is always followed by indelible *cicatrices*, red, thick, and furrowed, similar to those of burns which have destroyed the skin. If tubercles developed beneath the orbit ulcerate, and are followed by a cicatrix, this sometimes causes eversion of the lower eye-lid.

In some very mild cases, and when there are only one or two tubercles situated on the cheeks of a scrophulous child, they sometimes terminate in a sort of resolution, after remaining a year or two stationary; if the health of the child improves, they subside slowly, become less red, and at length completely disappear.

3°. Tubercles are observed on the limbs only when others exist at the same time on the face, except in rare cases. These tubercles are nearly always situated on the inferior and inner part of the arm, or on the back of the hand, and present the same characters as the preceding, and have also been designated under the name of *scrophulous ulcers*.

§ 447. The development of the tubercles of lupus, whatever the region they affect, is ordinarily preceded by, or complicated with, several diseases of the skin, or lymphatic glands, frequently observed in scrophulous subjects. Nearly all persons in whom lupus is developed have experienced, in their infancy, more or less engorgement of the lymphatic glands of the neck, axillæ, or groins, &c., and these may have sometimes terminated in chronic ulcers. Some have been previously attacked with tinea mucosa of the face or scalp, long and obstinate scrophulous ophthalmia, or the same kind of

inflammation of the bones; individuals are more rarely affected with œdema of the lower extremities while labouring under lupus, and sink with all the symptoms of inflammation of the digestive organs; but, in general, the influence of lupus does not extend beyond the parts which it affects.

§ 448. (c.) Lupus is usually developed in persons of a scrophulous habit between the ages of six and twenty-five years. It is remarked that the poor inhabitants of high Auvergne, who feed on acrid aliment, such as old cheese and half-putrefied meat, and lodge with their beasts, are very subject to this disease. Lupus is not contagious, and is rarely met with in the higher classes of society.

§ 449. (d.) The red and violaceous tubercles of lupus cannot be confounded with those of elephantiasis, which are of the same colour as the skin. Lupus is sometimes characterized by a single tubercle, and its ulceration has always a tendency to spread, either in depth or extent; a double circumstance which is absent in elephantiasis of the Greeks. Lupus has more analogy with cancer. The tubercles of the latter, however, are not so flat and are more painful, and more frequently seated on the lower lip than those of lupus, which are ordinarily seen on the nose and cheeks, and are never attended by the lancinating pain experienced in cancer. The edges of cancerous ulcers are everted, humid, and painful; their fungus surfaces bear much contrast to the ulcerations of lupus, which are covered by dry crusts. The adjacent vessels are dilated and varicose in cancer; in lupus, the ulcers are surrounded by a diffused redness, commonly violaceous. Lastly, the ulcers of lupus, frequent in children, sometimes heal spontaneously at the age of puberty, while cancer is rare at this age, and never attains this happy termination.

The tubercles of lupus of the nose, at their commencement, might be confounded with those consecutive to cuperosa, if the co-existence of some other acuminated pustules did not indicate the origin of these latter. Again, the tubercles of cuperosa are stationary, while those of lupus, abandoned to themselves, always terminate by more or less considerable ulceration. The solitary tubercles of lupus of the cheeks developed in children, have been, at times, mistaken for *sanguineous tumors;* but the latter are different in structure, as will hereafter be shewn. They are not inflammatory; left to themselves, they acquire a large volume, and do not terminate in ulceration. A little girl five years old, of a scrophulous habit, had a red violaceous tubercle on

the right cheek. A physician supposed it to be a sanguineous tumour; contrary to his advice, the patient was submitted to an anti-scrophulous treatment, at the end of which the tubercle disappeared.

When I come to treat of syphiloid eruptions, the characters which distinguish syphilitic tubercles, and spreading ulcers of the nose and cheeks, from the tubercles and ulcerations of lupus, will be pointed out.

§ 450. (P.) Lupus is always a very obstinate disease. It is seldom that the cure can be obtained till after some months, or even years, of treatment. It does not affect life, for it attacks organs of but slight importance; it is never accompanied by febrile action, and but seldom gives rise to other sympathetic affections. Its progress is sometimes observed to be suspended for a time, and afterwards to acquire, without any appreciable cause, renewed violence of action. The chronic inflammation of lupus may be ameliorated during the development of an internal phlegmasia, particularly that of gastro-enteritis. When the subjects of lupus die, it is almost always in consequence of an accidental inflammation of the lungs or organs of digestion.

§ 451. (T.) Lupus, in its first stage, when developed in persons who are not scrophulous, should be treated by the application of one or two leeches to each tubercle, by covering these small tumours with narcotic cataplasms, made of the fresh pulp of such plants as the henbane, night-shade, &c. In scrophulous subjects, on the contrary, bitters may be employed with success, such as gentian, &c., combined with the use of cold or sulphureous baths, particularly when their effects are favoured by a strengthening diet, a residence in pure air, &c. If the state of the digestive organs admits, there is sometimes benefit obtained by causing a temporary revulsion towards these parts. Bateman recommends the muriate of barytes, under these circumstances, to cause the resolution of the tubercles developed on the face; but the use of this preparation is attended with so much danger, that, as a general rule, it should be avoided. Muriate of lime, though less energetic, should never be employed without its effects being narrowly watched. In fact, the tonic treatment, as adapted to scrophula, appears the best to effect the resolution of the tubercles and prevent ulceration; but it should be so conducted as not to irritate the digestive organs.

§ 452. The ulcers of lupus do not usually cicatrize, unless they are stimulated by certain preparations of which experi-

ence has taught the utility. Like several other chronic inflammations of the skin, these ulcerations are seldom successfully treated during winter.

Among the preparations recommended in ulcerated lupus, the powder* used by M. Dupuytren holds the first place. According to this celebrated professor, this remedy, which acts as a specific as well as a caustic, should be employed as follows: "The surface of the eruption, if ulcerated, humid, and clean, should be sprinkled with this powder by means of a powder-puff, so as to form a layer of a millimetre,† or more, in thickness. If a crust is formed over the surface of the sore, this must be previously removed by poultices. If an imperfect cicatrix even should be formed, it must be destroyed; in twenty-four hours the bleeding will have ceased, and then the powder may be applied. If it is found that the powder does not sufficiently adhere to the parts, or that it be raised, or removed from them, it may be retained in contact, by being incorporated with gum-water or rose ointment. In this case, the quantity of arsenic may be increased by one or two hundredth parts. In all cases, the spontaneous fall of the powder or ointment must be awaited; this usually takes place in about eight or ten days, and the application may be then repeated in the same way till the cure is complete; this is generally obtained in eight or ten weeks, or after five or six dressings. An experienced practitioner may increase or diminish the proportions of the ingredients, according to the extent and depth of the disease; but it is of importance that neither of them should be omitted in the composition; both appear necessary for its success, without its being exactly ascertained the share which either has in its effect.‡"

When the ulcerations are numerous and of considerable extent, the powder should be sprinkled only over a surface of an inch or two in diameter. Lastly, when the ulcers of lupus are very old and indolent, advantage is gained by covering them with a blister before using the powder. This preparation is preferable to the arsenical paste of Frère Côme, as it does not cause erysipelas around the parts to which it is applied; it is not so powerful an escharotic, and its application may be frequently repeated without danger.

* R. Calomel prepared by vapour, p. 199. Arsenious acid, p. 1. Mix.

† About half a line.

‡ Ratier, *Formulaire Pratique des Hopitaux de Paris, ou, Recueil des prescriptions Medicam: Employées par les Medecins et Chirurgiens de ces Établissemens.* 2 Ed. 1825.

Frère Côme's paste, however, has effected several cures. The mode of its application has been fully detailed by M. Patrix.* I shall only remark here that it should not be applied to bleeding wounds of large extent, as absorption of the arsenic may give rise to serious symptoms. Before applying the arsenical paste, the surface of the ulcers should be cleansed by means of emollient lotions or cataplasms. The eschar formed by the caustic should be allowed to fall spontaneously. After it has become detached, the surface of the ulcer is found to have diminished in extent, and to have assumed a healthier aspect.

The requisite number of dressings may vary from one to upwards of twenty, according to the number and extent of the ulcerations. The employment of this remedy often gives rise to the development of erysipelas on the face. Some considerable time should be allowed to elapse between each dressing, when they are required to be repeated.

Messrs. Richerand and J. Cloquet have obtained the cicatrization of very obstinate lupus, by cauterization with the nitrate of mercury.

Cauterization with potass, nitrate of silver, butter of antimony, &c., is not so successful as that by the arsenical paste.

The actual cautery should never be had recourse to in large ulcers of lupus of the nose. When it has been employed, the bones and cartilages of the nose have been known to swell, and to become attacked by chronic inflammation, from which they were previously free.

§ 453. When cicatrization has commenced in ulcerated lupus of the nose, care should be taken that the apertures of the nostrils are not obliterated. To prevent this, a small piece of prepared sponge should be introduced, and maintained for sometime, in each nostril alternately. If, through the obstinacy or neglect of the patient, these apertures become obliterated, they must be re-established by the scalpel, or caustic, followed by the use of the sponge.

§ 454. Some powerful remedies have been employed with various results, in the treatment of very serious and intractable lupus. *Internally*, the animal oil of Dippel has been administered in the dose of six drops, and increased to twenty per day. Feltz' decoction has been given to the dose of a pint a day; and the Asiatic pills, so as that a grain of the protoxyde of arsenic is taken in the same time; Pearson's

* Patrix, M. *l'Art d'Appliquer le Caustique Arsenicale.* Paris.

solution, in the dose of forty or fifty drops a day; Fowler's, to ten or twelve. It is not until these dangerous medicines have been administered for several months that their utility becomes manifest; they more frequently prove useless, or injurious.

Externally, frictions, with ointments of the ioduret of mercury, have been more useful; but they frequently produce erythema, and at times erysipelas.

§ 455. Most of the cases reported by Bachelet de Lindry* appear to have been syphilitic inflammations, which, after having commenced by tubercles or pustules, terminated in ulcerations of more or less considerable extent; the cure was effected by the deuto-chloruret of mercury. One of his cases (VII.) was that of cancer of the nose; in fact, his work does not contain one well-marked case of lupus. A distinguished pathologist also has reported, under the name of *dartre rongeante*, cases of cancer, and syphilitic tubercles of the face. It is of great importance, however, not to confound three diseases, the treatment of each of which is so very different.

CANCER.†

Syn.—*Scirrhus.*

§ 456. Cancer of the skin is announced by one or more tubercles, usually developed on the lips, nose, around the anus, or on the genital organs. After an uncertain lapse of time, the cancerous tubercle becomes livid, produces acute lancinating pains, and terminates in an unequal fungous ulcer, the edges of which are indurated and everted.

§ 457. The study of cancer of the skin belongs rather to surgery. It has been thought advisable, however, to make brief mention of it in this work, that its distinctive characters may be pointed out, and the error of confounding it with syphilitic tubercles and ulcers, and those of lupus, may be avoided.

§ 458. (s.) Whatever region of the skin cancerous tubercles are developed on, they have common and generic characters. They are commonly solitary; they vary in size, from that of a grape-stone to that of a small egg; they are hard,

* Bachelet de Lindry, *Dissert. sur la Dartre Rongeante.* Paris, 1803.

† Scarpa, *Opuscoli di Chirurgia, &c.* Pavia, 1825. *Mémoire sur le Squirrhe et le Cancer. Ext.* par Ollivier, *Arch. Gener. de Med.* tom. x. p. 276.

resistant, and sometimes of the same colour as the healthy skin. They may remain latent for many years, or may, from their earliest formation, cause acute itching and lancinating pains. When accidentally irritated, cancerous tubercles tumefy, become livid, and are always then acutely painful; their bases enlarge and become deeper; fissures form on the surface, which furnish, at intervals, a yellowish serous and sanguinolent discharge; these fissures are followed by a fungous, and unequal ulceration, having indurated and everted edges; and the neighbouring parts are soon destroyed by it, to more or less extent.

Cancerous tubercles have peculiar anatomical characters. When cut through, and their structure examined with a lens, they are found principally to consist of a homogeneous lardaceous tissue, traversed by whitish lines resembling in appearance fibro-cartilage. Independent of this scirrhous tissue cerebriform and melanotic matter is sometimes recognised in the formation of these small tumors.

§ 459. Cancerous ulcers may be complicated with other lesions, and particularly with inflammation of the lymphatic and other glands adjacent to the parts affected. The tubercles are rarely accompanied by these secondary lesions.

§ 460. Cancerous tubercles and ulcers are more especially met with on certain regions:

1°. Cancer of the *hairy scalp* is principally observed in old, or bald individuals.

2°. Cancer of the skin *of the nose*, is announced by tubercles which usually present themselves on the lobe, alæ, or root of this organ: at first, they are of the same colour as the skin; small vessels are afterwards observed traversing their surface; and, in the course of a shorter or longer period of time, they ulcerate. The ulcers usually spread without causing inflammation of the surrounding skin. Their progress is slow if they are not accidentally irritated, or if it is not accelerated by injudicious treatment.

3°. Cancer *of the lip*, like that of the nose, is announced by a tubercle, usually developed on the lower lip. When this tubercle is ulcerated, a small quantity of acrid serosity exudes from it, and dries under the form of a greyish or yellowish crust. If the ulcer is seated in the skin alone, it does not commonly extend beyond the surface of it; but if it occupies the mucous membrane of the lip, the ulcer penetrates deeply into the subcutaneous cellular tissue, destroying the muscles and other parts of the face.

4°. Cancerous tubercles of *the cheeks*,* ordinarily flatter, and indolent for a longer time than those of the lips, terminate in ulceration, which extends more especially at its surface.

5°. Cancer of the *neck* and *forehead* has been rarely observed; it has the same course as the preceding.

6°. Cancerous tubercles of *the limbs* are nearly always of a blueish colour, and surrounded by small varicose veins; they are seen more particularly in old people.

7°. Cancer of the skin of *the anus*, consists commonly of a solitary tubercle, situated on some part of the circumference of this aperture. It is often attended by chronic inflammation of the rectum. It is of much importance not to confound these tumors with hæmorrhoids or syphilitic tubercles.

8°. Cancer of *the prepuce*† shows itself by a tubercle almost always indolent. If this small tumor is irritated by the act of coition, or the rubbing of the clothes, it tumefies, becomes painful, and terminates in a fungous ulcer, the surface of which furnishes an ichorous and fœtid suppuration. Tubercles of the *vulva* are developed and ulcerate in the same manner.

9°. Cancer of *the scrotum*, remarked in chimney-sweepers by Pott, also commences by a *tubercle* of the skin, according to the more recent observations of Mr. Earle.‡

§ 461. (c.) Cancerous tubercles have been observed to form in the skin after local irritation; but, in the majority of cases, these small tumors are developed slowly, and without pain, or any appreciable cause. They are seldom seen previous to the age of puberty. They are especially observed in persons of a bilious temperament, and between forty and sixty years of age.

§ 462. (d.) The tubercles of lupus, elephantiasis (Græc.) and of syphiloid disease, are always indolent; those of cancer become sooner or later the seat of acute lancinating pain. Cancerous tubercles differ from warts, by the latter having the epidermis thickened and fissured, and being nearly always numerous and indolent, never ulcerating spontaneously. The *painful subcutaneous tubercle* of W. Wood, which has been

* Scarpa has given a good engraving in the Work quoted, pl. 1.

† Wadd (William) has given a good drawing in his work, entitled *Cases of Diseased Prepuce and Scrotum*. 1817, pl. vii.

‡ Earle, *On Chimneysweep's Cancer*.

also called neuroma,* produces from the outset acute pain. Again, the painful subcutaneous tumor, as the name imports, is situated in the cellular tissue beneath the tegument; this is sufficient to prevent its being confounded with tubercles of the skin.

The ulcers of lupus, elephantiasis, and syphiloids, never cause pain similar to that attendant on cancerous ulcers.

§ 463. (P.) Generally, cancerous tubercles of the lips, nose, face, &c. are less grave than cancer of the glands, and not so liable to reproduction after removal. Cancerous ulcers of the face, limbs, genitals, &c. are always beyond the reach of art when they have made such progress as to prevent the use of the knife, or caustic, in removing the parts affected.

§ 464. (T.) When one or more tubercles are recently developed on a particular region, their resolution may be attempted by bleeding, purgatives, and emollient and narcotic applications. Too much confidence, however, must not be placed in these measures, the effects of which have been much exaggerated. I have never been able to effect the resolution of a cancerous tubercle by these means; they are always useless when ulceration has commenced. Forty leeches applied in eight days at a given distance from a tubercle recently developed, have not procured the slightest diminution in the size of the tumor.

Whenever the cancerous nature of a tubercle is well recognised, it should be at once removed by the knife. A host of examples prove that similar tubercles developed on the skin of the cranium, face, and other regions, have been extirpated with the utmost success. The existence of other lesions of the viscera, or their membranes, alone contra-indicate this operation. The multiplicity of the tumors should never be an obstacle to their removal, for they may be all successively extirpated in a little time.

Ulcerated tubercles and cancerous ulcers should be equally attacked with the knife whenever, the whole of the affected part can be removed. Caustic applications are, in general, much less useful in cancer than in lupus. Nevertheless, should the patient obstinately object to a surgical operation, it may be advisable to have recourse to Frère Côme's paste, or, in preference, Dupuytren's powder. Their employment should be attended by the precautions already indicated. (§ 452.)

§ 465. When cutaneous cancer, after having successively

* Descot (P. S.) *Dissert. sur les Affections Locales des Nerfs.* Paris, 1825.

destroyed the skin, the subcutaneous cellular tissue and the muscles, has extended to the bones, cartilages, lymphatic and other glands and organs near its primary seat, it can be attacked neither by the knife nor caustic; all that then can be done is merely palliative. The necessity, in these cases, of administering large and continued doses of narcotic preparations, and also of constantly loading the digestive organs with opiates, leads me to imagine that much advantage would be obtained in these desperate cases, by applying the acetate of morphine to the surface of the ulcers, or some point of the skin deprived of its epidermis, as recommended by the authors of the *endermic treatment*.

§ 466. With a view to favour the resolution of the tubercles, and to produce cicatrization of the ulcers, different substances of more or less activity have been recommended, such as cicuta-powder, carbonate of iron,* arseniate of soda, &c. These all have the disadvantage of fatiguing the digestive organs, and the cases in which they may prove beneficial have not been sufficiently well pointed out; but experiments, and even bold ones, should not be deprecated in a disease, which it is difficult to believe incurable, when the truly prodigious success is witnessed which some energetic remedies have obtained in the treatment of syphilitic ulcers, the ravages of which are not less extensive or frightful than those of cancer.

§ 467. Numerous cases of cancerous tubercles and ulcers have been published indiscriminately under the names of *boutons chancreux, cancerous ulcers, noli me tangere.*

ELEPHANTIASIS OF THE GREEKS.†

Syn.—*Elephantiasis*, Willan. *Lepra Elephantiaca. Elephant. Græcorum.*

§ 468. Elephantiasis of the Greeks is a chronic, apyretic inflammation, characterised by numerous indolent livid tubercles, sometimes of the same colour as the skin, varying from the size of a lentil to that of a large filbert, and which are principally developed on the face and ears, upper and lower extremities, and on the palatine vault. They terminate

* Carmichael, *On the Effects of the Carbonate and other Preparations of Iron on Cancer*. Dublin, 1808.

† Raymond, *Histoire de l'Eléphantiasis, &c.* Lausanne, 1767.—Kennis (J.) *Observations on Elephantiasis, as it appears in the Isle of France*. Edinburgh Med. and Surg. Journal, October, 1824.

by resolution, or in small ulcerations, which rarely extend in size or depth, and are covered by adherent crusts, beneath which a cicatrix forms.

§ 469. This disease may shew itself on the face, or the limbs only, or on several regions at the same time.

1°. The face is, above all parts, that most frequently affected. It presents a kind of general enlargement; the skin of the forehead, often traversed by transverse wrinkles, presents a number of tubercles of the same colour as the skin. The nostrils are dilated, and numerous tubercles, generally small, are developed on the alæ and lobe of the nose. A great many are observed also on the cheeks, hard, flattened, and hemispherical in form. Some appear to affect the skin alone, others to penetrate the subcutaneous cellular tissue. The lips are thickened, and covered by a shining skin; the chin is also sprinkled with tubercles, the pavilions of the ears enlarge, become tumid, and afterwards covered with small tubercles. It is impossible to say exactly what time elapses between the appearance of the earliest tubercles and the formation of the last; it varies from several months to some years. These tubercles may continue stationary for a long time, or slowly acquire their largest dimensions, which do not exceed those of a large filbert. The visage is singularly deformed by these tumors and the tumefaction of the cellular tissue, but is never painful.

Each tubercle passes through all its stages independently of the rest. Resolution, which is the rarest termination, is almost always preceded by an acute inflammatory stage, during which the tubercles are hot, and of a vivid red colour. Suppuration and ulceration may also take place after either an acute, or slow and progressive march. The sanguinolent pus furnished by each tubercle dries so rapidly on the surface of the ulceration, that they seldom extend farther in extent or depth. The brown or blackish crusts of the small ulcerated tubercles scarcely rise above the level of the skin; but those which succeed the larger tubercles are conoid and prominent. A *cicatrix* is slowly organised beneath the crusts. The nose and lips may be deformed by cicatrices consecutive to the ulceration of these tubercles.

2°. The tubercles of elephantiasis developed on the *upper extremities* pass through their different stages by a process quite analogous to that described above. They are usually more numerous on the outer and back part of the forearm than on any other part of the limbs. The palm of the hand

often exhibits a swelling similar to that of the face; the skin becomes soft, shining, and unwrinkled; the back of the hand and fingers are equally engorged.

3°. On the *lower limbs* the process is the same. The subcutaneous cellular tissue of the sole of the foot is so much engorged, that the hollow is entirely obliterated, making the sole flat. The tubercles developed on the nates are full; those on the sole of the foot are flat. Ulcerations consecutive to inflammation of the tubercles developed on the foot, inferior part of the leg, and near the ankle, heal more slowly than those of the upper extremities. The ulcers of the leg, even when they are extensive, are nearly always indolent. When seated on the phalanges of the toes, these may mortify and separate by the inflammatory process. One or several of the lymphatic glands of the groin are sometimes engorged. It is unusual to meet with similar alterations in the axilla, or other regions.

4°. These tubercles are seldom observed *on the trunk*. The two subjects of this disease which I saw, had them on the head and limbs only. Messrs. Lawrence and Southey made the same remark on the two cases which they have published. Mr. Kennis saw them developed on the limbs of a young mulatto.

§ 470. The development of the tubercles is sometimes preceded, and nearly always accompanied, by a change of colour in the tegument. In white people, the skin becomes tawny, or bronze colour, acquiring a tint which may be compared to that of the mulatto. In negroes, the pigment of the skin is equally altered. In the former, the tubercles are livid, or of a copper-colour; in blacks, they are of a deeper dye than the skin.

In individuals attacked with elephantiasis prior to the age of puberty, the growth of the beard, and even the hair of the axillæ, and genital parts, is sometimes arrested; in adults, and persons of a more advanced age, the fall of the hair of the beard, eyebrows, axillæ, pubis, limbs, and, more rarely, of the scalp, has been observed.

Cutaneous transpiration continues; and individuals affected with elephantiasis even sweat profusely after active exercise.

Nearly all pathologists agree that the sensibility of the skin is diminished in this disease; indeed, so much so, that the patient experiences no unpleasantness when pinched or pricked. The two which I saw did not exhibit this singular phenomenon; sensibility was blunted at the soles of the feet,

the patients complained of being drowsy and sleepy, but were easily roused by the pricking or pinching the skin; all other regions possessed the same degree of sensibility as in health.

Independent of these changes in the integuments and subcutaneous cellular tissue, something analogous takes place in the mouth. Tubercles, less voluminous than those of the skin, are situated principally on the roof of the mouth, and form a sort of *nipple-like* processes, increasing from the incisor teeth towards the vault of the palate, and this itself is affected as well as the uvula. Each tubercle, after a shorter or longer period, inflames separately, and terminates in ulceration, which never extends in size or depth. The patient frequently experiences no sort of inconvenience from these tubercles in the mouth, and even doubts the existence of them. They are but rarely seen on other parts of the mouth. The mucous membrane of the amygdalæ, pharynx, and nasal fossæ is affected by chronic inflammation; the sense of smell is lost or diminished; a considerable flux sometimes takes place from the nostrils, and a sense of heaviness is felt in the region of the frontal sinus; the voice is weak, and becomes nasal, &c. The principal organs of digestion and respiration remain, at least in appearance, for a long time free from derangement.

In this picture of elephantiasis of the Greeks no mention has been made of the *libido inexplebilis,* said by some authors to be a characteristic symptom of the disease. Some pathologists deny the existence of this phenomenon; others affirm having observed quite an opposite state, *abolition of venereal desire,* and even atrophy of the organs of generation; lastly, Mr. Kennis asserts having seen women affected with elephantiasis whose menstrual periods have been quite regular, become mothers, and suckle their infants; and men have declared to him that they have had neither more nor less desire for the other sex than before they were the subjects of elephantiasis.

Divers inflammations of the skin may be accidentally complicated with tubercular elephantiasis, and modify its appearance. Some weeks previous to death, in old persons, and others dying of some internal inflammation, sensibility is sometimes totally lost in the inferior extremities, and the ulceration of the tubercles soon runs into gangrene.

The duration of this disease always extends to some years, if not rendered fatal sooner by some serious complication.

§ 471. (A. R.) The anatomical structure of the tubercles of

elephantiasis in their different degrees of development, the alterations in the secretory organs of the hair, the fall of which is one of the most frequent symptoms of the disease, and the examination of the constituent parts of the skin, and the corresponding subcutaneous cellular tissue, have not hitherto been studied with that accuracy and minuteness which at present prevail in the researches of pathological anatomy. The structure of the tubercles is not yet ascertained. Some say it is solid and fatty; others have compared them to small cysts, containing a glutinous reddish serosity. The dermis is ordinarily inflamed only on those points at which the tubercles are suppurating, or have been succeeded by ulcerations. The tendons and muscles are sometimes found so adherent to each other, that they are with difficulty separated. The patients usually succumb to chronic inflammation of the mucous membranes of the air-passages, pharynx, or lungs.

§ 472. Elephantiasis is a very rare disease in Europe. In the two cases I saw in Paris, the disease was contracted in the one at Gaudaloupe, in the other at St. Domingo. The principal cases of this disease have been collected from Martigues in the island of Cyprus, from the islands of Feroe, Guadaloupe, St. Domingo, Isle of France, &c. It prevails more especially in maritime countries, in islands, and in countries abounding in ponds and marshes, and in those divided by deep bays, and the inhabitants of which feed on fat oily fish.

This disease may declare itself before or after puberty, and attacks both sexes indiscriminately.

Areteus, and several others, have thought elephantiasis contagious. Vidal and Heberden maintained, with truth, that there does not exist a single positive fact which can be cited in favour of this opinion of the Greek physician. It is generally supposed that want of cleanliness, bad aliment, and the habitual use of fish, may have some influence in the production ofthe disease.

§ 473. (D.) Elephantiasis of the Greeks has been confounded by some modern pathologists with lepra, and elephantiasis of the Arabs. The three, however, are distinctly separate; the first is characterised by tubercles of the same tint as the skin, and seated in the substance of this organ, or the subcutaneous cellular tissue; lepra is a squamous inflammation, the principal characters of which consist in scaly plates of various dimensions, nearly always circular, and surrounded by a reddish ring; elephantiasis of the Arabs is announced by a

considerable tumefaction of one region alone, and most frequently one of the lower extremities, caused by a peculiar inflammation of the veins, vessels, lymphatics, and glands, and also of the subcutaneous cellular tissue. In fact, lepra is a *squamous*, Greek elephantiasis a *tuberculous* disease, and the skin is not at all primarily concerned in Arab elephantiasis; three circumstances which establish a marked difference between the three diseases.

The numerous scattered tubercles of elephantiasis cannot be confounded with those of cancer of the skin, which are commonly solitary, and attended by acute lancinating pains; and still less with those of lupus, which are always red, violaceous, flatter, larger, and more superficial. The ulcerations of lupus and cancer are also distinct enough from those of elephantiasis.

Many pathologists have confounded syphilitic tubercles and ulcerations with elephantiasis. To avoid this, it is enough to remember that the former are always consecutive to chancres, or buboes; that they are of a violet-red colour, often grooved, more superficial and voluminous than those of elephantiasis; that they have a greater tendency to ulcerate; that they are deeply excavated, and their edges hard and sharp, the bottom greyish; lastly, that they are successfully treated by mercurials, always injurious in elephantiasis.

§ 474. (P.) Greek elephantiasis is nearly always incurable. If the tubercles are not inflamed, or when they suppurate and ulcerate at distant periods, the free and regular exercise of the functions of digestion, respiration, innervation, circulation, &c., may continue; but if inflammation seizes at the same time several tubercles, and extends to the mucous membrane of the air-passages, the number of the inflamed parts, and the importance of the organs secondarily affected, render the prognosis more grave.

§ 475. (T.) The treatment of elephantiasis is one of the most obscure points of its history. Vegetable diet, broths of the most wholesome meats, turtle flesh, skimmed milk, with decoction of barley and oatmeal, have been much recommended, more with the hope of arresting the disease, than of obtaining a cure. Cold, emollient, and narcotic baths, diminish the irritation of the skin, when the inflammation is general, or very intense.

Different remedies have been tried, with the intention of favouring the resolution of the tubercles. Bloodletting, purgatives, sudorifics, antimonial and mercurial preparations,

and tinct. cantharid., have all been employed with but little success. The protoxyde of arsenic, lauded as an infallible cure, has been recently tried by several distinguished practitioners, who have found more inconvenience than advantage from its use. Two Asiatic pills* contain one sixth of a grain of the protoxyde. The number of two pills a day should not be exceeded, if their use is for any continued length of time. Fowler's, or Pearson's solution, may be also administered under the same circumstances.

The action of arsenical preparations on the skin is too slow and remote to be easily appreciated. The introduction of arsenic into the stomach sometimes gives rise to the development of erysipelas; and this inflammation having itself a marked influence on the resolution and suppuration of the tubercles of elephantiasis, it is probable that arsenic produces some peculiar irritation of the skin when its administration is beneficial.

According to this hypothesis, the same results might be expected from external medications. Sulphureous baths have appeared to be but of little advantage in the few cases in which they have been tried. Frictions with volatile liniments, or ointment of hydriodate of potass, readily produce inflammation of the tubercles. If its action is too intense, its use must be suspended, and tepid baths employed. On the superior extremities the ulcerations are covered with crusts, and cicatrize without any external application; the ulcers of the legs, ancles, feet, and toes, often require treatment adapted to modify, or revive the inflammation, according to its intensity.

§ 476. The subjects of Greek elephantiasis should remove, if their residence is in a humid marshy district. The colonists of Guadaloupe and St. Domingo remove to Desirade when attacked with this disease, as do those of the Isle of France to the island of Don Diego Garcia. At the end of a prolonged sojourn on these islands, the inhabitants of which live chiefly on cocoa-nuts, fowl, and turtle, the patients experience marked relief, and some even recover their former state of health.

§ 477. Bonet† and Schilling‡ have given very imperfect

* ℞ Protoxyde of Arsenic grs. lv. Black Pepper ʒix. Pound in an iron mortar for four days at intervals. When the mixture is reduced to an impalpable powder, add water gradatim, so as to form a mass to be divided into eight hundred pills. They should be kept in a stone jar.

† Bonet, *Medicina Septentrionalis*. 1687.

‡ Schilling, *De Lepra Commentationes*, Ludg. Bat. 1778.

designs of elephantiasis. Bateman, in his large work, has a beautiful engraving of it. Raymond has confounded, under this name, several widely different diseases: elephantiasis of the Greeks, lepra, elephantiasis of the Arabs, syphilitic tubercles, and some other chronic diseases of the skin. However, of three cases given in his small *Treatise*, the first two appear to be really cases of elephantiasis; the third is syphiloid.

The characters of elephantiasis are not minutely described by M. Ruette.* He does not appear to have distinguished elephantiasis of the Greeks from that of the Arabs, or the *Barbadoes Leg*. The cases of Lawrence and Southey are much more detailed and accurate.

SQUAMOUS INFLAMMATIONS.†

Syn.—*Squamæ*, Willan. *Scaly Eruptions.*

§ 478. Squamous inflammations are announced by red spots, or elevations, upon which *squamæ* are formed; that is, lamina or lamellæ of the altered epidermis, which are continually becoming detached from the surface of the skin.

§ 479. This class of inflammations consists of four kinds: lepra, psoriasis, pityriasis, and syphilitic scales; but these I prefer placing in another group. Mr. Plumbe and Mr. Duffin have proposed to place lepra and psoriasis under one description. For the purpose of establishing the distinctive characters of these two diseases, or, if you will, varieties, I have thought it preferable to describe them separately, at the same time, I acknowledge the striking analogy between their external characters. Inflammation of the reticular body is the principal characteristic of this class of diseases: the squamæ are but secondary, and Willan attached too much importance to them when he placed icthyosis among squamous diseases.

§ 480. Squamous inflammations show themselves by small red elevations, which become hard, prominent, and as if papulous. In psoriasis and lepra these elevations unite, extend, and soon form squamous plates of various sizes and form. They may be few, and confined to some particular region, or they may be scattered over the whole surface; they at times become confluent, and then appear to form a sort of envelope to the body. In this case desquamation is so abundant, that the bed and clothes of the patient are filled with dry whitish

* Ruette, *Essai sur l'Eléphantiasis et les Maladies Lepreuses.* Paris, 1802

† E. W. Duffin, *Of Squamous Disorders.*—Edinburgh Med. and Surg. Journ. Jan. 1826.

scales. In pityriasis, these scales seem to be formed of the epidermis in its natural state. In lepra and psoriasis, the epidermis becomes thickened, opaque, soft, and very friable. When the scales are removed, or spontaneously detached, the reticular body beneath is found red and inflamed. Lastly, inveterate squamous diseases are always attended by a morbid thickening and fissure of the skin.

These inflammations are, at certain times, confined to the points they first occupy; at others, they leave these, and show themselves on other parts. They produce itching, formication, and heat, which are always aggravated by any augmentation of the temperature of the body. These sensations are most acute when the disease occupies the axilla, scalp, &c. Cutaneous transpiration is interrupted at the points covered by the scales; and when they have successively invaded the whole body nearly, the urinary secretion and pulmonary transpiration usually become more abundant.

Squamous diseases are frequently complicated with each other; another proof of the identity of their nature. They are rarely associated with other phlegmasiæ.

§ 481. Squamous cannot be confounded with other inflammations of the skin, unless their elementary form has been acted upon. It is true, squamæ are observed in the secondary stage of some papulous and vesiculous diseases, in chronic eczema, and lichen *agrius;* but vesicles, or papules, are always found in the neighbourhood of the squamous patches, which declare the nature of the affection. Lastly, this class cannot be confounded with icthyosis, in which disease the reticular body is neither inflamed nor painful.

In treating of lepra, psoriasis, and pityriasis, the characters distinguishing these diseases from each other will be duly indicated.

§ 482. Squamous affections commonly require to be treated for some months, or even years; they are more intractable and inveterate when they occupy an extensive surface.

§ 483. With regard to treatment, few diseases have so great analogy with one another as squamous; it is merely necessary to take a general view of lepra and psoriasis to be made aware of this.

LEPRA.*

Syn.—*Lepra,* Willan. *L. Græcorum. Vitiligo. Lepræ.*

§ 484. The word *lepra,* which has been applied to almost all chronic diseases, when highly developed, is used in a more restricted, and better determined sense, to designate a chronic squamous phlegmasia of the skin. The principal characters of this disease are, scaly plates of different dimensions, almost always circular, or orbiculated, surrounded by a reddish and prominent circle, and depressed at their centres, scattered over the surface of the integuments, and the development of which is not preceded by vesicles or pustules.

§ 485. (s.) The alteration of the skin constituting lepra (*L. vulgaris,* W.) *dartre furfuracée arrondie,* Alibert,) is announced by solid elevations, around which small patches are observed, a line in diameter, reddish, shining, *and circular,* and which are prominent. On passing the pulp of the fingers over these elevations, they feel firm and solid. Some resemble a hard voluminous papule, and from this circumstance, no doubt, Willan supposed lepra might be the result of induration of the papillæ of the skin.

The summits of these elevations (which are usually successive in their eruption) present, a few days after their formation, small white epidermic scales, which are semi-transparent, smooth, and shining. This small scale (resembling a spangle) soon separates, and its fall is followed by a pricking or itching sensation. The small surface of the skin, which is left uncovered, appears scarcely changed; but is unequal to the touch. On the under surface of the scale, a small eminence is observed, of less consistence than its other parts. This eminence, which is slightly bloody when the scale has been forcibly torn off, appears to have lodged in a slight depression of the skin.

The surfaces of these small scaly points, after being once denuded, progressively and pretty rapidly enlarge, till they attain about an inch diameter, but *always preserve the circular form.* They become again covered with scales, which are dry, thin, firm, and resistant, of a pearly grey or yellowish shade; they are surrounded by red or purple and *slightly elevated* edges, so that their centres appear to be depressed. The

* Willan's 4to. 1811, *art.* Lepra.—Rayer, *art.* Lepre, *Dictionnaire de Med.* 18 vols.

squamæ formed on them become thicker and thicker, forming prominent layers. The scales, almost always adherent to the skin, are not uniformly extended over the leprous patches, which are not invariably covered by one entire scale. The external surface often assumes a whitish tint. They separate partially and irregularly. When they are detached, the small orbiculated surfaces which they have covered, appear red and shining, and do not rise beyond the level of the surrounding healthy skin. If the leprous patches are of recent formation, they do not represent the lines of the dermis; but these are seen on the older patches. When ancient, they sometimes exhibit even a sort of wrinkle or furrow, corresponding to that remarked on the inferior surface of the scale.

The scales are quickly reproduced after their removal; the parts thus undergoing, in the course of some months, a series of successive desquamations.

The healing of these orbiculated patches, when spontaneous, or procured by art, begins at the centre, and thence extends to the circumference. This is indicated by the fall of the squamæ and their non-reproduction.

It is generally supposed that some modifications of this disease, alluded to by the Greek physicians, formerly received particular names, (alphos, leuce, melas.) These distinctions have been revived with more accuracy by Willan and Bateman. The size of the squamous patches are sometimes not large; increase slowly, and are slightly prominent (*L. alphoïdes*, W.) their diameter not being more than a few lines; they are seldom very close together, and are developed almost exclusively on the limbs; they differ from the patches of *L. vulgaris* by their whiteness, and the small size of the scales. This variety is more common in children than in adults and old persons.

The leprous spots may present a brown or livid tint, *L. nigricans*, W.) more deeply marked towards their edges, which are of a dirty violaceous red, and this is observed through the whole thickness of the scales. In this form of lepra the squamæ are more easily detached than in the other varieties, and the surface of the affected skin continues for a long time red and shining. Excoriation, however, may take place and cause the issue of a sanguinolent serosity, so that a new lamellous concretion may be formed. The blackish tint remarked on the site of the scales results from a change in the reticular body of the skin.

Lepra, at times, covers the whole surface of the body; at

others, it affects only the knees and elbows. The orbiculated spots are, ordinarily, first observed on the limbs, and most frequently at the bend of the elbow or knee. In most cases they affect the limbs of both sides. From these parts they may progressively extend along the arms and thighs, over the chest, shoulders, loins, and lateral parts of the abdomen. The patches are sometimes more numerous and prominent around the lower part of the belly. They are seldom seen on the hands, head, or scalp. When observed on the head they are of small size. They occasionally appear near the external angle of the orbit, and spread over the eyebrows, forehead, and temples. Several confluent, or, as it were, agglomerated patches, may join at their edges; but even then the *orbiculated* form of each is still indicated by the arcs of circles which may be distinguished at their edges.

If lepra is long neglected, and the leprous patches cover the fingers, the disease may be propagated to the reticular body beneath the nails. These then become thick, rugous, opaque, of a dirty yellow colour, and curved at the extremities. The surface is unequal and irregular, and the thickened root seems formed of a collection of distinct superposited layers. More rarely, the dermis which secretes the nail is inflamed, and furnishes a more or less abundant sanies.

When the patches are few in number, and not much inflamed, lepra is not accompanied by any morbid sensation, except slight itching, when the temperature of the body is raised by exercise, or the heat of the bed. This sensation is occasioned, Mr. Plumbe says, by the rising of the edges of the scales, which causes tumefaction of the surrounding areolæ. Whether this explanation be the true one or not, it is certain that, when lepra is cured, and new scales are no longer formed, to raise up and replace those already developed, this feeling of pricking and itching is not experienced by the patient.

When the spots, on the contrary, are numerous, inflamed, and scattered over the whole surface, they may be attended by excessive pain, anxiety, and tension of the limbs; they may then pour out a serous fluid, and present a surface analogous to that of ulcerated chronic eczema. I have seen this inflammation carried to such a degree as to render the motions of the joints difficult, obliging the patient to keep his bed, every movement being hindered by the stiffness of the epidermic scales, which produce a very remarkable crepitation.

However, lepra does not ordinarily exert any influence beyond the parts which it occupies. This affection seems to be essentially local. If P. Frank, Alibert, and some others, have mentioned, in the symptomatic description of this disease, morbid phenomena developed in other organs, and, in particular, *an alteration in the voice,* it is in consequence of their having confounded lepra with elephantiasis of the Greeks, and regarded two diseases so dissimilar, as varieties of the same.

§ 486. (A. R.) All the elementary tissues which enter into the organization of the skin, do not appear to be equally affected in lepra. Mr. Plumbe supposes that the vessels which secrete the epidermis are attacked by chronic inflammation, rendering this production more abundant, and causing the fall of the scales. If all the vessels of the skin are equally affected and in the same manner, it is difficult to explain how the result of this inflammation can be confined to the morbid secretion of the epidermis without causing the development of vesicles or pustules. However, this hypothesis, like many others formed on the same subject, does not at all account for the *orbicular* form always assumed by the leprous spots. Some pathologists have supposed that the superficial vessels of the skin are disposed in small concentric circles, while others have imagined this disposition of the spots to be the natural consequence of their primary formation, being that of a solid elevation, around which the inflammation irradiates circularly.

§ 487. (C.) Lepra is common to both sexes, and all ages. I have never seen it in infants at the breast; but frequently after the second period of dentition; it is most common in women. Mr. J. Wilson asserts that it is more frequent in England now than formerly; but it is possible it may have been for a long time mistaken, or incompletely noticed under some other name. Heberden, in particular, was deceived when he affirmed that lepra was very rare in England, "*De vero scorbuto et leprâ nihil habeo quod dicam, nam alter rarissimus est in urbibus, altera in Angliâ penè ignota.*" This suspicion seems the better founded, from the fact, that several French physicians, having but confused ideas of lepra, and those different from what it really is, have asserted that this disease is seen only in some of the meridional provinces, while every year, in Paris, there are admitted into the hospital of St. Louis, and that of Enfans Malades, a number of individuals labouring under this squamous affection of the

skin, which I have also myself observed in other classes of society. It may be here remarked, that all that has been written lately in France on the origin, propagation, and disappearance of lepra, in different parts of the world, contains a multitude of errors; this is the consequence of borrowing from authors who have confounded lepra with elephantiasis of the Greeks, elephantiasis of the Arabs, and other diseases not less distinct from one another.

The etiology of lepra is, for the most part, very obscure. This disease is not propagated by contact mediate, or immediate. Husband and wife may cohabit without communicating it the one to the other. All that has been said concerning the pretended contagion of lepra is erroneous; and in this respect, the most false inductions have been drawn from the existence of leprosies during the eighth, ninth, and tenth centuries. Again, no reliance is to be placed on a case cited by Niebhur, of a leprous subject, who, by having connexion with a linen-woman of the lazaretto, communicated the disease to her, and procured her admission into the hospital.

Like some other diseases of the skin, of shorter duration, (erythema, urticaria, &c.,) lepra seems to be caused by the abuse, or even use of stimulating food and spirituous liquors. Bateman knew a person, in whom the ingestion of spiced aliment, or a small quantity of alcoholic liquors, never failed to produce it; it has been known also to supervene soon after the ingestion of poisonous substances, the salts of copper, for example; and to follow the abuse of acids. It has also been attributed to the habitual use of game, salted and spiced meats, fish, and mushrooms; yet the disease is not more frequent on the sea-coast than inland. It has been attributed to the effects of grief and poverty; but rich individuals, and those given to luxury, are also subject to its attacks.

Willan supposes that the development of lepra is owing principally to the effect of cold and moisture, and to the action of certain dry and pulverulent substances on the skin. Bateman has seen examples from similar causes; and adds, with truth, that bakers, and those who work in laboratories, &c., are rarely affected with this disease; while it is often observed in young women in classes of society where cleanliness is an object of particular attention.

In some cases, lepra is manifested after violent and long-continued exercise. Hereditary predisposition to it has been several times noted. It must be acknowledged that there still remains great uncertainty and obscurity as to the number and

nature of the causes which produce lepra; and this is mainly to be attributed to the fact of practitioners being seldom consulted on the first appearance of the disease.

§ 488. (D.) The diagnosis of lepra is one of the most important points in its history; and yet it must be confessed that it is one of the diseases the characters of which are the best marked. It differs, in many respects, from other chronic inflammations of the skin, and even from those developed under the *squamous* form. In psoriasis, as in lepra, the epidermis is rough, scaly, and red on its inferior surface; but the form of the squamous patches is *irregular* in psoriasis, but regularly orbicular in lepra. In the former disease, the edges of the patches are neither elevated nor inflamed; their shape neither oval nor circular; the surface of the skin beneath the scales, often deeply fissured, is generally much more sensible and irritable than in lepra. There is, however, a variety of psoriasis (*P. guttata*, W.) which somewhat resembles lepra, and constitutes, as it were, an intermediate form between this disease and the other kinds of psoriasis. Indeed, the squamous spots of *P. guttata* are distinct and isolated, like those of lepra; but they are smaller, rarely exceeding one or two lines in diameter, and their circumferences are not so regular. It is more especially when lepra begins to heal that it most resembles psoriasis *guttata*. However, in some inveterate cases of lepra, when the orbiculated patches are confluent and confounded at their edges, it is difficult to distinguish them from certain cases of psoriasis. Syphilitic *squamous* spots, which resemble lepra in their seat, approach it still nearer by their *circular* shape. They resemble also *black* leprosy, (*L. nigricans*, W.) both in their size and their copper or violaceous colour. The edges of these spots are sometimes elevated like those of lepra, and their central parts are flat, and covered by very thin scales; but they are seldom more than six or eight lines in diameter. But the dryness and roughness of the skin, so remarkable in lepra, is not observed in syphiloid disease; and when the latter is of long standing, the spots are almost always as soft to the touch, and as supple as the other parts of the skin. Besides, in syphiloid disease the circles are livid, violaceous, devoid of scales, and rarely complete. Lastly, syphilitic spots supervene after venereal infection, grow pale, and disappear under the influence of mercury; and the healing presents this peculiarity, that it commences generally at the *circumference*, while that of lepra begins at the *centre* of the spot. It would seem dif-

ficult to confound the *scales* of lepra with the *crusts* of pustulous and vesiculous diseases; yet Willan observes that these mistakes have often arisen. Thus, some have confounded lepra with impetigo *figurata*, or, rather, with the scaly state of the skin consecutive to the fall of the crusts. In fact, this pustulous phlegmasia appears under the form of circumscribed patches of various size, commonly small and circular upon the upper, large, oval, and irregular on the lower limbs; and on these patches small pustules may be traced, the desiccation of the humour of which forms yellow, brownish, or greenish crusts, very distinct from the exfoliations of the epidermis observed in lepra. (§ 298.)

When lepra is developed on the scalp, it may be distinguished from the tineæ, by bearing in mind the progress of these diseases.

Lepra is neither preceded nor attended by pustules; it causes no oozing or exudation from the skin; and it does not commonly alter the hair, notwithstanding the assertions of a crowd of authors to the contrary. In psoriasis of the scalp, there is furfuraceous desquamation, but no scales; if the hair is plucked out, it will easily be seen that there is usually alteration of the bulbs. Tinea annulare might be confounded with lepra, only the former commences with the development of psydraceous pustules, and the latter, by that of solid elevations.

Lepra has been also confounded with ichthyosis by Plenck and Chiarugi. The name of *lepra* too has been given to two diseases, than which nothing can be more distinct: elephantiasis of the Greeks, and elephantiasis of the Arabs. It may be here observed, that not only are the descriptions of lepra hitherto published inaccurate, false, and unintelligible, but also those of these three diseases, (*lepra, elephantiasis Græc.* and *elephantiasis Arab.*) Although differing from one another in their seat and external characters, they have been regarded as simple varieties of the same affection, and confounded in the same symptomatic description.

§ 489. (P.) The duration of lepra is indeterminate. In old people it is nearly always incurable; it seldom heals spontaneously, and at times resists the most rational treatment: when it affects the limbs alone, it is not dangerous; if it occupies the whole surface of the body, cutaneous transpiration is diminished or suspended, and is generally equalized by the increase of that of the pulmonary and urinary organs. Leprous patches are often developed on different regions, disap-

pearing on some, and showing themselves on other points, for several years successively. Lepra never degenerates into cancer, as some writers have affirmed. When approaching to a cure, the scales are detached, and the spots grow indistinct at their centres; their edges dry, the skin ceases to become squamous, and the redness disappears; but the healing *always proceeds from the centre towards the circumference of the spot.*

§ 490. (T.) Many plans, some irritating, others of an opposite nature, have, in turn, been recommended in the treatment of lepra. All may be futile; but it is of importance that the treatment should be *adapted to the degree of inflammation of the skin.* It may be as well to remark, that the salutary action of remedies is more evident during summer than at any other time of the year.

1°. If lepra is recent and extensive; if the skin is highly inflamed, thick, and much injected; the itching very inconvenient; the motions of the joints difficult, the disease will certainly be aggravated by sea-water baths, frictions, sulphureous lotions, &c., which are too generally and injuriously recommended in the treatment of diseases of the skin. Bleeding, unctions with cream, milk, fresh butter, or well-washed lard, procure prompt relief, when the leprous spots are much inflamed. If the patches are large and few in number, leeches may be applied near their edges, and repeated if necessary. Vapour, emollient, or gelatinous baths, are useful, as principal, or auxiliary means. The simple vapour bath will sometimes alone cure lepra, when recent.

2°. When the squamous spots are but *slightly inflamed,* and of long standing, recourse is generally had to applications which cause more or less irritation; but the skin should be previously well cleansed by lotions, tepid baths, and light friction. When the scales are very adherent, or disposed in thick layers, stimulating lotions, containing alcohol, sulphuret of potass, &c., favour the fall of the squamæ, and may advantageously modify the march of the disease. After the scales are thus detached, a light layer of the black pitch ointment, or of tar, or the ung. hydrarg. nitrat. diluted or mixed with saturnine ointment, may be used. These should be applied at bed-time, and washed off in the morning with warm soap and water. The use of these topical measures continued for some months, has been known to render the skin of its natural flexibility, even when the disease has been treated internally without success.

Under similar circumstances, sulphureous lotions and baths

have been attended with success. In France, the waters of Barèges, Cauterêts, Bagnères, &c; and in England, those of Harrowgate, Leamington, Crofton, &c., are often recommended.

The employment of sulphureous vapour baths has sometimes been followed by a complete cure. Though so much extolled in Germany, they frequently fail; their principal advantage appears to be the high temperature at which they may be administered. Several observations have proved that acid vapour baths, natural or artificial salt-water baths, and alkaline baths, such as those of Plombières, the hot wells of Mount d'Or, Vichy, &c., may be also usefully prescribed.

Tepid baths cause the fall of the scales, and are very useful in keeping the skin clean. Sea baths are very much recommended in England, and indeed in France; but they occasionally produce such such an excitement of the skin, that they are obliged to be substituted by simple tepid baths.

Vapour baths accelerate the circulation, and may be employed for the detachment of the scales.

When the spots are few, and very ancient, the cure is sometimes attained by covering them successively with small blisters, or by cauterizing them superficially with a solution of chlorine, or the nitrate of mercury diluted.

Stimulating applications are generally proper when it is of advantage to excite the skin, and this is often the indication in lepra; but it is oftentimes not until after several trials, that it can be determined which application may be best suited to any individual case.

3°. The same principles should direct the therapeutist in the administration of *internal* remedies. Those whose action is most marked in ancient lepra are in general very energetic, and it is desirable to have recourse to them as seldom as need be.

The decoction of dulcamara (℥ij. to a pint) has been recommended, in the dose of from half, to an ounce and a half daily, by Dr. Crichton. In larger doses it produces vertigo, without having any increased action on the skin. The extract is less powerful than the decoction, and may be added to it in the cases of young robust subjects. Purgatives were much employed formerly, but are not so in the present day. These remedies, assisted by the use of the tepid and vapour bath, have cured, in a month or six weeks, lepra which had resisted all other measures. The tinct. cantharid., in the dose of from

five to thirty drops, has caused the disappearance of lepra, when it has not been very ancient or extensive. The dose has been carried to sixty or eighty drops, watching always the effects it may produce. This has, of all the energetic remedies employed in lepra, the most marked effect on the skin; but it is liable to cause, insidiously, chronic inflammation of the digestive organs and urinary passages.

When the leprous spots are neither painful nor much inflamed, the use of arsenical preparations has been advised, which, according to Willan, Bateman, and others, tend to stimulate the skin. Fowler's solution is the form most commonly used, in the dose of four or five drops a day. This may be gradually increased to fifteen, divided into four doses, and should be persevered in for some months. Some practitioners have carried the dose to fifty or sixty drops, but such hazardous practice usually causes acute or chronic inflammation of the digestive or respiratory organs. The beneficial effect of this preparation has been several times proved by Willan, Bateman, Mr. Plumbe, &c., and I have myself also witnessed it; but must say I consider external applications far preferable. It may be as well to repeat, that the administration of such active medicines requires much circumspection, joined with constant vigilance. If, during the administration of this remedy, the patient should complain of tension, stiffness, or swelling of the face, heat or shootings in the œsophagus or mouth, these symptoms, even when there does not exist any appreciable derangement of the functions of the stomach, indicate not only that the dose has been carried far enough, but that it ought to be decreased. If the tongue becomes red at the point and edges, if thirst and slight erythema of the face supervene, and the secretion of saliva becomes abundant, the medicine should be suspended. Lastly, it should always be discontinued whenever it produces nausea, vomiting, vertigo accompanied by cough and epigastralgia. These symptoms usually diappear on the intermission of the arsenic, without requiring recourse to the lancet. The arsenical solution of Dr. Valagin, that of Dr. Pearson, and of Dr. Lefebvre, and the arsenical pills of the Edinburgh Pharmacopœia, possess the same advantages and inconveniences, and require the same vigilance and reserve in their employment.

Pitch, in the dose of ten, twelve, or more grains; turpentine, to that of fifteen, twenty-four, or thirty-six, have been

employed under the same circumstances as above. But, like them, they may aggravate the eruption when attended by much irritability of the skin, and produce new disorders internally.

§ 491. The deplorable inefficiency of most remedies against lepra, and the hope of substituting some more certain and less dangerous means for those already known, has given birth to a crowd of essays and experiments, for the most part empirical, of which it is only necessary to give a summary of the principal results.

Antimony, and its sulphuret, sometimes produce amelioration, but never the cure of this disease.

The utility of mercurials has been exaggerated by Mr. J. Wilson. Small doses of an aqueous, or alcoholic solution of the corrosive sublimate, are the best of all these preparations. Calomel, as a laxative, is beneficially employed in *L. vulgaris*, but causes salivation so rapidly when it becomes absorbed, that this must be looked upon as one of its disadvantages.

The decoction of *daphne mezereum*, employed by Pearson in several cases of lepra, has procured temporary relief, but not a permanent cure. Its effects are more marked, however, than those of guaiacum, or sarsaparilla. Mezereon may occasion vomiting, hypercatharsis, and inflammation of the stomach and larynx; it causes heat and violent pain in the throat. This drug is less active administered in the form of syrup; some give it as an adjunct to arsenic. The liq. potassæ of the London Pharmacopœia, in the dose of twenty or thirty drops; the aqueous extract of the white hellebore, in doses of from two to four grains; different preparations of the ranunculæ, of the *rhus radicans*, *toxicodendron*, &c., have sometimes produced amendment in the leprous spots, when numerous and much inflamed, and without causing any particular derangement of the digestive organs. Nevertheless, the immoderate and inconsiderate employment of these kind of medicines easily converts them into true poisons.

Experiments, subsequent to those of Dr. Lettsom, go far towards confirming what he said of the advantages obtained from the use of the decoction of the bark of the pyramidal elm; but it is seldom thought of now in the treatment of lepra.

§ 492. Further researches, then, must be prosecuted in the treatment of lepra. They should more particularly be directed to extending the domain of external medication, and restraining the employment of internal remedies, which are without

efficacy unless violent, and, on the other hand, are the more dangerous as they are the more active.

Lastly, it may be remarked, that a sober, regular mode of life, habitual use of white meats and fresh vegetables, ripe and juicy fruits, and milk, tend to favour the action of the different remedies enumerated; and which must, in turn, be had recourse to in so obstinate a disease, when it is not judged prudent to abandon the case to itself.

§ 493. A great number of cases have been published under the name of *lepra*, but most of them differ from the squamous inflammation, the subject of this article. On the opposite side, some cases of well-characterised lepra have been described under other names. Alibert has given two examples, as *dartre furfuracée arrondie*, and M. Marcolini has detailed a case under the designation of *maladie impetigineuse*.

PSORIASIS.*

Syn.—*Psoriasis*, Willan. *Scabies Sicca. Dry Scall.*

§ 494. Psoriasis is a chronic inflammation of the skin, affecting one region only, or the whole surface, characterised by squamous patches of various forms and dimensions, but which have neither the depressed centres nor the raised edges of those of lepra.

§ 495. Psoriasis is met with under a variety of forms, which constitute so many species of the affection; they may be reduced to four principal:

1°. (*P. guttata*, W.) One variety appears on one or more regions, or over the whole surface of the body, in the form of a certain number of small, distinct, irregular squamous spots, of two or three lines diameter, the appearance being something similar to that produced by drops of water sprinkled over the body. Such is the origin of the epithet employed by Willan to designate this variety. Each of these squamous patches is announced by a slight, solid, red elevation, of the size of a pin's head, the summit of which is soon covered by a dry white scale. These spots are round, prominent and lenticular, and separated from each other, at first, by considerable interstices. The centre of a spot is always more elevated than its edges; the healing commences at the centre, and thence extends to the circumference; the middle of the

* Willan, *art.* Psoriasis.

spot, formed by healthy skin, or the colour of which only is altered, becomes accidentally depressed. During the progress of the cure, the spots are transformed into segments of circles of various dimensions. The spots of *P. guttata* are generally more inflamed than those of lepra, and of a more animated red. When the epidermic scales are removed, the reticular body appears red and irritated. The spots may be confined to the face, trunk, or limbs, or they may be disseminated over the whole surface of the body, and may appear simultaneously or successively. In children their development is more rapid than in adults. They are very numerous on some points, and rare on others ; on the limbs they are numerous, according to the extent they occupy. This variety is most frequently seen in autumn, and sometimes spontaneously disappears during summer. It may thus alternately appear and disappear for several successive years. After its cure, the skin presents, for several weeks, small spots of a brownish grey on the parts which it has occupied.

2°. The spots of psoriasis may be elongated and slightly twisted spirally (*P. gyrata*, W.), or rather, disposed in longitudinal bands, traversed by superficial lines. These patches, which are observed on the trunk and limbs, become the seat of a furfuraceous desquamation. Like all forms of psoriasis, this undergoes marked remission during summer, and is nearly always exasperated in the autumn.

3°. The patches may be still larger, and of very various and irregular forms and dimensions, scattered over different regions of the body, upon which they multiply and become confluent (*P. diffusa*, W.) This variety, like *P. guttata*, is commonly announced by small solid elevations, very numerous, and somewhat papulous ; upon the summits of which are formed small, thick, white, dry scales. The intervening skin becomes inflamed and squamous ; the spots extend and unite, their surface is red, and often divided by dry, linear, and painful fissures. On the legs and forearms the patches sometimes unite, and form one large plate only, which either covers the whole limb, or is disposed in large bands, according to the length of the limb affected. Instead of squamæ, in this case, small yellow furfuraceous scales only are distinguished on the skin, the colour of which approaches that of the farina of mustard. When the scales have been removed by lotions, baths, vapours, &c., the skin beneath appears smooth, shining, and inflamed. The patient feels in the affected parts a burning pain and pungent itching, which is

increased by the heat of the bed, and all causes which raise the temperature of the body. The squamous patches of *P. diffusa* more frequently show themselves on the limbs than on the trunk, and sometimes diappear from one region to show themselves on another. Lastly, the different form and disposition of the patches does not alter the nature of the disease: *P. guttata* may be frequently seen on the trunk, while *P. diffusa* occupies the limbs of the same subject.

4°. Whether it has commenced by small distinct spots, as in *P. guttata,* or large confluent patches, as in *P. diffusa,* when psoriasis has existed some months or years, particularly if developed in old persons debilitated by misery and the abuse of spirituous liquors, or rather the chronic affections produced by it, the redness of the skin diminishes beneath the scales, and the tissue of this membrane becomes indurated and tumefied; the patches are covered with dry, hard, thick, white scales; the skin is stiff and tense, yields with difficulty to the motions of the limbs, and numerous fissures, of greater or less depth, traverse it in various directions, (*P. inveterata,* W., *P. agria* of the ancients.) *P. inveterata* may extend over the whole body, or be confined to some particular region. When general, the skin seems to be covered wholly by a new envelope, formed of whitish scales, and the surface has a peculiar appearance, which some pathologists have compared to the bark of old trees. This led Alibert to name this variety of psoriasis *dartre squameuse lichenöide.* When the disease has arrived at this degree, the production of scales is so abundant, that a considerable quantity is found every day in the patient's bed, and his clothes always filled with them. These scales are sometimes a line in thickness; the fissures get deeper and deeper, bleed, and sometimes suppurate, the discharge drying under the form of linear crusts. The skin itches much, particularly at night. Its functions are interrupted, or suspended; but pulmonary transpiration and the secretion of urine become more abundant. Lastly, in a more advanced stage of the disease, the epidermis is detached from more or less considerable surfaces of the back, lower limbs, and nates. The skin becomes excoriated in many places, and the patient becomes a prey to the most acute pain. When inveterate psoriasis is confined to a particular region, the skin undergoes real hypertrophy, and is sometimes a quarter of a line thicker than in its natural state. In other respects, the disease presents the same phenomena as general psoriasis. The duration of psoriasis varies from some months to several years; it,

in general, bears a direct ratio to the number of patches, the depth of the alterations of the skin, and the age of the patient.

§ 496. Independently of the remarkable difference which this inflammation presents, in sometimes consisting of small isolated spots, or large scaly patches, being, at times, confluent, and having fissures, &c. it offers other peculiarities, according to the region on which it is developed:

1°. Psoriasis *of the scalp* rarely exists independent of that of the face, or of general psoriasis. It sometimes causes inflammation of the bulbs of the hair, which falls off from different points.

2°. Psoriasis *of the face* is often consecutive to that of other parts; yet it may exist on the face alone. The patches by which it is characterised are red, inflamed, and furfuraceous, rarely covered by large scales. The subcutaneous cellular tissue is generally tumefied, particularly if the disease is of long standing and inveterate. Psoriasis may be confined to some particular part of the face; one of the varieties best known is that affecting the eyelids. It is characterised by scales, observed at the angles of the eyes, and on their lids, which become stiff, tender, and fissured. In children, the eyebrows and eyelashes sometimes drop off. This variety appears to have been known to Galen: "*Psoriasis autem exterius est; prosophthalmia internam palpebram superiorem præcipuè afficit.*"

The lips may also be affected with psoriasis, even when all other regions of the body are exempt. The epithelium thickens, becomes cracked, and is detached in pretty large scales. These often remain adherent at the centre when the edges have been loose for some days. A new epidermis is formed beneath the scales; but in the course of some hours, cracks in its turn, and falls, and is replaced by another, which undergoes the same process. This affection is usually tedious and obstinate, and is very distinct from another inflammation of the lips, also accompanied by fissure and desquamation of the epithelium, which is produced by cold, supervening at the close of some acute disease. The duration of this latter affection is a few days only, while that of psoriasis is long and indeterminate. The causes of psoriasis of the lips are frequently obscure. I have known it occur in two great speakers who had the habit of biting their lips.

3°. Psoriasis *of the trunk* very rarely exists without that

of the limbs. When inveterate, the scales are commonly larger and thinner than those on the extremities.

4°. Psoriasis *of the scrotum* often runs into the *inveterate* stage; it is then attended by acute itching, painful fissures, and large excoriations. It may exist independent of a similar affection on any other part. I saw recently a case of *P. guttata* of the scrotum, characterised by small prominent patches, disposed parallel to the line of the raphè. In children, the small circular spots of *P. guttata*, developed on the scrotum and margin of the anus, have been mistaken for syphilitic spots and tubercles.

5°. Psoriasis *of the prepuce* is often attended by thickening of the skin, and sanguinolent painful fissures, which may be followed by a slight engorgement of the lymphatic glands of the groin. This variety is usually very obstinate, and sometimes requires the operation for phymosis to be performed. It is important that these spots should not be confounded with syphilitic disease.

6°. Lastly, there are two other varieties of psoriasis which I have observed on the hands: 1°, *Palmar* psoriasis (*dartre squameuse centrifuge*, Alibert,) is announced by small, solid elevations on the palm of the hand, on the summits of which are dry, white epidermic scales. These white points are soon surrounded by small reddish circles, upon which the epidermis becomes dry, and detached in a circular shape. Around this first circle a second is formed, which operates a similar desquamation. These circles becoming more and more eccentric, may thus extend over the whole palm of the hand, and the same kind of eruption is developed on the palmar face of the fingers. The parts affected are the seat of much itching, which is always increased on the exposure of the part to heat, placing the hand in warm water, and even by repeated motion of the fingers. If the patient scratches the part, the skin assumes a violaceous red tint. In a more advanced stage, fissures of more or less depth form, which correspond to the lines of the palm of the hand. The small surfaces comprised between the fissures are covered with very dense thick scales; the skin of the hand grows thick and stiff, and the mucous body beneath the epidermis is inflamed. This disease is principally observed in lemonade-makers and washerwomen, whose hands are constantly plunged in lies more or less irritating; it is seen also in tinmen and goldsmiths, whose skin is inflamed by repeated pressure,

and the contact of certain metallic substances. Palmar psoriasis is aggravated in winter, and sometimes heals during summer. The skin continues for some time shining, and of a dull red colour. This disease almost always recurs, unless the subjects of it quit their former occupation. 2°. Under the name of *grocer's itch*, a variety of *P. diffusa* has been described, which is developed in persons following this business; but it is also observed in bakers, washerwomen, and even in the more elevated classes of society. This disease commences by two or three small squamous elevations, which gradually extend over the whole dorsal face of the hand. The inflamed skin is soon traversed by dry painful fissures, particularly about the articulations of the first phalanges with the bones of the metacarpus, and the union of the carpus with those of the forearm. This variety of psoriasis is disguished from chronic confluent lichen of the hand, by the latter being constantly preceded by a considerable eruption of small papules.

When either of these varieties of psoriasis invades the whole hand, the matrix of the nail sometimes becomes the seat of chronic inflammation; the nail then thickens, curves inward, and becomes striated, and ultimately detached; a new nail is formed, which undergoes the same changes.

7°. Psoriasis of the *lower limbs* often passes into the *inveterate* stage. In this case, the legs appear as if covered by a new and squamous envelope, the aspect of which really bears some resemblance to the lichen on trees, and to which it has been compared. *Plantar* psoriasis is more rare than *palmar* psoriasis, and is not so frequently attended by fissures.

§ 497. Psoriasis is seldom complicated with other inflammations of the skin, if we except lepra and pityriasis. It has been known to coincide, however, particularly in children, with eczema *impetiginodes*, and to arrive at a high degree of development. (*P. infantilis*, W.) *Local* psoriasis is seldom complicated with internal inflammation; but at the outset of general psoriasis, and occasionally during its course, there is present an apyretic inflammation of the gastro-intestinal mucous membrane. It is from this circumstance, no doubt, that Willan and Bateman have considered, as the precursory symptoms of psoriasis, the pain of the epigastrium, lassitude, cephalalgia, and other symptoms produced by inflammation of the digestive organs.

§ 498. (c.) Psoriasis is one of the most common chronic inflammations of the skin. Of the various forms under which it may be developed, *P. guttata* is the most frequent.

In a certain number of cases this variety has borne the proportion of three to five. Psoriasis is seen chiefly in adults, between the ages of twenty-eight and thirty, and, above all, in females of a nervous and sanguineous temperament. Psoriasis also is, of all chronic noncontagious affections of the skin, that, the hereditary tendency of which is best demonstrated. The seasons have a marked influence on *P. diffusa* and *P. guttata*, the invasion generally taking place in the autumn or the spring. The influence of particular avocations seems to be confined to some local varieties of this disease. All causes, which directly or indirectly irritate the skin, may give rise to the development of psoriasis; it has been known to succeed repeated attacks of lichen or prurigo, to supervene after the application of a blister, and to follow the development of some acute cutaneous diseases.

§ 499. (D.) Psoriasis can be confounded with three diseases only, which, like it, assume the squamous form, viz., lepra, pityriasis, and syphiloid squamous diseases. There is certainly much analogy between psoriasis and lepra, particularly *P. guttata*. Both these affections commence with solid and somewhat papulous elevations; both are very obstinate; the squamous spots of each soon acquire the circular form; lastly, the squamous patches often affect the form of *P. guttata* on the trunk, and of lepra at the knees and elbows of the same patient. Thus Mr. Plumbe and Mr. Duffin have regarded lepra and psoriasis as but two varieties of the same disease. Although others may hold this opinion, it is not of the less importance to point out the characters which distinguish the two from each other. The spots of *P. guttata* are always smaller, and generally closer together than those of lepra; their edges are not so elevated, nor their centres so depressed, as in the latter disease; in psoriasis the inflammation of the reticular body is more acute, communicating a more animated red tint to the scales, which are also more adherent and less shining* than those of lepra. There is a more marked difference between the latter and *P. diffusa*. The spots of this variety are irregular, and not depressed in the centre; those of lepra are perfectly circular; and even when several coalesce, their circular disposition is still indicated by the arcs of circles which are distinguished at the circumference of the group. Syphiloid scales differ from psoriasis by their having copper-coloured areolæ; the scales being thin

* The shining here alluded to, is that peculiar appearance of the stone called *cat's-eye*.

and less distinct, by their centres being sometimes occupied by a very minute pustule, soon followed by a lamellous crust; they have an evident tendency to ulcerate, are not accompanied by itching, and are frequently attended by syphilitic affections of the conjunctiva or pharynx, exostosis, &c. They also heal rapidly under the administration of mercury, and particularly of the deuto-chloruret. Lastly, their disappearance commences at the circumference, approaching the centre gradually, upon which a small whitish cicatrix is often observed after the cure; characters and circumstances which sufficiently distinguish them from psoriasis. *P. guttata* of the scalp differs from pityriasis by the spots of the former being larger, and always presenting beneath the scales a central red point, rising above the level of the skin.

§ 500. (P.) The varieties of psoriasis designated by Willan, *guttata, diffusa,* and *inveterata,* are ordinarily very obstinate, and more intractable than lepra. *P. guttata* is, in general, less grave than *P. diffusa,* which, again, is not so intractable as *P. inveterata:* the last is often incurable. When the cure of psoriasis takes place, it operates at first on one, or several points, and extends from them to the other regions affected; the approaching cure is announced by the colour of the patches fading away. When *P. diffusa* or *P. inveterata* are approaching a cure they assume the form of *P. guttata:* the fissures of the skin disappear, the inflammation of the reticular body gradually decreases, the altered epidermis is replaced by one less thick, dry, and friable, and, after several successive desquamations, the skin, at last, has an epidermis quite similar to that in the healthy state.

§ 501. (T.) The treatment of psoriasis should be conducted on the same principles as that of lepra; the remedies must be varied according to the more or less inflamed state of the skin. When *P. guttata* is recent, and developed in adults, bloodletting to greater or less extent is proper. I am, at this time, in possession of a number of facts which prove that bleeding is always beneficial. Messrs. Duffin, Wallace, and Graves, have made the same observations at Edinburgh and Dublin. In children, local bloodletting is preferable to the employment of the lancet. If the patient is affected with general psoriasis, the bleeding should be repeated in the neighbourhood of the inflamed points, on the neck, trunk, or limbs, in the course of some weeks, at the same time tepid baths, or, what is better, fresh emollient narcotic baths, should be employed, as they subdue the inflammation of the skin, and relieve the acute

itching by which it is always attended. By this simple and rational treatment, pursued for two or three months, the cure of *P. guttata* and *P. diffusa* in children may be attained.

In adults, *douches* and vapour baths are of advantage by detaching the scales. By alternating their use with that of sulphureous baths, the cure of *P. diffusa*, when not greatly inflamed, is, at times, attained in three or four months. When *P. diffusa* is ancient, the irritating plan may be tried, by frictions with the stibial ointment; these are useful even in cases of *P. inveterata*, though in this variety, if the alteration of the skin is deep, it is almost always incurable, at least, in old subjects.

P. inveterata is always ameliorated by the use of emollient and narcotic baths, by vapour baths, or by *douches*, the employment of which causes the fall of the scales. Local bleeding also may be had recourse to from time to time. In old persons who have this form of the disease, and whose skin is thick, fissured, and indurated, nearly all over the body, the treatment may be confined to the palliative; this appears more especially to be preferred, when the disease is developed in an individual, who will certainly have a return of it, from the nature of his occupation. Patients with inveterate psoriasis have been known to experience an amelioration of their state, after having used more than a 150 *douches*, or vapour baths, and having submitted to the most active internal treatment. Others have been attacked with erysipelas of the face, or have suffered more or less seriously.

§ 502. Some, in whose therapeutic views I do not participate, recommend that psoriasis, and some other chronic affections of the skin, should be treated internally, (instead of by external measures,) with certain remedies, the slow and tedious action of which seems still more dangerous, from psoriasis being frequently complicated with chronic disease of some part of the digestive apparatus. In the treatment of *P. diffusa* and *guttata*, it has been advised to administer daily, for some months, an ounce of Epsom salts, two drachms of the subcarbonate of potash, or calomel and jalap, &c., so as to produce several alvine evacuations in the course of the day; the patient to use at the same time tepid baths, taking care to suspend the use of purgatives immediately on symptoms of permanent gastro-intestinal inflammation arising. This very ancient practice has been lately revived under the name of the *Hamiltonian method*, and appears more especially applicable to cases of psoriasis of the face and scalp. The

deuto-chloruret of mercury, in the dose of ¼ grain per day, and the sulphuretted sulphite of soda gradually carried to ʒj doses, have also effected the cure of psoriasis.

In the treatment of the different kinds of psoriasis, and, in particular, of the inveterate form, it has also been recommended to employ tr. cantharid., gradually increased from five to sixty drops a day, continuing its use for two, three, or four months, until it operates a favourable change on the state of the skin, unless derangement of the digestive or urinary organs should supervene. Arsenical preparations have also been advised, but their effects must be watched, and their use suspended from time to time. It is certain that the cure of psoriasis has followed the use of these remedies; but it is not less certain that the majority of these cures has been but temporary; that the relapses have occurred the following winter; and that this has happened more particularly among the lower classes; lastly, that but few cases of *P. inveterata* have experienced any amelioration, notwithstanding the continued use of tr. cantharid. or of arsenical preparations for five or six months. There does not appear much rationality in subjecting a patient with psoriasis to the arsenical treatment, with the faint hope of producing a temporary improvement, and the certainty of causing some injurious effect of the internal organs, more irritable than the skin, and upon which these powerful remedies exercise a more direct influence.

To resume: *P. diffusa* and *P. guttata* may be successfully treated by medicines of a much less dangerous tendency; and a palliative treatment alone, consisting of emollient and narcotic baths, seems to me applicable to *P. inveterata*, when developed over the whole surface of the body, in persons belonging to the lower classes.

The local varieties offer the same curative indications as general psoriasis; local bleeding, lotions, baths, cataplasms, emollient and narcotic unctions, are always useful when the skin is red, painful, and inflamed. In *palmar* psoriasis, simple baths, or those of chamber lie, vapour baths, *douches*, &c., are useful. When it is produced by some external cause, the first indication is to remove the patient from its influence. Psoriasis of the lips is usually very obstinate; sometimes desquamation is rendered more or less abundant, by anointing the parts, night and morning, with some soothing salve.

§ 503. Psoriasis is so common, that it is astonishing that, up to the present time, so few cases of it have been published.

Some cases of *dartres sêches*, inserted in the periodicals, ought to be called psoriasis, and others *lichen* or *lepra*. Some cases of *dartre furfuracée*, published by Alibert, are true psoriasis; the *dartre squameuse lichénoide* of the same author, is only the inveterate psoriasis of which Schenck* formerly published a case.

PITYRIASIS.†

Syn.—*Pityriasis*, Willan. *Dandriff.*

§ 504. Pityriasis is a chronic superficial inflammation of the skin, characterized by small red spots, often scarcely perceptible, followed by a permanent furfuraceous desquamation.

§ 505. The history of pityriasis has been hitherto obscured by false connexions; for, though Willan and Bateman have not, like other writers, described under this name the *furfuraceous desquamation* of the scalp consecutive to lichen, psoriasis, lepra, chronic eczema, &c. they have fallen into the grave error of considering pityriasis as an affection of the pigment of the skin (*chloasma, maculæ, hepaticæ*, &c.), which is itself followed by furfuraceous desquamation, but which essentially differs from the chronic and superficial inflammation constituting pityriasis.

§ 506. (s.) Pityriasis may shew itself on any region of the body, but is most frequently observed on the hairy scalp. Persons attacked with *pityriasis capitis* ordinarily experience pretty acute itching, which causes them to be constantly scratching or rubbing the head. By this, they detach from the scalp a whitish powder, formed by minute epidermic scales. If friction is repeated several times a day, either with the hand or by a brush, it always gives rise to this furfuraceous desquamation, which is more or less abundant, according as the disease is confined to a particular part of the scalp, or extends over the whole of it. If some tufts of hair are removed, and the skin examined shortly after the development of pityriasis, small, irregular, red superficial patches are observed disseminated over the scalp, beneath the scales. The skin is shining, dry, and rather rough to the touch. This inflammation is rarely carried to a higher degree; I have,

* Schenck, lib. v. *De Universali Furfuracea Corporis Affectione.*

† Willan, art. *Pityriasis.*

however, known patients to complain of a sense of tension and stiffness in the skin. The epidermis, indented in several points, becomes detached in very thin, small, furfuraceous scales, most frequently circular, and beneath which a new epidermis is formed. This soon undergoes the same process, and the augmented size of the scales is generally the only appreciable change observed to follow these successive desquamations. In infants who have but little hair, and old people who have lost most of it, the different alterations of pityriasis are more easily observed. It should be remarked too, that the small red spots spoken of are not very distinct, except on the points where desquamation has been recently established. After several successive desquamations, the skin, in lieu of the red tint, has, on the contrary, a more dead-white than in its normal state. The duration of pityriasis of the scalp may be very long; when the cure is approaching, the inflammation of the reticular body gradually subsides, the skin becomes covered by a smooth shining epidermis, and cutaneous transpiration is re-established.

Pityriasis *capitis* may coincide with other chronic inflammations of the scalp. It often accompanies the fall of the hair; and may supervene during convalescence after acute, or at different periods of chronic diseases.

§ 507. (c.) Pityriasis *capitis* is frequently observed in young children on the superior part of the forehead and temples. A similar affection is occasionally seen on the scalp and eyebrows of persons of advanced age, without any probable cause being assignable.

§ 508. (d.) Pityriasis has been confounded with several diseases attended, or followed, by furfuraceous desquamation. The small spots which characterize it differ from those of psoriasis *guttata* by not being so large, and by the latter always presenting beneath the scales a central red point, surpassing the level of the skin. The squamous plates of lepra are much larger, orbicular, and shining,* and are also depressed at the centre; in *pearly*† ichthyosis, the fall of the epidermis is not followed by inflammation of the reticular body; the desquamation consecutive to lichen and chronic eczema is preceded by papules and vesicles; lastly, freckles and hepatic spots differ from pityriasis, by the desquamation which they sometimes offer being the consequence of an

* See note, page 240.

† *Nacrée*, Auth, having the appearance of mother-of-pearl.

alteration in the pigment of the skin. The *dirt* sometimes observed on the scalp of new-born children consists of a yellowish, hard friable matter, usually deposited, in greater or less quantity, on the anterior and superior part of the head; but this dirt is not an epidermic production, like the scales of pityriasis, and its formation is quite independent of chronic inflammation of the reticular tissue of the skin. This remark is applicable also to the dirt observed on the scalp of old people who are negligent of their persons.

§ 509. (P. and T.) It is difficult to foretell the duration of pityriasis; it varies from a few weeks to several years. In bald individuals, saponaceous lotions to cleanse the surface of the scalp, and decoctions of bran or poppyheads with or without the addition of the acetate of lead to diminish the itching, have been used with success. If the head, is covered with hair, we must content ourselves with cleansing it with a light brush. Purgatives have been recommended, with the view of causing a revulsion temporarily towards the intestines.

§ 510. The different diseases which may be complicated with pityriasis require appropriate treatment to be adopted.

This inflammation is of itself but of slight importance.

LINEAR INFLAMMATIONS.

§ 511. This form of inflammation is characterised by *linear divisions* of the skin, not the effect of external violence.

These linear divisions may be consecutive to several cutaneous phlegmasiæ; they sometimes supervene on erythema and chilblain; they are often observed in old confluent lichen, and in psoriasis *inveterata;* but in some cases they form quite independently of any preliminary affection. They then assume two particular forms, known under the names of *fissures* and syphilitic *rhagades.* The history of the latter belongs to that of syphiloid diseases in general.

FISSURES.

Syn.—*Fissura. Cracks. Chaps.*

§ 512. Under this term are designated linear divisions of the skin, or of the mucous membranes continuous with it, the development of which is independent of the action of cutting instruments, &c.

Fissures are commonly seen on the palms of the hands,

soles of the feet, between the toes, at the edges of the nostrils, on the lips, and at their commissures; on the eyelids, nipples, prepuce, vulva, and anus.

§ 513. (s.) The term *chap* has been more particularly applied to radiated or linear *cracks*, more or less deep, which are observed on the *hands*, and more rarely on the *feet*, especially during winter. This affection, more inconvenient than serious, must have been known to the ancients, whose sandals, open on all sides, protected their feet neither from cold nor dust. Fullers, from the fœtid urine they use in bleaching, and in getting the grease out of the tissue of the wool; bricklayers, who use quick-lime; miners in lead and copper; forgers, and braziers, are all very liable to them.

Hands affected with chaps become hard, *scabrous*, and dry, and are always closed to a certain degree, and cannot be opened without causing pain and the cracks to gape; these being most frequently situated transversely on the palmar face between the thumb and index-finger. The skin is cracked through its whole thickness; the edges of the chaps are hard; and the bottom of the wound is red, and occasionally suppurates.

Chapped *feet* are more frequent among people who go barefooted, or those who, not wearing stockings, neglect cleanliness. Chaps, of more extent than depth, are observed on the heels, in the folds of the sole, and between the toes.

The *lips* too are liable to fissure; the most common cause of this slight affection is extreme cold, or heat, and dryness of the respired air.

The *nipples* in females suckling for the first time are often fissured, when much irritated by the repeated exertions of the infant. This irritation is sometimes so great as to oblige the mother to give up nursing, each application of the child causing the most intolerable pain, attended by insomnolency and fever. Circular fissures have been known to become so deep around the base of the nipple, as to detach it entirely, giving rise to considerable ulceration.

The skin of *new-born infants* is frequently affected by fissure round the genitals, at the fold of the thigh, in the neighbourhood of the joints, neck, &c.; and in those parts of the skin, generally, where there are folds and wrinkles.

In pregnant women, during the latter months of gestation, when the integuments have undergone great tension, fissures sometimes arise on the belly. They supervene also on the same part, and on the legs in hydropics.

The fissures round the margin *of the anus*, to which some have exclusively given the name of *rhagades*, ordinarily depend on chronic inflammation of the rectum, or on inordinate dilatation of this aperture, caused by the excretion of hard and voluminous fæces. They are sometimes complicated with spasmodic stricture of the anus.*

Fissures of the *prepuce* are occasionally produced by the erection of the penis, which distends and ruptures the prepuce, if the aperture is narrow.

Fissures of the vulva are almost always consecutive to lichen *agrius*, or eczema *rubrum*, developed on the genitals; they are observed, however, to follow laborious parturition, independent of all other causes.

§ 514. (D.) Fissures cannot be confounded with exanthematous, vesiculous, bullous, or other inflammations. When they coincide with, or supervene in the course of, these phlegmasiæ, the latter are always rendered distinct by the elementary forms proper to them. The skin, however, always appears erythematous before the formation of simple fissures.

It is not so easy to discriminate between fissures and syphilitic rhagades of the hands and feet. I have remarked, however, that the latter are nearly always attended by squamous spots of a copper tint; that rhagades of the nose and lips are often complicated with syphilitic tubercles or pustules, having a copper-coloured areola; lastly, that the venereal taint of rhagades of the margin of the anus, or genitals, is commonly recognised by the existence of some syphilitic complication.

§ 515. (P.) The fissure of new-born infants is a very simple disease, those of the nipples, anus, and soles of the feet, are sometimes rather difficult of cure, the patients not having it in their power to remove the exciting cause.

§ 516. (T.) The treatment of fissures supervening in lepra, psoriasis, syphiloid disease, frost-bites, &c., is pointed out in the chapters dedicated to these diseases. Fissures of the *feet* and *hands*, independent of these complications, should be combated by baths of chamber lie, and the ointment below.† The hand or foot should be smeared with this ointment, and an oiled silk sock or glove should be worn night and day; this contributes much to restore the lost softness and suppleness of the skin.

* Boyer, *Traité des Maladies Chirurg.* tom. x. p. 125.—Delauney, *Thèse sur les Gerçures de l'Anus.* 4to. Paris, 1824.

† ℞ Beef marrow ℥j. Fat of calf's kidney ℥ij. Honey and olive oil a.a. ℥ss. Camphor ℥ss. Mix, and melt slowly.

Lotions of decoction of mallows and poppyheads, with the addition of a small quantity of acetate of lead, have been employed in fissures of the breast. Light friction with quince mucilage, oil of almonds, cocoa-nut oil, and other analogous substances, combined with small portions of opium, when the pain is acute, washing the breast before applying the child to it again, is also useful. These measures, however, are not very efficient, unless the mother will consent to wean the infant for some days; without this precaution, new fissures will surely follow. The breasts may be relieved by means of the air-pump, or by exposing them to the vapour of boiling water. When the fissures are healed, it will be proper to endeavour to restore the secretion of milk.

Before delivery, the formation of fissures may be prevented by slight preparatory suction being exercised on the nipple, this being previously covered with a gum-elastic cap.

Fissures of the *prepuce* require the operation for phymosis, when caused by the distention and chafing of this part in erections of the penis.

Those of the *anus* must be treated with soothing suppositories, and emollient ablutions and baths. When complicated with spasmodic stricture of the rectum, this commonly yields to gelatinous injections, but is cured more completely and rapidly by the double *débridement* proposed by M. Boyer.

Fissures of the legs, complicated with petechiæ and œdema, are successfully treated by the horizontal position of the limb, compression, and even bloodletting, when the skin is much inflamed.

Fissures of *the toes* require the feet to be frequently washed, and a small piece of fine lint to be placed between the toes, and frequently renewed.

The superficial fissures of new-born children heal rapidly under the employment of baths, cleanliness, and afterwards powdering the inflamed parts with lycopodium.

§ 517. The periodical publications and works of accoucheurs contain numerous cases of fissured nipples, rectum, legs, soles of the feet, &c.

GANGRENOUS INFLAMMATIONS.

§ 518. Cutaneous gangrenous inflammations are characterised by rapidly terminating in *gangrene*, that is, mortification, to a more or less considerable extent, of the skin.

§ 519. These inflammations are two in number, malign

pustule, and plague-spot. Some pathologists add anthrax, placed in this work among the furunculous inflammations. Malign pustule has likewise been described under the name of *charbon malin*, and sometimes also a gangrenous affection of the cheeks, which spreads from the mucous membrane of the mouth to the skin of the face.

§ 520. This class of diseases is announced by the appearance of a small vesicle, beneath which a deep induration is formed, and quickly becomes mortified; it is surrounded by a very large erysipelato-phlegmonous areola.

Very grave symptoms usually precede the development of pestilential carbuncle, but appear in the latter stages only of malign pustule.

§ 521. The comparative study of the alterations constituting malign pustule, plague-spot, and the carbuncle of animals, has not yet been carried to any satisfactory extent; the two former have hitherto been the objects of but few anatomical researches. The carbuncle of inferior animals is characterised* by an extremely voluminous tumour, not circumscribed, and yielding to pressure, giving the crepitation of emphysema to the touch, and exhaling a peculiar, putrid odour; the centre of the tumour is black, as if *burned* or *charred;* its circumference is infiltrated by a brownish or yellowish fluid, and a very fetid gas; the tissue of the centre is usually softened, and its surface covered by ecchymoses following the course of the blood-vessels. The blood contained in the heart and great vessels, often liquid in the veins where it is very black, sometimes consists of a yellowish or dark coagula, very soft and gelatinous. The lungs, covered with small superficial ecchymoses, present also deep blackish spots, formed by a kind of local engorgement. The internal surface of the stomach and intestines presents here and there dark projecting points, near the course of the blood-vessels, formed by the effusion of blood beneath the peritoneal covering, or between the two inner membranes. The villous coat of the stomach is sometimes ecchymosed, the liver and spleen engorged, and emphysema is at times observed in the neighbourhood of the kidneys; the nervous system is found in a healthy state.

In malign pustule the alteration of the skin and subcutaneous cellular tissue has much analogy with what takes place in carbuncle, as will be hereafter indicated; but the existence of the internal lesions, and the alteration of the blood, have

* Leuret, *Récherc. et Expériences sur les Altérat. du Sang*. 4to. Paris, 1826.

not been satisfactorily ascertained. Nevertheless, the similarity of the general symptoms of the two diseases can be rationally attributed only to the development of similar alterations. I say nothing relative to the carbuncle of the plague, the history of which is still less complete.

§ 522. Gangrenous inflammations are contagious, and attack indiscriminately all ages and conditions, and both sexes.

§ 523. They cannot well be confounded with any other phlegmasiæ of the skin; they alone are characterised by a vesicle, elevated on a central hard point, which quickly becomes gangrenous, and is surrounded by an erysipelato-phlegmonous areola.

§ 524. Malign pustule, abandoned to itself, is often followed by lesions which render it fatal; affections of a very grave character also precede, or accompany, the carbuncle of the plague.

§ 525. To destroy by cauterization the gangrenous points, and soft parts adjacent, and to subdue the internal affections complicated with the local one, are the two principal indications in gangrenous diseases.

MALIGN PUSTULE.*

Syn.—*Anthracia. Anthrax. Carbuncle* (of Veterinarians.)

§ 526. Malign pustule is characterised at its outset by a vesicle full of a sero-sanguinolent fluid, beneath which a small lenticular induration is formed,and this is so on surrounded by an erysipelato-phlegmonous areolary tumefaction. Gangrene softens this tumour, and rapidly extends from its centre to its circumference.

§ 527. (c.) Messrs. Enaux and Chaussier, and a number of other pathologists, think that malign pustule is always produced by the contact of carbunculous tumours, or the skins which have been removed from animals affected with them. To establish this opinion they cite the following observations. 1°. Malign pustule is most frequently seen in veterinarians, shepherds, herdsmen, tanners, farriers, &c.; that is, *in persons having the care of beasts, or handling their skins.* 2°. It is seated exclusively on those parts of the body habitually uncovered, as the neck, face, hands, shoulders,

* Thomasin, *Sur le Charbon Malin de la Bourgogne.* 1782.—Enaux et Chaussier, *Meth. de Traiter les Moissures des Animaux, Enragé, et de la Vipère. Suivie d'un Précis sur la Pustule Maligne.* 1785.

arms, &c., or on other parts accidentally exposed. 3°. This disease is observed more particularly during carbunculous epidemics among animals.

The same pathologists suppose that the *sanguinolent serosity* furnished by the pustule is one of the media through which the disease is transmitted. A woman who had been dressing her husband's wound wiped her cheek with her fingers impregnated with this serosity; two hours afterwards, a tumour formed, which made alarming progress.*

It has been stated even, that the blood of a sheep affected with carbuncle having flowed over the back of a shepherd, malign pustule was developed; and that a butcher had the disease in his tongue, from having held his knife between his teeth for a few moments, while slaying an ox which was affected by carbuncle. These observations perfectly accord with results obtained by M. Leuret, in his experiments on alterations of the blood.

And further, some persons pretend that the blood of animals, not affected by carbuncle, but otherwise diseased, may give rise, when applied to the skin of man, to the development of malign pustule; but this opinion is not well established. On this head, it is related that two butchers, of the Hotel des Invalides, were attacked with this disease, after having killed and dressed some oxen fatigued by a long journey, but *in other respects perfectly healthy*.

I am of opinion that malign pustule may sometimes be developed in the human subject *sporadically*. Without doubt, the nine cases of *gangrenous pustules* published by Bayle,† were cases of true malign pustules. This accurate observer remarks, "que presque tous les malades étaient bien assurés de n'avoir touché les restes d'aucun animal mort du charbon, et que la plupart de ceux qui avaient usé de quelques alimens tirés du règne animal, étaient bien certains de n'avoir pas mangé de viande suspecte." M. Davy-la-Chevre‡ reports six cases of malign pustule, in none of which it is said that the disease was contracted from any person or animal affected with carbuncle. Though a rare disease in Paris, malign pustule is very common in some parts of France, as Lorraine, Franche-Comté, and, above all, in Burgundy.

* Thomassin, p. 81.

† Bayle, *Considerat. sur la Nosologie, la Med. Observat. et la Med. Pratique. Suivies d'Observations pour servir à l'Histoire des Pustules Malignes.* 8vo. Paris, 1822.

‡ Davy-la-Chevre, *Dissert. sur la Pustule Maligne.* 4to. Paris, 1807.

§ 528. (s.) If matter is inoculated from malign pustule, the time which intervenes between the moment of infection and the appearance of the gangrenous inflammation of the skin, varies from a few hours to five or six days. The formation of the *vesicle* is announced by a rather sharp itching, followed by the appearance of a small red spot, resembling a fleabite, whence the vulgar name *puce maligne*, by which it is known in Burgundy. Some hours after its appearance, this vesicle, from the size of a millet-seed, acquires a large volume, and bursts spontaneously, if the itching has not caused the patient to rupture it by scratching. Soon, that is, in twenty-four or thirty-six hours from the date of invasion, a small engorged, hard, and circumscribed swelling, of the form and size of a lentil, with unequal surface, is observed beneath the vesicle. A soft reddish, or livid tumour, is then observed around the central point; and this is covered by secondary vesicles, at first isolated, afterwards confluent, and filled with a reddish serosity. The central point turns brown, very hard, and insensible, and is struck with gangrene. The inflammation extends considerably, the adjacent skin becomes red and shining, and the subcutaneous cellular tissue is engorged, tense, and as if emphysematous. The diseased part loses its sensibility wholly, and gangrene makes alarming progress.

If the disease is circumscribed, an inflammatory circle, of a vivid red colour, is traced round the eschar; the engorgement, which has extended to some distance, diminishes; the patient feels a moderate warmth, accompanied by throbbing of the part; the pulse is sustained or rises, strength returns, and slight febrile reaction sometimes occurs, which soon terminates in mild perspiration; suppuration is established between the inflammatory circle and the eschar, which separates, and exposes to view the full extent of the disease.

If, on the contrary, a fatal termination is about to result, very grave symptoms are present; the pulse is small and concentrated, and there is much anxiety and debility; there is a dry, parched, brownish tongue; contracted features; dry skin; dull eye; mental prostration, syncope, cardialgia, muttering delirium, the harbingers of death.

The duration of the stages of malign pustule is very uncertain; the period of its incubation varies from an hour or two to several days. The second stage, comprising the formation of the primary vesicle, lasts from twenty to thirty hours. The third, marked by the development of the central induration and areolary tumefaction, is usually completed in a few hours.

Lastly, the fourth stage, announced by gangrene and other local and general phenomena, more or less grave, varies from one to several days, according to the way in which the disease has a tendency to terminate.

The progress of malign pustule is, at times, so rapid, that death takes place in eighteen or twenty-four hours; in favourable cases, on the contrary, the gangrene is confined to its incipient state.

§ 529. Malign pustule offers some peculiarities, according to the region of its development:

1°. *On the face,* it is not only accompanied by phlegmono-erysipelatous inflammation of the part, but the engorgement has been known to extend to the neck and anterior part of the chest.

When seated on the *eyelids,* this disease causes enormous and painful tumefaction of the face, severe cephalalgia, delirium, sometimes loss of the eye, and always eversion of the palpebræ, which, sometimes, afterwards consist of the orbicular muscle and conjunctiva alone. When the upper eyelid only is destroyed, the lower one is occasionally carried slightly upwards, from the numerous efforts which the patient makes to protect the eye from the light; there is an abundant flow of tears, the transparent cornea becomes inflamed and opaque: an operation resembling the rhinoplastic has been proposed, to remedy this defect. On the chin, lips, lobe of the nose, and on all points where muscular fibres are complicated with the tissue of the skin, the gangrene does not penetrate so deeply; however, when malign pustule occupies the lower lip, this may be destroyed to a considerable extent, either by the disease, or caustics employed to arrest its progress; this deformity is attended by an involuntary and continual flow of saliva.

2°. Malign pustule *of the neck* is accompanied by phlegmono-erysipelatous inflammation, rendering deglutition and respiration difficult. There is frequently also salivation, epistaxis, tumefaction of the face, &c.

3°. Situated on the parietes of *the chest,* malign pustule is always accompanied by inflammation of the cellular tissue, which extends to the axilla.

4°. When the disease occupies the back of *the hand,* or *instep,* the inflammation extends over the whole affected limb.

§ 530. When malign pustule continues to be no longer a local disease only, unequivocal signs of gastro-intestinal irritation are observed; at least, of all complications of this affec-

tion, that with disease of the digestive organs, is the most frequent.

§ 531. In those cases, unfortunately too rare, in which the effects of the animal poison, causing malign pustule, are confined to a much milder inflammation than the preceding, and which has been described by M. Davy-la-Chevre under the name of *prominent malign pustule;* it commences by a seropurulent elevation, the base of which, hard, tense and deep, is surrounded by a phlegmono-erysipelatous inflammation. The central pustulous point is struck with gangrene; but this seldom extends beyond its original seat.

§ 532. (D.) On its first formation, and when consisting only of a hard, unequal elevation, surmounted by a vesicle, malign pustule may be confounded with the painful, inflamed tubercle produced by *gnat-bites.* But these small tumors, usually multifarious, have small, yellowish central points, easily recognisable. A boil has not at first a pustule or vesicle on the summit, like malign pustule; the latter is soon surrounded by a diffused inflammation, which is wanting in the former.

When malign pustule acquires large dimensions, and the gangrene has extended more or less considerably, this inflammation can only be confounded with phlegmonous and gangrenous erysipelas, that *gangrenous affection of the cheeks and labia** seen in children, or with pestilential carbuncle. Phlegmonous erysipelas is not preceded by vesicle or pustule, neither is it contagious; it does not become gangrenous, except from the violence of the inflammation; it is always advantageously opposed by bloodletting, which is generally injurious in malign pustule.

It differs again from the gangrenous affection of the cheeks, as the latter commences in the interior of the month, extending consecutively to the skin, and there is no reason to suppose this to be contagious.

The analogy and difference between malign pustule and the carbuncle of the plague will be hereafter pointed out.

It is in vain to endeavour to discriminate between malign pustule and the carbuncle of animals, particularly that which has been designated *charbon des bêtes à laine.*† In fact, like

* Baron, *Mémoire sur une Affection Gangrèneuse de la Bouche, particulière aux Enfans.* (Bull. de la Fac. de Med. de Paris. 8vo. 1816.)—Isnard, *Essai sur une Affection Gangrèneuse, particuliére aux Enfans.* 4to. Paris, 1818.

† Hurtrel d'Arboval, *Dict. de Médecine et de Chirurgie Véterinaires.* 8vo. Paris, 1826, *art.* Charbon.

malign pustule, this carbuncle is announced by a small, hard circumscribed tumour, in the centre of which is a black point. Towards the middle, and at the circumference, phlyctenæ appear, filled with an acrid serosity. The subcutaneous cellular tissue is engorged; the gangrenous point extends, &c. Lastly, the humour which exudes applied to the human skin produces malign pustule; these two diseases then seem identical.

§ 533. (P.) Malign pustule may terminate fatally in twenty-four or thirty-six hours. However, its march, usually not so rapid, admits of being arrested. This disease is much more dangerous when seated on the head or neck, and particularly when on the eyelids, than when it occupies the limbs. A very elevated or depressed temperature contributes to aggravate this disease; in pregnant women it often causes abortion.

§ 534. (T.) Immediately the existence of malign pustule is ascertained, the affected part should be scarified and extensively cauterised. To be effectual, the scarifications should comprehend the whole of the mortified and indurated parts, but without extending beyond them. At the outset of the disease, the vesicle should be opened and the serosity absorbed by lint, and the inflamed part covered with lint soaked in liquid muriate of antimony, or by a small piece of caustic potass, maintained in its place by adhesive plaister, or an appropriate bandage. After five or six hours, this apparatus may be removed, and the eschar covered with lint soaked in some strong digestive. The following day, if no vesiculous areola is formed, and the patient experiences only slight pain, without much throbbing or acrid heat, the cauterisation has comprised the whole extent of the disease; if, on the contrary, hard tumefaction appears around the eschar, if considerable erysipelato-phlegmonous inflammation supervenes, the operation should be repeated, with the precaution of removing the mortified parts, after dividing them by a crucial incision. This treatment is applicable also when the eschar forming the centre of the tumour has become hard, compact, and impermeable, resembling leather; it should be raised so that the caustic may act on the parts not yet gangrenous, and they should then be covered by a tonic cataplasm. Although the utility of cauterisation in the treatment of malign pustule is incontestable, and this operation is always indicated when the gangrene is not circumscribed, it may be remarked that the latter is seen to suspend its ravages spontaneously.

§ 535. *Internally*, acidulated drinks or wine and water, are

the common beverages usually prescribed. Emetics and purgatives have been recommended to subdue some symptoms attributed to vitiated secretions of the primæ viæ. I have not much observed the effect of these measures against malign pustule, in which disease I have been but little disposed to prescribe them. Bleeding is generally contraindicated; I had recourse to it in a case of mild prominent malign pustule; and, I may say, without advantage. In all cases, cauterisation is far preferable.

The deformities consequent on the ravages of this disease may render other surgical operations necessary. By means of a very ingenious proceeding, M. Lallemand* supplied the defect of lost substance in the lower lip of a young woman, who had malign pustule of the face.

§ 536. The first observations made on malign pustule were very incomplete. Among those recently published, are a great many in which the primary characters of the disease are not at all described. This omission would indicate that the writers had not been consulted until the parts were already gangrenous.

CARBUNCLE OF THE PLAGUE.†

Syn.—*Plague Spot. Bubo Pestis.*

§ 537. Pestilential carbuncle is a gangrenous and contagious inflammation of the skin, announced by a vesicle, surrounded by a large inflamed areola, soon terminating in gangrene.‡

§ 538. The carbuncle of the plague causes a painful itching of the part on which it is about to be developed. A vesicle of the size of a pin's head is soon formed, filled with a yellowish serosity. This vesicle gradually rises and extends; and when it has attained the size of the nail, the epidermis breaks, the serosity escapes, leaving exposed a black surface already gangrenous. The eschar extends till it acquires the size of the palm of the hand.

Plague carbuncle is commonly solitary. If several exist near together, they are sometimes united by erythematous bands, traversing the spaces which separate them.

* *Archives Générales de Médecine.* Tom. iv. p. 242.

† Diemerbroëck, *Tractatus de Peste.* Amsterd. 1665.—Desgenettes, *Hist. Medicale de l'Armée d'Orient.* 8vo. 1802.

‡ Bateman has given, after the original designs of Dr. Calvert, four figures of this disease, representing the vesiculous and gangrenous state.

This gangrenous affection may shew itself on any region of the body. It is always preceded or accompanied by various, but very grave symptoms, which are designated collectively under the name of *plague*. When about to end favourably, the gangrene is circumscribed; an inflammatory circle limits its extent; a peculiar process operates the separation of the slough, and the general and local symptoms, at the same time, diminish. When the carbuncle acquires a large size, the arterial or venous trunks, the nerves and the bones may be laid bare, and are sometimes more or less altered in structure. In this case, the cure is very long in being brought about.

§ 539. (C.) This disease may result from local contagion. It was a carbuncle of this kind by which Diemerbroëck was affected in his left hand, after having paid a first visit to Captain Brouwer, who had several of the same kind. Commonly, however, this gangrenous affection is observed in the course of one of the stages of the plague.

It has been principally met with in Egypt, Turkey, &c. It is never spontaneously developed in France, neither has it been imported, since the plague of Marseilles, in 1720.

§ 540. (D.) With regard to external characters, malign pustule and pestilential carbuncle are very similar. To affirm, like most pathologists, that the carbuncle of the plague differs from malign pustule, by the latter being constantly produced by some external cause, while the former is always dependant on internal lesions more or less grave, would be to advance two errors at the same time.

Supposing even, that under the name of *malign pustule*, inflammations produced by external causes only, were designated, and that by the name of *pestilential carbuncle*, analogous alterations developed under the influence of internal causes were described, if the affection of the skin was the same in both cases, would it be necessary to make two separate diseases of them?

§ 541. (P.) Idiopathic pestilential carbuncle may prove fatal without being attended by the general symptoms of plague. (Diemerbroëck and Desgenettes.) Nevertheless, the carbuncle is usually symptomatic. The attendant danger is proportioned to their number and extent, and the intensity of the lesions accompanying them. When they are developed on a person sick of the plague, he usually rapidly succumbs after their appearance.

§ 542. (T.) The treatment indicated is the same as in

malign pustule. The affected parts should be deeply scarified, the mortified tissue raised, and the incisions cauterised to their full depth; the fall of the eschars being afterwards promoted by antiseptics and irritants.

§ 543. But few cases of pestilential carbuncle have been published, and for the most part the alteration of the skin has been rather indicated than described. It has been asserted, in turn, that this affection commences by one or several *pustules* (Diemerbroëck), by several *brown* or *blackish* spots (Larrey), and by a *button* or *vesicle* (Dr. Calvert.) I have adopted the opinion of Calvert as the most probable, having myself never seen the disease. Mertens, Couzier, Savarési, &c., have published interesting observations on it.

MULTIFORM INFLAMMATIONS.

§ 544. *Multiform* inflammations possess this characteristic peculiarity, that each may present itself under several phlegmasic forms.

§ 545. These inflammations are three in number: burn, frost-bite, and syphiloid disease. The two first have much analogy in their external characters. Both consist of *erythematous patches, bullæ,* or *gangrene,* according to the exciting cause being more or less prolonged and intense.

Syphiloid diseases differ from both these in their causes, symptoms, and treatment required; but, like them, they never affect any constant primary form. They present, in turn, all the elementary characters which inflammation of the skin may offer, without furnishing anything that will explain this singular phenomenon; for that erythema, bullæ, and gangrene are, in burns and frost-bites, the result of the same cause acting more or less powerfully, has been fully proved; but it is probable only that the *exanthematous patches, papules, pustules,* and *squamæ* of syphilitic diseases, are modifications of the effects of the same contagious stimulus.

§ 546. Multiform inflammations cannot be confounded with any belonging to the preceding orders. Independently of the characteristic lesions which constitute them, and which will be presently described, they are rendered distinct from other inflammations of the skin by the peculiar nature of their causes.

BURNS.*

§ 547. All alterations produced by the action of caloric or caustic upon our organs, and particularly, upon the skin, have been designated generally, as burns.

§ 548. (s.) According to their intensity, burns of the skin are characterised by *erythematous patches, bullæ, vesicles,* or by *eschars.*

1°. *Erythematous* burns (*first degree of burn,* Dupuytren,) are distinguished by a bright redness of the skin, which disappears under pressure. There is a pricking heat, and slight engorgement of the part. These local symptoms may last a few hours, or endure for some days. In the latter case, the epidermis is usually detached under the form of small scales. Superficial burns, when limited in extent, occasion no derangement of the principal functions; when very extensive, they are attended by agitation, insomnolency, delirium, and are sometimes fatal. These burns may be produced by *coups de soleil* on the hands, face, scalp, or neck. They are formed also in a gradual manner on the legs and thighs of old people, who frequently expose these parts, during winter, to the heat of a furnace, and in women who habitually use chafing dishes. These burns then appear under the form of red-brown patches, (*Ephélides ignéales,* Alibert,) and are always apyretic.

2°. *Vesiculous* and *bullous* burns (*second degree,* Dupuytren,) constitute a more intense variety of this injury; the bullæ appear almost immediately after the application of the burning body, particularly if this is in the fluid form. New vesicles or bullæ are successively formed around the first, and become more voluminous as the surrounding inflammation increases. The skin is red and tense; the subcutaneous cellular tissue is tumefied, and the pain and heat more acute than in the former variety. The serosity of the bullæ is lemon-coloured or turbid. After their rupture, the epidermis dries, shrivels, and is detached, exposing sometimes a false membrane spread over the inflamed reticular body. A new epidermis soon replaces that which has been destroyed, if the burn is not very extensive and is properly treated. But when the excoriation consecutive to the fall of the epidermis causes acute inflammation and ulceration, a sanguinolent sero-

* Moulinié, *Thèse sur les Brulures.* 4to. Paris, 1812.

sity is secreted, suppuration is retarded, and the cure is rarely effected without the formation of cicatrices.

3°. *Gangrenous* burns (*third and fourth degrees*, Dupuytren,) are attended by mortification of part or the whole substance of the skin, of the subcutaneous cellular, and other deeper seated tissues.—The milder degree of this variety is announced by greyish, or yellowish, insensible but superficial patches.—The insensibility of the skin, its horny hardness joined to its yellow or greenish colour, indicate the conversion of the whole thickness of the skin into an eschar. Bullæ are usually formed around the eschars, and beyond them erythematous inflammation extends, attended by acute acrid and burning pain.—About the eighth or ninth day, rarely sooner, often later, an eliminatory inflammation is set up around and beneath the eschar. Suppuration becomes abundant; shreds of mortified cellular tissue are discharged, giving out a fœtid odour.—When the burn is very intense and extensive, the inflammation may spread to a great distance, become excessive, and even terminate in gangrene.

§ 549. Small burns, superficial or deep, are rarely accompanied by general morbid phenomena; but extensive burns are always attended by distressing thirst and great heat; the pulse is hard and frequent; urine, scanty and reddish, &c. If the injury extends over nearly the whole surface of the body, the patient succumbs in a few days, or, it may be, hours after the accident. The pulse is contracted and frequent; the extremities grow cold, delirium and convulsions supervene; the face and trunk are covered with a cold sweat; the countenance is anxious, &c. Patients who recover from the first shock of these large burns, frequently fall victims to the consequent phlegmasiæ of the pulmonary and gastro-intestinal mucous membranes. They have been known to die even when the ulcers were quite, or nearly cicatrised.

§ 550. (A. R) In addition to those alterations already noticed, on examining subjects who have died from burns, sanguinolent and purulent effusion is sometimes found in the joints of the limbs which have been injured; sanguineous congestion of the vessels of the brain, or traces of inflammation in the serous membranes, and still oftener, of the mucous lining of the stomach and intestines.

§ 551. (C.) Burns occasioned by solid bodies are the more intense, according as these are more elevated in temperature, better conductors of heat, of greater density, and according as the application is more prolonged. Some substances, the

combustion of which is rapid, and which continue fusing or burning, as phosphorus, sulphur, resin, &c. produce large and deep burns in a very short space of time. All liquids do not scald with the same violence; those requiring to be raised to a high temperature to arrive at the boiling point, and those having a tendency to adhere to the skin, are the most injurious; such as soups, oil, fat, &c. Burns occasioned by alcohol, ether, the explosion of gunpowder, &c. are often very extensive, but are usually superficial, and thus, less dangerous.

Under the name of *spontaneous combustion*, have been designated alterations analogous to those occasioned by caloric or caustic, but the mode of production of which is still but little known.

§ 552. (D.) The erythema, vesicles, bullæ, and eschars of burns, differ from those of pemphigus, and other diseases, in their producing cause.

§ 553. (P.) The prognosis varies according to the extent and depth of the injury. Burns are more dangerous in children and old and irritable subjects, than in others. Seated on the parietes of the abdomen, thorax, or on the face, they are more dangerous than when on the limbs; yet burns of the hands and feet sometimes give rise to the development of tetanus.

The degree of injury inflicted on the skin may be at once ascertained; but that of the deeper seated parts cannot be fully appreciated till the inflammation has attained its utmost intensity, and the eschars begin to fall.

§ 554. (T.) *Erythematous* burns should be treated, from the first, by the application of cold water, or ice, and by compression.

Immediately after the accident, the injured part should be plunged into cold or iced water, and then covered with cloths kept constantly wet; these should be supported by a compressive bandage. Some surgeons anoint the part with a mixture of two parts of white of egg and one of oil. If there is much pain, some soothing balsam may be added. But I have always found the application of cold combined with pressure succeed.

In *vesiculous* and *bullous* burns, if the burnt clothes still adhere to the parts, they must be removed carefully, so as not to tear the epidermis which is raised by the serosity beneath.

The bullæ should not be punctured till the pain and inflammation begin to subside. Then one or more punctures should

be made in the most dependent part, and without raising the epidermis, which protects the skin from the action of the air. If, after some days, the dermis secretes a puriform fluid which can escape only with difficulty, the epidermis may then be removed. If suppuration is abundant, the saturnine cerate may be used as dressing, covering it with lint to absorb the pus. If there is ulceration to any great extent, these dressings must be used cautiously, lest the lead becomes taken up by the absorbents. According to Messrs. Bretonneau and Velpeau,* compression may be advantageously employed in this form of burn, as well as the gangrenous.

In the early stage of *gangrenous* burns, the same treatment may be followed; the separation of the eschars should be afterwards promoted. When the fingers or toes have been burnt so as to destroy their organization entirely, it is frequently necessary to divide the ligaments and tendons connecting them with the sound parts. If a whole limb is destroyed, amputation should not be delayed. This operation seldom succeeds when the burn extends over a large surface on other parts of the body. Amputation may be called for, when, after the detachment of the eschars, a large joint becomes exposed, or the wounds are so deep, large, and irregular, as to exclude all hope of their healing.

The cicatrisation of wounds following burns does not always take place from the circumference towards the centre. It sometimes commences at a distance from the edges, by insulated points. It should be always endeavoured to make the cicatrix of the same extent as the skin which has been destroyed, so that, after the cure, the parts may be free, and the command of their motions preserved. Skeins of cotton, tents, canulæ, and sponges, serve to prevent the contraction of natural apertures; compresses and pledgets to separate contiguous parts; burnt fingers should be fixed on a frame the shape of the hand, and gently separated from each other; by appropriate splints and bandages, contracted limbs, wry neck, &c. may be avoided. To obtain a firm cicatrix, the too luxuriant fleshy granulations must be cauterised with lapis infernalis; but some precaution is required, or the cicatrix will be thick and adherent, if the burn has penetrated deeply.

Bullous or gangrenous burns, when suppuration is abun-

* Bretonneau, *De l'Utilité de la Compression dans les Inflam. Idiopathiques de la Peau.* Paris, 1815.—Velpeau, *Mémoire sur l'Emploi du Bandage Compressif. dans le Traitment de l'Erysipele Phlegmoneux, de la Brulure, &c.* (Arch. Géné. de Med. Juillet, 1826.)

dant, should be dressed two, or even three times a day, taking care to expose the inflamed parts only partially; for this purpose the bandage of Scultetus* is preferable to the common roller.

§ 555. M. Lisfranc† employs a peculiar mode in the treatment of burns. After opening the bullæ and vesicles, he removes the epidermis, covering the inflamed skin with a dressing of serate, having holes made in it, and over this he places a compress of lint soaked in chloruret of lime, keeping the whole constantly saturated with this liquid. The preparation employed by Lisfranc corresponds in strength to three degrees of the chlorometer of Gay-Lussac. If this application occasions only slight pain, and the cure is tardy, Lisfranc increases its activity, by raising it two, and sometimes three, degrees. If, on the contrary, the contact of the chloruret produces much pain, and this continues long after the dressing, and white albuminous flakes are formed on the surface of the sore, he diminishes its strength. Its action always appeared to him to have a favourable effect.

§ 556. The *general* treatment of burns consists in combating the lesions consequent on this accidental inflammation of the skin, particularly those of the digestive organs, and the nervous irritation. In small superficial burns no change of diet is required. In those of considerable extent, a rigorous regimen, demulcent drinks, opiate emulsions, bloodletting, and the application of leeches to the head or epigastrium, are always indicated. A too abundant supply of nourishment may retard the progress of cicatrisation, and provoke the development of some more or less serious internal inflammation.

§ 557. When a large burn is situated on the trunk, the slightest movement is attended by pain. The patient should be placed on a bed constructed so as to allow of the clothes and mattress being changed, and a bed-pan used, to receive the urine and fæces without causing any painful motion of the body.

§ 558. By means of oily embrocations, oleaginous and mucilaginous baths and *douches*, combined with repeated motion, the thin bands formed by the cicatrices may be lessened and almost got rid of; but when these are very thick and rigid, it becomes necessary to divide them at their bases, if they include no tendons, and then to keep the edges of the

* Resembling the many-tailed bandage.

† *Revue Medicale*, June, 1826.

wound firmly apart, until fresh cicatrisation is entirely completed.

§ 559. Several cases of burns of the skin, published by Messrs. Molinié, Lisfranc,* Velpeau, Borot de Belloy,† &c. may be read with advantage. They make known the peculiarities which may be presented, and, at the same time, show the different applications and treatment which have been described. The very interesting observations of Marshall‡ on burns of the pharynx and larynx, those of M. Lair‖ on human combustion, and some rare cases, open to controversy, of spontaneous combustion,§ should be also consulted.

FROST-BITE.¶

§ 560. I designate collectively, under the term *frost-bite*, all alterations of the skin and subjacent tissue produced by the action of cold.

§ 561. (s.) The parts most distant from the centre of circulation, as the hands, feet, ears, lobe of the nose, &c., are most liable to be frost-bitten. This affection may be presented under three principal forms, each increasing in gravity.

1°. *Erythematous* frost-bite is characterised by simple redness of the skin, attended by an uncomfortable itching and slight tumefaction of the subcutaneous cellular tissue. After the impression of cold, this affection is developed in a slow and gradual manner; the skin, at first pale, acquires a red tint, preceded by a sense of formication, which is increased by exposure to heat. The engorgement of the subcutaneous cellular tissue extends farther than the redness of the skin; and if the hands are affected, the fingers become stiff and benumbed. This degree of frost-bite, if left to itself, may be followed by fissure, and other consequences of the *bullous* form of the injury.

2°. The *bullæ*, constituting the next degree of the disease, are most frequently situated on the palmar face of the last phalanges of the fingers, the corresponding part of the toes, or posterior part of the heel, are flat, and filled with a reddish sanguinolent serosity. The skin on which they are developed

* Lisfranc, *Revue Medicale*. Juin. 1826.

† Borot de Belloy, *Observations Cliniques sur le Traitment de quelques Maladies*. 4to. Paris.

‡ Marshall, *Observations sur les Brulures, &c.* (Rev. Med. tom. ix. p. 309.)

‖ Lair, *Essai sur les Combustions Humains*. 12mo. Paris, 1800.

§ *Archives Generales*, tom. x. p. 115.

¶ Aymes, *Dissertation sur les Engelures*. 4to. Montpellier, 1814.

has a livid or bluish tint. Abandoned to itself, the epidermis becomes detached; and greyish, pale, sanguinolent, irregular and very painful ulcerations soon take place to a considerable extent and depth, and the healing of which is obtained with great difficulty during winter.

3°. When the action of cold is more intense, sudden, and prolonged, (*gangrenous* frost-bite,) the affected parts become cold, insensible, immoveable, and assume a livid tint; sometimes a sort of *mummification* is produced. During the winter of 1812, I attended a Spanish prisoner, both of whose feet were sphacelated by cold, and had acquired the hardness of wood. When patients survive these local congelations, nature establishes a line of demarcation between the dead and living parts; and, according to its disposition, the excision of some ligaments or tendons becomes necessary, or even the amputation of an entire limb.

§ 562. Erythematous and bullous frost-bites occasion no derangement of the general functions. Gangrenous, on the contrary, are frequently accompanied by very grave morbid phenomena; internal shivering, paleness, rigidity and numbness of the body, diminution of sensation and animal heat, torpidity of the circulation; precordial anxiety, stupor, and extinction of life, if the cold is intense and long applied.

§ 563. Frost-bite commonly takes place only during winter, but it may be accidentally produced at other seasons by frigorific mixtures. It is observed in temperate climates most frequently in cold, damp weather; washerwomen, hatters, dyers, &c., are most liable to its attack; weak, lymphatic, and scrophulous children, whose skin is fine and delicate, and the poor, destitute of proper nourishment and warm clothing, are also its subjects.

§ 564. (D.) The different alterations which constitute frost-bite, *erythema*, *engorgement* of the subcutaneous cellular tissue, *bullæ*, *fissures*, *ulceration*, *gangrene*, &c., differ, both in their mode of development and succession, from analogous lesions produced by other causes; and to recognise the differential characters of frost-bite, burn, and erysipelas, it is only necessary to compare them with this view.

§ 565. (P.) Erythematous and bullous frost-bite, with or without fissure, is an affection more inconvenient than dangerous. Gangrene produced by congelation is always attended with danger, and that proportioned to the importance of the organs destroyed, or the functions suspended, by the prolonged action of cold.

§ 566. (T.) The preventive treatment consists in inuring the parts most frequently affected gradually to cold. In doing this, they should be protected from all moisture; and when, after having been plunged in very cold water, they become painful, they should be dried, and warmth excited without the aid of external heat. Repeated friction with snow, lotions of cold water, camphorated spirits, &c., the removal of fur gloves and worsted stockings, which too closely exclude the external air, powerfully contribute to the prevention of frost-bites.

When characterised by simple *redness* of the skin, and slight swelling of the subcutaneous cellular tissue, the affected parts should be bathed several times a day with a decoction of mallow-root and poppy-heads. Acidulated and spirituous lotions are sometimes useful; but when discontinued, the disease becomes aggravated.

Emollient and narcotic poultices, moistened with a solution of acetate of lead, are useful in bullous frost-bites, when very painful and much tumefied. The ulcerations should be cauterised with the nitrate of silver when livid and fungous, and afterwards covered by a perforated rag spread with cerate, and a piece of lint placed over it, retained in its place by a bandage and compress, kept wet with some dissolvent and tonic lotion. These measures, combined with protection from cold, are sufficient for the cure.

Gangrene may be prevented by the use of tonic and stimulating drinks, frictions with hot flannels, and spirituous aromatic fomentations. If gangrene has commenced, the formation of a line of demarcation must be waited for. It must be then decided whether the separation of the mortified parts is to be left to nature, or ablation practised.

§ 567. The history of *gangrenous* frost-bites, or gangrene from congelation, has been detailed in many surgical works, and inaugural dissertations.*

SYPHILOID DISEASE.†

Syn.—*Sibbens. Lues Venerea. Syphilitic Eruptions.*

§ 568. This is an apyretic chronic inflammation of the skin, produced by the contact or absorption of the syphilitic virus;

* Houin, *Exposé sur la Congélation*. Paris, 1815.—Stockly, *Sur la Gangrène par Congélation*. Paris, 1831.

† Alibert, *art*. Syphilides. Carmichael, *An Essay on Venereal Diseases*.

and is usually characterised by papules, pustules, tubercles, and squamous patches, surrounded by an areola of a coppery, or violaceous red colour. These primary lesions, abandoned to themselves, terminate in *ulcers*, the edges of which are irregular and sharp, while the bottom is unequal, and of a greyish white.

§ 569. (s.) The elementary lesions attributed to syphilis may be developed simultaneously, or successively, in healthy individuals, or in persons affected with other symptoms of the disease. All are not equally characteristic of their nature; and the most opposite opinions have been advanced on them. Those lesions which are most frequently observed, and the nature of which is the least disputed, will be first described.

1°. *Syphilitic patches* (*syphilide pustuleuse squameuse, maculæ syphiliticæ, venereal lepra, ephelide syphilitique,* &c.) are the most frequent, and least equivocal, form of syphiloid disease. These patches are ordinarily dry, flat, circular; from four to six lines in diameter, and of a *coppery red colour.* Each spot is announced by a small hard elevation, red or violaceous, which extends circularly till it reaches its fullest dimensions. These plates, or patches, very distinct and separate from each other, are always of a copper tint when arrived at their highest degree of development. They scarcely exceed the level of the skin; their surfaces are, at first, as soft and smooth as the healthy skin; they afterwards become scaly or furfuraceous, but the copper colour always decides their syphilitic nature. Sometimes the centre is paler than the circumference; at times they are formed in circles or rings, in the centres of which the skin remains perfectly healthy; but still, the peculiar copper tint does not allow of their being confounded with lepra or psoriasis.

Left to themselves, these patches run on to ulceration, after the development of a small psydraceous pustule. The light scales which cover their surfaces become detached, and are replaced by others of greater thickness; a small crust is then formed, beneath which ulceration takes place, but rarely to any extent, and generally superficial.

When properly treated, these patches begin to grow pale; desquamation is less abundant on their surfaces; but the skin, particularly in old people, retains a long time its copper tint; and on the points corresponding to the centres of the

Lond. 1825. – Clinique, *Sur la Maladie Syphilitique.*—N. Duvergie, *Avec Atlas Colorié.* 4to. Paris, 1826.

patches, small irregular cicatrices are sometimes observed. These squamous plates differ from those of lepra in being smaller, not so elevated, and less shining.

Syphilitic eruptions may appear over the whole surface of the body, or be confined to particular regions. They are principally observed on the forehead, nucha, hands, &c.; and are modified in their external characters by the region they affect. Thus, on the palms of the hands and the soles of the feet, the desquamation is more abundant, owing to the peculiar disposition of the epidermis, which is thicker on these than other regions of the body. The spots seated in the groin, on the nucha, and near the roots of the hair, sometimes unite, forming large patches of a red-copper colour. When situated on those parts of the skin which lie in contact with others, as between the fingers and toes, on the scrotum, labia, margin of the anus, &c., the patches are usually large and humid; the affected skin is tumefied, and a puriform matter exudes from the surface, having a peculiar odour, which some authors regard as characteristic. Lastly, when this affection is developed on the mucous membrane of the glans or vulva, it is of a greyish-white colour, and easily distinguished from the adjacent healthy membrane. When much inflamed, the lymphatic glands of the groin sometimes swell.

This affection is always accompanied by other symptoms of syphilis, such as chancres in the pharynx, exostosis, pains in the bones, &c.

2°. *Syphilis* may manifest itself over the whole body, or on some region, under the form of large *phlyzaceous*, or small *psydraceous* pustules. The former, which commonly have the form and dimensions of the pustules of ecthyma, differ from them in being surrounded by a coppery violaceous areola, and are much more common. Syphilitic *phlyzaceous* pustules, which have been compared to those of variola on account of their large size (Lagneau), have been observed on all parts of the body. They are sometimes seen on the chest or face, and successively on the trunk and limbs. Thus may be seen, on the same individual, pustules scarcely formed; while others, covered with crusts, may be separated from them by small ulcers and cicatrices, on the parts first affected. After some days, the *phlyzaceous* pustules give issue to a purulent fluid, which concretes under the form of blackish-brown crusts, usually conical, and surrounded by a copper-coloured areola. When the crusts fall, there remain on the skin

brownish spots of a coppery tint, or *small* irregular *cicatrices* of the same hue.

Phlyzaceous pustules, which are developed after direct infection through the mucous membrane of the prepuce, vulva, nipple, &c., terminate in ulcers, known under the name of *chancres*, with hard undermined edges, and unequal and greyish-coloured centres. When these pustules appear on the limbs, trunk, or face, and are confluent, they may be followed by *serpiginous ulcers*, spreading on one side, and healing on the other. These ulcers are, however, usually consecutive to tubercles.

The small *psydraceous* pustules are not near so common as the preceding. They affect, almost always, successively the face, trunk, and limbs; so that the eruption presents an irregular assemblage of pustules, some hardly formed, others suppurating, or covered by minute crusts, mixed with violaceous and copper-coloured patches, and irregular cicatrices. These, in form and dimensions, singularly approach those of cuperosa; but they differ from them in having their bases slightly indurated, and being always surrounded by violaceous areolæ. These small pustules terminate in tuberculous induration, or ulceration, and small citatrices, easily distinguished on the surface of the skin. Syphilitic *psydraceous* and *phlyzaceous* pustules are sometimes mixed with papulæ, terminating in small brownish depressed cicatrices, of the size of a pin's head. When these pustules are situated on the face, they are often complicated with syphilitic affections of the nose, throat, &c.

3°. *Syphiloid tubercles* are ordinarily observed on the alæ of the nose, commissures of the lips, on the forehead, genitals, &c. They are also seen on the limbs. These tubercles vary in size from that of a cassia-seed to that of an olive; they are round or ovoid, scattered or disposed in groups, and at times symmetrically arranged one after the other. Their livid or copper colour, contrasts singularly with that of the surrounding healthy skin. Their surfaces are at first smooth and shining; but when they have been long neglected, they inflame and *ulcerate*. Among the ulcerations, some are covered by thick adherent crusts, frequently conical. When these become detached, the ulcer sometimes heals at its centre while it is spreading at its circumference; and if the patient is much debilitated, the ulceration acquires considerable dimensions. Tubercles may also terminate in *serpiginous*

ulcers, healing on the one side, and spreading on the other. These deep and sinuous ulcers, spirally disposed, resemble ciphers, letters, segments of circles, entire rings, &c., the livid edges of which are sometimes surmounted by tubercles. After their cure, they leave indelible cicatrices on the skin, of a very irregular form.

These tubercles being successive in their development, the same individual may exhibit incipient tubercles, and others ulcerating, or replaced by cicatrices. It is not uncommon to see in the same person, vegetations, psydraceous and hyzaceous pustules, ulcers of the larynx, caries, nodes, &c.

This tuberculous eruption may be partial or general. I have seen it so thick on the alæ of the nose as to obstruct the nasal fossæ, and on the prepuce as to produce a kind of phymosis.

4. *Syphilitic papules (lichen syphiliticus, syphilide pustuleuse miliaire,)* are small, solid, brownish, conical elevations, surrounded by very small livid areolæ. Their copper colour distinguishes them from the papules of common lichen. If neglected, they ulcerate, and leave small violaceous cicatrices. Like other forms of syphilis, this eruption is successive in its development; and on the same subject, and sometimes on the same region, may be observed papules intact and ulcerated, and small circular cicatrices, having irregular edges, while their centres are depressed.

These papules are generally seen on the skin at the same time as patches, pustules, or tubercles. They are sometimes complicated with ulcers in the pharynx, exostoses, chronic inflammation of the conjunctiva, and, more frequently, with iritis.

5°. *Syphilitic exanthema, (Roseola syphilitica, Syph. maculata,)* is observed only in individuals who have other symptoms of syphilis, and consists of patches of a deep coppery red, scattered over the trunk and limbs. These patches, which disappear under the pressure of the finger, may continue for several months, and may be thus distinguished from other exanthemata.

6°. Under the name of *rhagades* are designated fissures situated round the margin of the anus, commissures of the lips, alæ of the nose, on the surface of the labia, between both fingers and toes, on the palms of the hands, and on the soles of the feet, which are developed in individuals affected with other signs of syphilis. Of these fissures, some are superficial, and give but little pain; and a white thick

pus oozes from their edges, which are not at all indurated. Others are deep and painful, with hard, callous everted edges, covered with a sanguinolent acrid serosity. When seated near the margin of the anus they are usually very painful; the patient can neither walk, sit, ride, nor pass his excrement, without suffering severely.

7°. *Vegetations* are observed, in the subjects of this disease, on different parts of the integuments, as the margin of the anus, perinæum, neck, eyelids, navel, &c., of various forms and dimensions. They are commonly remarked, however, on the mucous membrane of the genitals. Wherever their seat, if unaccompanied by other characteristic lesions, they are but equivocal signs of syphiloid disease.

Names were formerly given to these accidental productions. Some are formed of masses of small red granules, separated by deep grooves *(raspberry.)* The indentations are less marked in others *(strawberry.)* Some are grouped together, forming tumours of considerable size, covered with a greenish ichorous matter; these were called *cauliflowers.* Firm, resistent, filiform vegetations, were known by the names of *figs* or *leeks,* according to their resemblance to these vegetables. Others, which were spongy, flat, and reddish, were compared to *cocks-combs.* Those of a purple colour are smooth and shining, having appendices separated from one another by fissures of greater or less depth. When situated on the glans penis, their inner surface is slightly concave, to accommodate itself to the convexity of this organ; but when developed on parts where no pressure is exercised on them, they grow straight and upright; they only cause slight, and not very inconvenient itching. Other growths, known by the name of *condylomata,* are of large size, smooth and indolent, having a narrow base of the same colour as the skin. They are observed principally round the anus. I have seen twenty of them round the root of the glans, having the form and size of a lentil.

§ 570. Elementary syphilitic lesions are ordinarily *complicated* with one another. Tubercles, plates, *papules,* &c. are often observed on the skin of persons who have at the same time vegetations on the genitals, ulcers in the pharynx, nodes on the superficial bones, &c. Other non-syphilitic cutaneous phlegmasiæ, as prurigo, psora, eczema, &c. may supervene during the course of simple or complicated syphiloid disease. The diagnosis in these complex cases requires an attentive analytical examination of the different alterations

remarked on the surface of the skin. Lastly, syphiloid disease may be complicated with one, or more, acute or chronic affections of the organs of digestion, respiration, or of the osseous system, &c.

§ 571. (A.R.) Syphilitic papules, pustules, tubercles, plates, and vegetations, have not yet been the objects of minute anatomical or analytic research. The constant violaceous coppery tint of many of these alterations, and their *tendency to ulcerate*, depend on conditions but little known. In this work, it has been thought more imperative to discriminate between the external characters of syphiloid, and other diseases of the skin.

§ 572. (C.) The different alterations constituting this class of diseases, when in a state of ulceration, are capable of transmitting the disease from one individual to another, provided inoculation takes place on a mucous membrane. Thus, syphiloid disease is often developed on the genitals after impure intercourse; on the nipples of nurses from infected children, &c. But it is most frequently observed in persons who have been previously affected by contagious inflammation of the genital organs, or by lesions of the same nature in the pharynx, nasal fossæ, &c.

§ 573. (D.) With the view of arranging the distinctive characters of each variety under which syphiloid disease may shew itself, it may be as well to recapitulate these varieties in the order in which they have already been described.

1°. Syphilitic *patches* cannot be confounded, except with exanthematous or squamous inflammations. Their anatomical characters distinguish them from vesiculous, papulous, tuberculous inflammations, &c. Again, among the exanthemata, rubeola, roseola, scarlatina, erysipelas, and urticaria, cannot be mistaken for syphilitic patches. Chronic spotted erythema has neither the constantly round or oval form, nor the *coppery tint* of syphilitic patches. Of the squamous inflammations, (lepra, psoriasis, pityriasis,) lepra, and psoriasis *guttata*, most nearly approach this disease; but it does not, like them, commence by small papules; syphilitic patches are not squamous at their outset; they never present the shining appearance of the scales of lepra; rarely form complete circles; and, when neglected, their centres ulcerate, afterwards exhibiting small cicatrices, a double circumstance not observed in lepra. Syphiloid patches of the vulva, penis, margin of the anus, lips, tongue, &c. are circular, whitish, and surpass the surface of the healthy surrounding membrane.

At the margin of the anus they are usually very close and numerous; on the internal nates they often occupy a circle round this aperture of not more than two inches diameter. They are not livid and tuberose, like piles, but flattened and tumid, their surface being covered by an abundant suppuration.

2°. Syphiloid *phlyzaceous pustules* are frequently developed after direct infection through the genital organs, or nipples. In ancient syphiloid disease, they may appear on all regions of the body. In form and dimensions, these pustules are somewhat analogous to those of ecthyma. They differ from them, however, in being surrounded by a smaller areola, and this having the *coppery tint*, and by terminating nearly always in *ulcerations*, which are followed by depressed cicatrices. Syphiloid *psydraceous pustules*, more rare than the preceding, might be confounded with the pustules of cuperosa, mentagra, or impetigo, did not they differ from these by their violaceous red colour, and the characteristic small cicatrices which they leave on the skin. At times, they are mixed with large phlyzaceous pustules, tubercles, and ulcers.

3°. Syphilitic *tubercles* differ from those of lupus, in having their seats commonly on the external genitals, or commissures of the lips; while, in lupus, the tubercles are not so numerous, and are most commonly developed on the cheeks and alæ of the nose. The bases of syphilitic tubercles often have a copper tint; they are seen to follow inveterate venereal disease, in persons endowed with the strongest constitution; while lupus is nearly always observed in individuals of a scrophulous habit. Lastly, they are sometimes agglomerated and in bunches, and always complicated with papules, spots, vegetations, inflammation of the pharynx, conjunctiva, &c. of a venereal character; and mercurials have a much more beneficial effect on the tubercles of syphiloid disease than on those of lupus.

The ulcers consecutive to these pustules or tubercles, are still more distinct from those of lupus or cancer. They are found to be, when deprived of the crusts which sometimes cover them, excavated, deep, and irregular; their edges are hard, callous, and undermined; their bottoms unequal, greyish, and bathed in a greenish serous pus. Some remain stationary, while others, called *serpiginous*, eat away the skin, forming different shapes, and leave indelible cicatrices behind them. These ulcers are advantageously treated with mercurials, and their secretion is contagious; all these collective

circumstances are not presented by any other inflammation of the skin which ends in ulceration.

4°. Syphilitic *papules* differ from those of lichen, strophulus, and prurigo, by their violaceous tint, and their termination in small ulcerations of one or two lines diameter, followed by depressed cicatrices.

5°. The characters which distinguish the violaceous and chronic *exanthema* of syphiloid disease from the other exanthematous inflammations, have already been described. (§ 570.)

6°. The *fissures* and *vegetations* developed in persons who have never had any contagious inflammation on the generative organs, or similar affections of the mucous membranes bordering on the skin, can be distinguished from similar affections arising from syphilitic disease only by the characteristic lesions by which the latter are attended, or by the effect of certain preparations which experience has proved to be effectual in the cure of these latter.

To conclude: syphilitic papules, plates, tubercles, pustules, and vegetations, differ from other papulous, pustulous, &c. inflammations, not only in their external and evident characters, but they seem to depend on one certain stimulus, *(venereal virus;)* since these alterations are almost always seen complicated with other symptoms of syphilis; such as nodes, ulcers of the pharynx, pains of the bones, &c. They are treated often with success by the same measures as the last mentioned affections, while the other papulous, pustulous, &c. inflammations, present sufficient distinctions.

§ 574. (P.) Of all the elementary forms of syphilis, the pustulous and tuberculous are the most grave. Not only is the latter very intractable, but is followed more frequently than any other by corroding and serpiginous ulcers, which eat away the skin in various directions. Syphiloid exanthema, papules, vegetations, and phlyzaceous and psydraceous pustules, are much less grave.

Other lesions, as exostosis of the cranium, tibia, inferior maxillary bone, clavicle, or sternum; caries of the cranial bones, of those of the nose, roof of the palate, &c.; ulcers of the pharynx, larynx, genitals, &c.; chronic inflammation of one or more viscera; previous existence of scurvy or scrophula; and other accidental morbid conditions, by being complicated with the eruption, may render the prognosis more grave, and the treatment more difficult.

§ 575. Among the innumerable plans recommended in

syphilis, the advantages and disadvantages of which have been judiciously discussed by M. M. Lagneau* and Jourdain,† I shall point out those which appear the most beneficial. For the rest, whatever the mode adopted, the treatment should be continued for a month, or even longer, after the disappearance of the symptoms, to prevent any relapse which too often takes place when this precaution is neglected.

The patient should avoid all acrid and spiced viands, and what are called made-dishes, such as ragouts, salt and smoked meats; also coffee, wine, &c. Wine copiously diluted, small beer, vegetable soups, white meats, &c., should be his chief nourishment. In winter and rainy weather he should wear flannel, to protect him from the cold and damp.

1°. The *deuto-chloruret of mercury, joined with sudorifics*, is, of all antisyphilitic remedies, that most frequently employed. The patient may take in a cup of decoction of sarsaparilla fasting, in the morning, a tablespoonful of the solution, which contains nearly a $\frac{1}{4}$ of a grain of the sublimate. This dose may be divided in the day, or $\frac{1}{8}$ of a grain only may be began with, if the stomach is irritable. In children, the usual dose is $\frac{1}{24}$ of a grain. In adults, the quantity may be increased to $\frac{1}{2}$ a grain daily; and in children to $\frac{1}{16}$. In adults, twelve or fifteen grains; and in children, two or three; suffice, in most cases, to obtain a cure. The patient should drink, every day, a pint of compound decoction of sarsæ, and have a tepid bath every second or third day.

This method has the advantage of not soiling the linen, and of being unattended by that dirtiness so disgusting during the employment of mercurial frictions; it does not so frequently produce salivation; and lastly, has a more marked effect on syphilis than the other preparations of mercury. But the sublimate, if used injudiciously, and without due caution, may cause gastritis, enteritis, or chronic hepatitis; it imports then to watch attentively the effects of so energetic a remedy, and never to administer it to the subjects of inflammation of the respiratory or digestive organs.

2°. *Mercurial sudorofic ointment.* This is also much used. After taking a few baths to cleanse the surface of the skin, and having the hair shaved off the lower extremities, the patient should rub into one of the legs, from the malleoli to the knee, half a drachm of mercurial ointment, for fifteen or twenty minutes. The following day a similar unction should

* Lagneau, *Exposé des Symp. de la Maladie Vénérienne.* Paris. 1818.
† Jourdain, *Traité complet des Maladies Vénériennes.* 3 vol. Paris, 1826.

be made on the thigh of the same side. The next day a bath should be administered, and frictions should be used in the same way on the opposite limb. Stockings and drawers may be worn day and night, to prevent the clothes being soiled, as the stains left on the linen by this ointment are not easily removed.

The quantity of ointment may be increased to ʒj per day. In ordinary cases, forty or fifty frictions combined with the use of the decoct. sarsæ comp. suffice in adults to attain a cure. The facility of absorption in children, and its difficulty in old subjects, require that the dose should be diminished in the former, and the treatment prolonged in the latter. This method, preferable to the employment of the chloruret of mercury in the treatment of syphilis in its primary stage, is less certain than the other, when used in syphiloid disease of the skin. The method by friction renders it difficult to appreciate the quantity of mercury absorbed, often giving rise to mercurial gastritis, and a disgusting salivation, which frequently leave the patient very weak and debilitated. Lastly, cleanliness cannot be studied during its progress.

3°. *Tisan of Feltz.** This is a very active remedy, to which recourse is sometimes had with a truly surprising effect, when syphilis is accompanied by nodes, pains of the bones and periosteum, caries of the bones, and cartilage of the nose, &c. It is recommended that the patient be purged two or three times towards the conclusion of this treatment, which frequently effects a complete cure in two or three months.

4°. *Subcarbonate of ammonia.* After preparing the patient as before mentioned, he should take a drachm of the subcarbonate dissolved in a pint of succory tisan; this may be repeated two or three times a day; fifty or sixty doses sometimes complete the cure.

§ 576. Although one or other of these methods usually suffices for the cure of syphiloid disease of the skin, simple or complicated with lesions of the bones, cartilages, &c. yet, to promote or secure the success of these plans, they should occasionally be combined with certain *external measures*, by the aid of which, independent of all internal treatment, obstinate syphiloid disease may also be cured.

* ℞ Water xij. Sulphuret. antimony ʒiv. Sarsap. incised ʒiij. China-root ʒi. Ichthyocolla. Box-bark. Ground ivy do. ā.ā. ʒiss.; enclose the sulph. antimon. in a linen cloth loosely; then make the decoction, and boil down to half; strain through a sieve; add three grains of corrosive sublimate. A pint and a half may be given per diem.

1°. Baths of the deuto-chloruret of mercury have been employed with success, particularly with children, women, and persons who have a fine, delicate skin; mercurial lotions are also useful, such as the *red wash*,* and *phagedenic lotion*.† More concentrated solutions irritate the skin; and aggravate the disease, when much inflamed, or in the ulcerated state.

2°. Mercurial fumigations,‡ particularly of cinnabar, applied by an appropriate apparatus, succeed well in syphiloids when confined to one region only, as the face, genitals, margin of the anus, &c.

3°. The citrine ointment and that of the proto-nitrate of mercury and ammonia, Zetler's ointment,§ &c., are also used successfully to stimulate syphiloid disease, when not much inflamed, and developed in old subjects.

§ 577. Each variety of syphiloid disease presents also peculiar indications:

1°. Syphiloid *blotches*, primary, or consecutive to pustules or tubercles, disappear more rapidly, after slight unctions with a muriatic liniment, or spirituous saline lotion, than when left to themselves.

2°. *Papules* yield to the use of mercurial and spirituous washes.

3°. Psydraceous and phlyzaceous *pustules*, not ulcerated, ought to be treated first by emollient baths, then by mercurial lotions, and slight unctions with the ointment of nitrate of mercury.

4°. Coppery *blotches* require, independent of general treatment, the frequent use of tepid baths, and, at times, even vapour baths, or cinnabar fumigations. Friction is also advantageous, made with the ointment of the proto-chloruret or deuto-sulphate of mercury. The large, oval and tumefied plates around the margin of the anus, should be dressed with pledgets smeared with mercurial ointment and laudanum, which may be superseded by the simple mercurial ointment. If not greatly inflamed, their resolution may be favoured by repeated lotions of the phagedenic wash, liquor of Van Swieten, or a solution of the sulphate of zinc or copper.

5°. The resolution of *tubercles* may be effected by general and local bloodletting, the latter near their circumferences,

* (Redwash Hosp. St. Louis.) ℞ Deutochlor. mercury 3j. Distilled water ℈j. Anchusa q. s. M. ft. Lotio.

† ℞ Deutochlor. mercury g. xxx. Lime water ℈j. ft. Lotio.

‡ ℞ Protochl. mercury 3ij. Sugar, Thus ā.ā. ℥ss. M. for fumigation.

§ Zetler's ointment, ℥i of the proto-chloruret to ℥j spermaceti ointment.

by the employment of vapour *en douche* and frictions of the ioduret of mercury, when they are indolent, and of long standing.

6°. *Ulcers*, after the use of lotions and emollient cataplasms, should be dressed with a mixture of equal parts of mercurial and simple cerate. Under the influence of these topicals, the ulcers produce red, consistent, fleshy granulations, and cicatrize at the same time at their edges, and at several points on their surfaces. When the ulcers are old and indolent, they may be stimulated by the deut-oxyde, ioduret, or acid nitrate of mercury. But these remedies, if used injudiciously, keep up and aggravate the local inflammation.

7°. *Rhagades* rarely resist the combined action of the deutochloruret of mercury, sudorifics, tepid baths, cleanliness, and the application of mercurial ointment. If the fissures are very painful, and seem to be aggravated by the mercurial treatment, emollient and narcotic lotions may be advantageously substituted with unctions of opium cerate.

8°. When *vegetations* exist at the same time with other alterations, they must be treated by mercurials and sudorifics. They often then drop off spontaneously. However, if they form the predominant symptom of syphiloid disease, the employment of the chloruret of gold is preferable to mercury. This should be given to the amount of half a grain per day, in three doses; seventy doses usually complete the cure. Sometimes the vegetations become detached as early as the twentieth day.

When these accidental alterations exist free from any other syphilitic affection, or when they succeed on the cessation of other symptoms, under a regular treatment, they may be got rid of by the frequent application of lime-water, the phagedenic wash, a solution of the sulphate of copper, or by covering them with a dressing of mercurial ointment sprinkled with savine powder. They may be destroyed too by the nitrates of silver and mercury, or by the nitric and sulphuric acids. Cauterisation with the argent. nitrat. is ordinarily too superficial; that by the nitrate or sulphuric acid requires some precaution, so as not to allow their action to extend too far. The ligature is applicable only when these tumours are not numerous, and are elevated on a narrow peduncle, and may be inclosed with facility in a loop of thread. Lastly, in most cases, it is better to excise them with curved scissars, taking care to remove the portion of skin or mucous membrane which serves for the base. The nitrate of silver should afterwards be rubbed over the small wound left by the excision.

§ 578. The previous existence of scrophula or scurvy, or the accidental development of serious inflammation of the lungs, intestines, larynx, &c., render the treatment of syphilis more difficult and complex. The indications of the concomitant disease must then be fulfilled; the syphilitic treatment must be confined to external remedies; or it may be necessary to suspend it altogether till the more grave complications have been subdued.

When a new-born infant is affected with syphilis, if the mother, or nurse, has the same disease, it is in general sufficient for the cure of the child, to submit the nurse or mother to a course of sudorifics and mercurials. If the child's symptoms are very grave and numerous, emollient baths daily, and some of the external remedies already mentioned, must be employed.

§ 579. The obscurity which still hangs over the history of the venereal disease, is owing to the little trouble which has been taken to study its primary and secondary symptoms, and to the defects of the nomenclature still adopted. This has the double effect of altering the sense of technical terms, and of singularly obscuring symptomatic descriptions. Thus squamous plates, papules, tubercles, &c., have all been indistinctly alluded to under the name of syphilitic *pustules*. Ulcers, always consecutive to these elementary lesions or subcutaneous inflammations, have been described as the primary form of syphilis. This confusion arose when different non-contagious inflammations of the skin, and urticaria, in particular, were ranged among the symptoms of syphiloid disease, merely because they happened to be accidentally developed in individuals labouring under this disease.

CHAPTER II.

SANGUINEOUS CONGESTIONS.

Syn.—*Apoplexia Cutis. Congestion.*

§ 580. Morbid accumulation of blood in the tissue of the skin, not depending on inflammatory action, is known under the name of *congestion*. It differs from *hæmorrhage* by the blood not being effused either on the surface, or into the substance, of this membrane.

§ 581. Sanguineous congestion, as observed on the surface of the body, may be divided into two kinds:

1°. One depends on want of energy in the venous circulation; such as that produced by applying a tight ligature round a limb, or by diminishing atmospheric pressure by means of cupping-glasses: it is observed also on the face and extremities, in diseases of the heart; in asphyxia of new-born infants, &c. The congestion which is seen on the cheeks in pneumonia, and the *lividity* remarked on the posterior part of the trunk at the time of, or immediately after death, should also be attributed to retardation of the circulation.

It is ascertained that these lividities, (*maculæ morientium,*) called *cadaverous*, exist only on those points which have sustained the weight of the body in the agony of, or immediately after death, and they are sometimes seen on the whole posterior surface of the trunk and limbs. Their blueish colour is not so deep as that of ecchymosis, from which they differ by the blood not escaping from the containing vessels. On incising the skin, it is easily seen that, though engorged with black blood, the dermis and subcutaneous cellular tissue are not at all changed in structure. These lividities may be sometimes made to disappear, by giving to the body at the moment of, or immediately after death, an opposite position to that in which they were formed.

2°. Other congestions, sometimes preceded by a morbid paleness, appear to be owing to some anormal influence of the nervous system upon the capillary vessels; such is the *redness* produced in the face by vivid emotions, or that observed in the second stage of intermittent fever.

§ 582. Whatever the cause of sanguineous congestion of the skin, whether temporary, intermittent, or continued, it is readily distinguished from exanthematous inflammation. The latter, indeed, is always accompanied by morbid heat, or followed by desquamation.

§ 583. Cutaneous congestions are, of themselves, not dangerous; but they are, at times, symptomatic of very grave affections of the heart, lungs, &c. They demand no farther treatment than that required by the disease producing them.

§ 584. I pass at once to the consideration of cyanosis. The skin, naturally livid and whitish in this symptomatic affection, is ordinarily the seat of partial congestion on the face and lower extremities.

CYANOSIS.*

Syn.—*Morbus Cæruleus. Blue Jaundice. Lividity.*

§ 585. *Cyanosis* is the name given to a blueish coloration of the skin and mucous membrane, caused by the stagnation of blood in the right cavities of the heart and venous system, in individuals affected with emphysema of the lungs, or contraction of the ventriculo-pulmonary or auriculo-ventricular orifices, or having congenital or accidental communication between the right and left cavities of the heart, or between the large vascular trunks.

§ 586. (c.) Cyanosis may be congenital, or accidentally developed at a more or less advanced age. The principal causes are contraction of the orifices of the heart, the non-obliteration or reestablishment of the inter-auricular foramen, or the continued existence of the ductus arteriosus, a perforation of the ventricular septum, the aorta arising from the pulmonary artery, &c., morbid dispositions which often coincide with other accessory changes in the conformation and structure of the heart and large vessels.

§ 587. (s.) In cyanosis, the skin presents a livid blueish tint of a violet or blackish purple, with stripes or spots of a deeper colour, and of various extent. It is more intense on the face; above all, on the cheeks, nose, lobules of the ears, and upper eyelid. This lividity is still deeper on the genital parts, on the hands and feet, and particularly at the extremities of the fingers and toes. It becomes more marked by suction, during digestion, by the use of stimulants, coughing, crying, walking, and, in general, by any exertion. It is increased also by the action of cold or of an elevated temperature. It acquires its highest degree of intensity in paroxysms. This coloration is diminished by repose, during sleep, &c. At the commencement of the disease this is very marked, the skin turning of a lead-colour, pale, and cadaverous. The lips are swollen, particularly the lower one, and their colour is blackish or livid. The face is swelled and tumid. The patient frequently complains of cephalalgia; he walks slowly and with difficulty, muscular action losing its energy; respiration is attended with more or less oppression, and all muscular efforts increase the dyspnœa. The contractions of the

* Gintrac, *Observations et Recherches sur la Cyanose*. Paris, 1824.—Bertin, *Traité des Maladies du Cœur et des Gros Vaisseaux*. Paris, 1824.

heart are often accompanied by *bruit de soufflet*, easily recognised by auscultation. Individuals affected with cyanosis experience a constant feeling of cold, particularly in the extremities; they are weak and delicate; their fingers, usually long, are puffed at the last phalanx, presenting a round extremity. The organs of generation are seldom largely developed.

These symptoms, and others depending on the conformation and structure of the heart, are aggravated at certain periods, sometimes after exercise, during sleep, &c. This accession is manifested by considerable oppression and dyspnœa, giving the patient a dread of suffocation; and, by increase of the lividity of the skin, palpitations, &c. The paroxysm may last some hours. The diseases which cause cyanosis influence the constitution of the patients, rendering them feeble and delicate. They most frequently become suddenly fatal.

§ 588. There is no disease but what may be complicated with cyanosis. The affections of the heart, of which cyanosis is an external symptom, almost always end in hæmorrhages or dropsies. When they terminate in a slow and progressive manner, the limbs become more livid and œdematous; the body covered with cold viscous sweats; respiration becomes more and more embarrassed; syncope supervenes, and death closes the scene suddenly, or after a struggle of some hours.

§ 589. (D.) In cyanosis the coloration of the skin and mucous membranes is increased during the paroxysms; the dyspnœa, palpitation, *bruit de soufflet*, and other signs of diseased heart or lungs furnished by auscultation, the diminution of heat, muscular debility and change of form of the fingers, constitute an assemblage of symptoms, which distinguishes this morbid tint of the skin from the temporary blueish colorations produced by intense heat, or the effect of cold, from cutaneous ecchymosis, or the alteration of the pigment, caused by the long-continued use of the nitrate of silver, &c.

§ 590. (P.) Like the diseases which cause it, cyanosis is incurable, and its danger is in proportion to the frequency of its paroxysms, their intensity, duration, and the more or less complete restoration which succeeds them.

§ 591. (T.) The causes which give rise to cyanosis, their fixedness and permanency, leave no farther hope than that of prolonging and rendering more supportable the existence of the patient. With this view, a moderate temperature should be maintained on the surface. Aliments of easy digestion,

either animal or amylaceous, vegetables, rest, light exercise, amusements suitable to the age and taste, and proportioned to the inertia of the patient, (the result of constitutional debility,) contribute to prevent and restrain the paroxysms. During their accession, the patient should be so placed as to favour the free action of the lungs, and the room filled with fresh air. The muscles of respiration should be excited by friction over the thorax, and warmth must be applied to the trunk and extremities, to increase the temperature of the skin.

§ 592. Cyanosis being rather a symptom of disease of the circulatory organs, than an affection of the skin, I refer the reader to the work of M. Gintrac, who has published a number of cases.

CUTANEOUS AND SUBCUTANEOUS HÆMORRHAGES.*

§ 593. Cutaneous and subcutaneous hæmorrhages have received particular names, according to their seat, and quantity of blood effused. *Petechiæ* is the name given to small red or violaceous spots, formed by minute quantities of blood deposited in the tissue of the skin. Under the name of *ecchymoses,* larger spots, of a violaceous red, livid, or even black colour, having a deeper tint in the centre, and varying in extent from a few lines to some inches, have been described. Lastly, by the term *dermatorrhagia* have been more especially designated sanguineous fluxes observed on the surface of the skin, incised, ulcerated, or denuded of its epidermis, after bullous, vesiculous, or pustulous inflammations, &c. This term, or that of *blood-sweat,* has also been applied to a disease peculiar to new-born infants, and in which the blood is seen to issue from the surface of the skin, without the latter being appreciably altered in texture.

§ 594. The sanguineous flux which sometimes takes place in bullous burns, ulcerated pemphigus, mucous tinea, eczema rubrum, confluent variola, &c., after the application of leeches, or operation of cupping, cannot be studied independently of the inflammations or operations which have produced it. If the possibility of hæmorrhage from the surface of the healthy skin, admitted by Bichat, With, &c., is not to be denied, it must be acknowledged that the good faith of observers is not always to be relied on. A charlatan made a dropsical patient

* Fourneaux, *Observ. sur quelques Hémorrhagies Cutanées et Sous-Cutanées, &c.* 4to. Paris, 1826.

of mine believe that vervain poultices applied to the limbs would evacuate a great quantity of *sanguinolent water*, and I could with difficulty undeceive her, by convincing her that the rose-coloured stain of the rags, &c. used for dressings was owing to their being impregnated with the colouring matter of the herb. Women have been known to simulate hæmorrhage from the skin, by covering some regions of the body with blood. Never having seen *blood-sweat*,* or cutaneous hæmorrhage, when the skin has not been deprived of its epidermis, I pass at once to the consideration of ecchymosis, petechia, and hæmacelinosis, which nearly approaches the two first in external characters; but differs from them by internal hæmorrhage always accompanying it.

ECCHYMOSIS.

Syn.—*Ecchymoma. Sugillatio. Bruise.*

The name of *ecchymosis* has been given to the red, violet or greenish colour, caused by blood effused or infiltrated, in organised tissues.

§ 595. (c.) Cutaneous or subcutaneous ecchymosis may be produced by the wound of a vein or artery; by the rupture of capillaries; by contusion or compression from a tight ligature, as in strangulation; by a sprain; by very strong muscular action; the diminution of atmospheric pressure; by stagnation of the venous circulation, caused by debility of the heart's action, by immobility of a limb, or pressure on its principal veins, &c.

§ 596. (s.) Whatever the cause of ecchymosis, it is characterised by spots of a violaceous or vivid red, or even black, having a deeper colour in the centre. Its extent is in relation to the quantity of blood effused and permeability of the cellular tissue. It is easily produced where the skin is very fine, provided with a great number of vessels, and connected with the subjacent tissue by a lax, flexible, cellular membrane, as in the eyelids, for example. In ecchymosis properly so called, the blood is infiltrated only; if collected in a single cavity, it is called *thrombus*. It gradually disappears as the blood becomes absorbed; the black or blueish tint gradually changes from red to deep yellow, becoming afterwards paler, disappearing completely by degrees.

* Fournier cites two cases of it, *art.* Cas. Rares. (*Dictionnaire des Sciences Medicales.*

When absorption of the effused blood does not take place, this fluid, becoming an extraneous body, causes inflammation, which may produce abscess.

Ecchymosis caused by external violence is sometimes complicated with phlegmonous inflammation, and large bullæ, containing a sanguinolent serosity, or lesions of the muscles, bones, arteries, &c. Ecchymosis, called *spontaneous*, is most frequently observed in persons having abdominal tumours, œdema, weakness of the walls of the heart, &c. Lastly, I saw it developed in the substance of the eyelids, during a violent attack of cholera morbus, which nearly proved fatal to one of our most celebrated chemists.

§ 597. (A. R.) When external ecchymosis is examined after death, the blood is sometimes found effused into the substance of the skin, but more often into the subcutaneous cellular tissue. When the ecchymosis has resulted from contusion, the capillary veins and arteries are commonly found lacerated; when it is not dependent on external violence, the capillaries are not ordinarily ruptured.

Subcutaneous ecchymosis may be obscured by other alterations of the skin. In an old paralytic man, whose lower limbs were flexed and immovable, the weight of the bedclothes had caused on the anterior part of each knee a circular eschar of two inches diameter, and which interested the whole thickness of the skin. Beneath these the cellular tissue was infiltrated with blood, and the synovial membrane itself presented several ecchymoses.

§ 598. (D.) When blood is effused into, or beneath the skin, it is sometimes of importance (particularly in cases of legal enquiry) to determine whether the ecchymosis is the result of contusion, suggilation, the application of cupping-glasses, or is independent of external causes. The form and extent of the ecchymosis, the state of the adjacent parts, the history obtained from the patient or his friends, all assist in forming an opinion of the nature of the bodies which have produced it, and the lapse of time which has taken place since its formation. Accidental and artificial coloration of the skin, congestions of which it may be the seat, particularly cadaverous lividity, and chronic erythema, differ from ecchymosis by characters already, or hereafter to be described.

§ 599. (P.) Cutaneous and subcutaneous ecchymosis produced by external violence is of no moment, if unaccompanied by lesions of the bones, large blood-vessels, &c. The prognosis is more grave when it results from disease of the heart,

or pressure on the principal vein of a limb by a tumour, or any other cause which opposes the return of blood to the heart.

§ 600. (T.) Ecchymosis produced by external violence disappears in more or less time, according to the quantity of blood effused, and the rapidity of absorption. If the bruises are few in number and of small extent, the treatment may be confined to the application of cloths dipped in vegeto-mineral, or acidulated water. Compression and phlebotomy are the most efficacious means, to which recourse should always be had when the quantity of blood effused is considerable, or when inflammatory symptoms become developed.

Ecchymosis of the limbs, attended by wheals or œdema, caused by diminution of energy in the heart's action, or long continuance in the same position in old persons, requires, independent of the treatment of these complications, the employment of pressure and stimulating spirituous lotions.

§ 601. Although the study of ecchymosis caused by outward injury may not require new researches, the same observation will not hold good with respect to that kind which has acquired the name of *spontaneous*, and the development of which appears to be owing to stagnation of the venous circulation in certain parts of the body.

PETECHIA.

Syn.—*Febris Petechialis. Typhus Petech. Petechial Fever.*

§ 602. Petechiæ are small spots of a livid red colour, from half a line to a line in diameter, formed by a drop of blood deposited in the tissue of the skin.

§ 603. (C.) Petechiæ are developed in the course of several grave diseases. They frequently appear in typhus, from the second to the sixth day. In one hundred and ninety-four subjects of typhus, at Volterra, in 1817, one hundred and fifty-six had petechiæ, according to MM. Raickem and Bianchi. They also occur occasionally in rubeola and variola. They are more rarely seen in persons attacked with inflammation of the digestive organs or lungs. It has been supposed that the petechiæ, developed in these different conditions, result from some alteration of the blood; and in support of this opinion, the development of petechiæ and ecchymosis in animals, whose veins have had putrefied matter injected into them, has been cited.

Under other circumstances, the production of petechiæ

appears, owing to the stagnation of the venous circulation; such, particularly, are those seen on œdematous limbs.

§ 604. (S.) In typhus fever and contagious diseases, petechiæ are observed on the lateral parts of the neck, shoulders, thighs, and above all, on the anterior part of the forearm, from the elbow to the wrist. They vary in size from half a line to a line and a half in diameter. This colour, at first of a deep or blackish red, becomes of a clear yellow, after part of the blood is absorbed; they resemble, at first, flea-bites, not presenting, however, the central perforation when recent. The slight pressure which causes the disappearance of the areola surrounding flea-bite, does not produce the same effect in petechia. This distinction, however, need not be dwelled upon, for in subjects who have a thick tawny skin there is no areola round a flea-bite, and in true petechia there is sometimes a central black point. The colour of petechiæ usually diminishes from the circumference towards the centre; it sometimes grows uniformly paler; at other times, the central point is first absorbed, presenting a yellow colour, surrounded by a blueish circle. Lastly, the effused blood may be converted into a small blackish crust, around which the epidermis breaks, and becomes detached in furfuraceous scales. Petechiæ are not attended by itching, pain, nor heat of the skin. They may be few and distant from one another, or numerous and nearly confluent.

§ 605. (A.R.) Till very recently petechiæ were regarded as an inflammatory alteration of the skin; but it is easily proved by dissection, that they are formed by blood effused between the reticular body and epidermis.

§ 606. (D.) Petechia differs from ecchymosis only by the effusion of blood not being so great nor so diffused as in the latter. Lentigo is characterised by small spots of a yellowish red, dependent on alteration of the pigment. The spots by which rubeola, scarlatina, and variola, are announced, are less livid than petechiæ, the first being disposed in circular arcs; the second, in large patches; and the third, transformed into pustules.

§ 607. (P.) Petechiæ themselves do not constitute any serious affection; neither can we draw any conclusion from their number, colour, or form. That which is of the greatest importance to ascertain, is, the character of the organic conditions, giving rise to their development, and to which they bear no comparison in a prognostic relation.

§ 608. (T.) Petechiæ claim no particular attention beyond

that required by the disease accompanying or causing them. They give no indication in typhus fever. In variola, rubeola, and scarlatina, their appearance often coincides with grave pneumonia. Lastly, when they supervene in œdema of the extremities, or are complicated with ecchymosis, pressure and lotions of the chloruret of lime, are the measures employed with the greatest advantage.

§ 609. The works of Italian practitioners may be consulted with advantage on the development of petechiæ in acute diseases, particularly that of Dr. Acerbi.* *Petechiæ sine febre* not depending on stagnation of the venous circulation, really constitute a variety of the affection most generally known in France under the name of *maladie hemorrhagique tachétée* of Werlhof. I have described it under the shorter, but not less significant name of hæmacelinosis.

HÆMACELINOSIS.†

Syn.—*Purpura Hæmorrhagica. Petechiæ sine Febre.*

§ 610. Hæmacelinosis, or *spotted hæmorrhagic disease* of Werlhof, is an apyretic affection, announced by petechiæ, or red, violet or livid spots, scattered over the surface of the body, and formed by blood effused into the substance of the skin, or beneath this membrane. These petechiæ, or ecchymoses, independent of external causes, and of mechanical obstruction to the circulation of the blood, are preceded, accompanied, or followed, by hæmorrhage from the mucous membranes, and ecchymosis of the sub-serous, sub-mucous pulmonary tissues, &c.

§ 611. (s.) 1°. When hæmacelinosis is developed in a *healthy subject*, it is seldom announced by any premonitory symptoms; yet it is occasionally preceded by epistaxis, hæmatemesis, hæmoptysis, &c., or by other hæmorrhages from mucous membranes. The spots appear on the body unattended by heat or pain. Children continue their amusements, and adults to attend to their affairs. The pulse remains natural; digestion, respiration, the excretions and secretions, and the intellectual faculties, are performed as in the healthy state. In these simple cases, stethescopic exploration of the

* Acerbi (Enrico), *Dottrina Teorico-pratica del Morbo Petechiale.*—Milano, 1822.

† Gauthier, *Dissert. sur la Maladie Tachetée Hemorrhagique de Werlhof.* Strasbourg, 1811.—Pierquin, *Recherches sur l'Hémacedinose*, 4to. Montpellier, 1820.

thorax, and examination of the abdominal regions, detect no sign of alteration in the organs of these cavities. *Petechiæ* and *ecchymoses* are usually first seen on the legs, then on the thighs and arms; the trunk, neck, and face, are rarely affected. Spots, of the size of flea-bites, multiply astonishingly in the space of ten, fifteen, or twenty days, never, however, becoming confluent. Ecchymoses are, at first, of a deep red; but soon become purplish or livid, and afterwards brown or yellowish, when about to disappear. These ecchymoses, generally formed by the union of several petechial spots, never assume any regular form, but bear some resemblance to the marks left on the skin by a blow from a whip, or by a violent bruise. In the intervals left between the petechiæ and cutaneous or subcutaneous ecchymoses, the skin preserves its natural colour, temperature, and sensibility. The formation of the spots is successive, so that some are yellowish and nearly invisible, while others are of a brownish red, having been developed only a few hours, or of a pale red, if they have existed some days. All the different gradations which petechiæ and ecchymoses can present, may be recognised at the same time on the maculated skin, from the first moment of their appearance to the last of their existence.

These cutaneous or subcutaneous hæmorrhages are preceded, accompanied, or followed by internal ones, most frequently from the surface or substance of some mucous membrane. The gums, palate, amygdalæ, and interior of the mouth and lips, are covered with ecchymosis, or the blood exudes from their surfaces. It is also observed on the tongue, which may be double its normal size. In some subjects, instead of hæmorrhage from the mouth, epistaxis, hæmoptysis, hæmatemesis, intestinal, uterine, vaginal, or vesical bleedings, take place. Of all internal discharges, epistaxis appears the most frequent in children, menorrhagia in women, and pulmonary or intestinal hæmorrhage in men. None of these are attended by heat or pain; they are usually intermittent, and renewed at epochs more or less distant; the loss of blood may be considerable; several pounds have been known to flow in this way.

These internal hæmorrhages, and the external accompanying ones, may continue for several months, when not very abundant. Hæmacelinosis has no fixed duration, which can be either foretold or calculated. If the disease is about to terminate unfavourably, the discharges become more frequent and abundant; the lower limbs become œdematous, and the countenance acquires a cachectic pallor, the whole body

assuming a yellowish or livid tint; the blood gets more and more serous; the maculæ more numerous, and of a deep brown tint; the extremities grow cold, and convulsions supervene, soon followed by death.

2°. In some cases, hæmacelinosis may be preceded, accompanied, or succeeded by other affections, of a more or less serious nature. When complicated with acute inflammations, the apyretic character of the disease is lost, and the progress of these cases is as rapid as it is fatal. Thus, hæmacelinosis, associated with gastro-enteritis, cholera, variola, peripneumony, &c., may give rise to the most varied symptoms. The accidental development of exanthematous, papulous, pustulous inflammations, &c., may also render the diagnosis more obscure, its march more rapid, and its treatment more difficult.

§ 612. (A.R.) The ecchymosis, and cutaneous or subcutaneous petechiæ of hæmacelinosis, neither increase nor diminish at the moment of death. On dissection, it is found that the petechiæ and ecchymoses have not all the same seat. Some are very superficial, and situated on the surface of the reticular body; others occupy the alveolæ of the dermis, and the largest and deepest are situated in the subcutaneous cellular tissue. All these spots are formed by effused blood, coagulated in the larger and darker ones, and liquid in the smaller. The vascular ramifications, in the vicinity of these small effusions, are not more developed than in the natural state; the blood is easily removed by washing or maceration. The mucous membrane of the mouth, stomach, and intestines, presents, at least in some part, small petechiæ and ecchymosis like those of the skin. The external surface of the lungs ordinarily presents some of these spots, more distinctly seen when the intervals between them are healthy. The tissue of the lung beneath the ecchymosis is of an uniform red-brown, firmer than the healthy surrounding parts, being slightly circumscribed and engorged, and from which the black blood is easily expressed; a circumstance quite analogous to the hæmoptysical engorgements described by Laënnec. Ecchymosis is sometimes found between the layers of the mesentery, beneath the peritoneum, pleura, pericardium, &c. The heart, or blood-vessels, present no peculiar and constant alteration; and the other organs may offer accidental, but not characteristic lesions. Aaskow has analysed the blood of persons affected with this disease, and affirms that it is not different from the blood of a person in health;

this assertion is not correct, at least in those cases in which the hæmorrhage has been abundant and repeated.

§ 613. (c.) The organic conditions which cause the spots of hæmacelinosis are still unknown. The vessels in which the blood circulates having been found intact, and no obstacle to the course of the blood having been ascertained, it has been supposed the transudation is owing to some alteration in its composition, to the greater tenuity of its molecules, &c. Some have thought local venous congestion necessary to the production of petechiæ and ecchymosis; others, that the blood flows through the dilated pores of the capillaries increased or diminished in sensibility, or the walls of which have been ruptured, &c.

This disease, fortunately not very common, attacks all ages. I have remarked it particularly in infants of a poor constitution, badly nourished, and living in low and damp situations; and in women of a nervous temperament, subject to moral affections, or debilitated by chronic disease. It is also seen in the higher classes of society, and in persons apparently possessed of the best constitutions.

§ 614. (d.) Hæmacelinosis is distinguished from ecchymosis produced by external violence, or dependent on stagnation of the venous circulation, by the latter being always a local affection, while the former is the result of an organic condition but little known; it is a general hæmorrhagic affection, characterised, at the same time, by hæmorrhage from the tissue of the skin, subcutaneous cellular tissue, substance and surface of the mucous membranes, from the pulmonary and subserous tissues, &c. This character serves also to distinguish it from cutaneous petechial hæmorrhages, which supervene in the course of typhus, rubeola, acute and chronic gastro-enteritis, &c. Scorbutic affection of the gums, complicated with œdema of the limbs, petechiæ, and ecchymosis, and, at times, with chronic inflammation of the digestive organs, differs from hæmacelinosis, as in the latter the gums are not constantly affected. Scurvy is commonly observed to follow long continued debilitating regimen, and yields to the use of tonics and fresh vegetables. Hæmacelinosis sometimes affects individuals of the upper classes of society, and of good constitution. It may supervene in the course of acute disease, and often resists the measures successfully employed in the treatment of scurvy. It may be added, in conclusion, that it is of the greatest importance to ascertain, in each case, by an attentive examination of the different apparatus of organs,

whether the disease is *simple*, or *complicated* with other more or less serious affections.

§ 615. (P.) Independent of all complication, hæmacelinosis is dangerous in proportion to the quantity of blood lost, by the hæmorrhages which take place in the different tissues. In other respects, the prognosis varies according to the importance of the tissues or organs affected. The previous existence, or accidental development, of disease of the lungs, heart, digestive organs, &c., renders the prognosis more grave, and the treatment more doubtful.

§ 616. (T.) For the treatment of this disease I can offer but few rules, and those drawn from empirical observations. It of course must vary, according as the disease is *simple* or *complicated*.

1°. *Simple* and slight hæmacelinosis heals spontaneously in a few weeks. When the hæmorrhage is frequent and abundant, it is usually treated with purgatives, alum whey, cold orgeat, iced water and wine, decoction of bark with mineral acids, or decoction of rhatany or angustura bark, or the extract of the former to the dose of ℈j. daily. Purgatives should never be administered when symptoms of gastro-enteritis are present; they may produce intestinal hæmorrhage.

Each particular hæmorrhage requires, in addition, its specific treatment. Stimulating, spirituous, or chloruret of lime lotions, should be applied to *ecchymosis* and *petechiæ;* and the limbs may be enveloped in cloths soaked in vinegar and water. In frequent and abundant epistaxis, astringent lotions, mustard pediluvia, and plugs, must be had recourse to. Styptic lotions, the application of ice to the epigastrium and the *tampon*, will be proper in uterine hæmorrhage; others must be treated on general principles. If the disease is developed in a person of poor condition, coarse nourishment must be superseded by a more abundant and appropriate one. In all cases, the aliment should consist principally of thick soups, boiled or roast meats, animal and vegetable jellies, and good wine diluted with water. The meals should be light and frequent, and the patient placed in a cool room.

2°. When hæmacelinosis supervenes in the course of variola, cholera, or chronic pneumonia, and the hæmorrhage is not very abundant, and appears to diminish the intensity of the concomitant disease, it should not be interfered with. Lastly, in these complex cases, which are often fatal, it is always the principal affection which should rivet the attention.

§ 617. Applying to hæmacelinosis the scholastic distinction of asthenic and sthenic hæmorrhage, some authors have proposed to employ the tepid bath, diluent drinks, and bloodletting, in the latter variety. But, on consulting the observations, published up to this time, on hæmacelinosis, it seems that the sthenic form of the disease is always owing to some accidental inflammatory complication; and it has been under similar circumstances only, that I have ever seen it assume the character of active hæmorrhage.

§ 618. The celebrated Rivière* had treated hæmacelinosis long before Werlhof† devoted a few lines to the description of this disease, in his well-known collection. Graff‡ published, in 1775, the first inaugural dissertation on this affection, the history of which has been rendered more complete by the respective works of Adair,§ Bateman,‖ De Bergener,¶ De Havinga,** of M. Gauthier Bellefonds,†† and several other authors, mentioned by M. Pierquin, in his inaugural dissertation.

CHAPTER III.

NEUROSES OF THE SKIN.

§ 619. The skin, the organ of general and passive tactility, by which is recognised the presence of bodies, and their temperature, is the seat of a peculiar and active sensation (touch) at several points, where it is provided with numerous nerves and vessels. This function of the skin may be modified, or abolished, without the texture of the membrane presenting any appreciable alteration.

* Rivière, *Praxis Med.* lib. xvii. c. 1. Paris, 1640.

† Werlhof, *Commerc. Noric. ad Rei Medicæ et Scient. Nat. Incrementum Instit.* 1745.

‡ Graff, *Dissert. de Petech. sine Febre.* 4to. Gottingen, 1775.

§ Adair, *Dissert. Med. de Hæmorrhea Petechial.* Edinburgh, 1789.

‖ Bateman, *Diss. Med. de Hæmorrh. Petechiali.* Edinburgh, 1801.

¶ Bergener, *Diss. de Hæmor. Petech.* 4to. Halæ, 1792.

** Havinga, *Diss. de Morbo Maculoso Hæmor. Werlhofii.* 4to. Groningen, 1799.

†† Gauthier, *Work cited.*

§ 620. *Exaltation of the sensibility of the skin,* is but slightly manifested in the numerous inflammations to which this membrane is subject. However, in some diseases of the viscera, and, above all, in liver affections, I have known patients complain of a very disagreeable itching of the skin, without its being possible to discover on its surface either papules, vesicles, or any other inflammatory alteration.

§ 621. *Diminution, or abolition of the sensibility of the skin,* is a morbid phenomenon much more frequent, depending on a local affection of the nerves distributed over this membrane, or of the nervous centres from which they originate. These *anæsthesiæ,** which often coincide with paralysis of the muscles of the same regions, are sometimes observed in persons whose muscles of locomotion are in full energy. The ingenious experiments of Charles Bell and Magendie,† authorise us to conclude that in these cases the sensory threads of the spinal nerves are alone affected, while the motor filaments are intact.

§ 622. Relatively to these anæsthesiæ of the skin, I may mention that, in the *Mémoires de l'Acadamie des Sciences* for 1743, is the history of a soldier, who, after having accidentally lost all sensibility of the left arm, continued to exercise with undiminished facility all its movements. It is known also, that La Condamine used his hands for many years after having entirely lost all feeling in them.

§ 623. Paralysis of the skin being always symptomatic of local affections of the nerves, or nervous centres, the seat and nature of these lesions‡ must be ascertained, and the treatment directed against them.

* Zukowski, *Dissert. de Anæsthesia.* Vilnæ, 1802.

† Magendie, *Journ. de Physiologie Experimentale et Pathologique,* tom. 2. Paris, 1822.

‡ *Consult:* Lallemand, *Recherches Anatomico-Pathologiques sur l'Encéphale.* Paris, 1826.—Rostan, *Rech. sur la Ramolissement du Cerveau.* Paris, 1823.—Ollivier, *De la Moelle Epinière et de ses Maladies.* Paris, 1823.—Serres, *Anatomie Comparée du Cerveau,* 2 vols. Paris, 1826.

CHAPTER IV.

ALTERATIONS IN THE COLOUR OF THE SKIN.

§ 624. Besides the morbid tints produced by cutaneous inflammations, the skin of man is subject to various alterations of colour. Some are the result of a defect or diminution of the secretion of the pigment (*leucopathia, chlorosis*); others depend on different modifications of this colouring matter* (*ephelis, lentigo, chloasma*); again, they are produced by the introduction of extraneous matter into the tissue of the skin (*icterus, artificial colorations*); lastly, the texture of the tegument may be more deeply affected (*melanosis, nævus.*)

I may observe, that pathologists having indiscriminately designated, under the name of *nævus*, simple changes in the colour of the skin, and also more complex alterations of its texture, this latter class will not be preserved; for vascular cutaneous and subcutaneous *nævi* have more analogy with sanguineous tumours, not congenital, than with alterations of the pigment.

LEUCOPATHIA.†

Syn.—*Leucæthiopia. Albinism. General Whiteness.*

§ 625. Under the name of leucopathia are designated decolorations, congenital or accidental, general or partial, caused by the absence of the pigment of the skin and colouring matter of the hair.

§ 626. In *general and congenital leucopathia* (albinism), the skin is usually of a dead white, which has been compared to milk in appearance, or linen, or paper. The hair of Albinos is soft, silky, straight, or wavy, but sometimes crisp, like that of negroes; it is also remarkably white, like cotton or silk, and unlike the snowy appearance caused by old age, or the golden yellow tint seen in fair people; the eyebrows,

* Heusinger, *Rech. sur la Production Accidentelle de Pigment et de Carbone dans le Corps Humain*, &c. Eisenach, 1823.

† Sachs, *Hist. Naturalis Duorum Leucæthiopum Auctoris ipsius et Sororis ejus.* Salzbach, 1812.—Mansfeldt, *Reflex. sur la Leucopathie, Considérée comme le Resultat d'un Retardement de Dévélopement.*

beard, and hair of the pubis, are the same: the whole body is covered by a down of peculiar whiteness and softness. The iris is of a pale rose colour, and the pupil has a marked redness, depending on the absence of the pigment of the choroid and uvea. Albinos are generally of a delicate constitution, and of middle stature; their intellect not greater than that of negroes, although some examples have occurred to the contrary. The great sensibility of their eyes does not admit of their going abroad at mid-day, at least, when the sun is unclouded; their eyelids are continually agitated by winking; the pupil contracts and dilates by constant oscillations; the eyelids blear, and tears are discharged whenever the sun falls directly on the eyes. The moral character of Albinos corresponds to their weak organisation.

§ 627. *General accidental leucopathia* has been observed only in negroes; whites, however, after remaining long in places totally dark, undergo a change approaching to albinism.

§ 628. *Partial leucopathia* may be congenital or accidental: negroes affected are called *pied*, and present, on different regions of the body, white patches, of various forms and dimensions. When these patches are situated on the scalp, the hair of the affected part is decoloured. These partial and congenital decolorations of the skin are never observed in whites; but at a more advanced age, they may be accidentally affected with similar patches, which usually increase progressively in extent.

§ 629. (R.A.) Not having had the opportunity of making anatomical researches on skin affected with general or partial leucopathia, I shall merely remark, that it is, at present, supposed, that the whiteness of the skin in Albinos is owing to the absence of the mucous network of Malpighi, or the pigment deposited on its surface.

§ 630. (C.) The etiology of albinism, general and congenital, is very obscure. The disease is met with in all the varieties of the human race, in all parts of the globe, and in a great number of animals. The union of an Albino with a coloured person, is productive of a coloured child, but sometimes of an Albino. Though Albinos are more common in Africa, they are observed in other meridional countries inhabited by negroes; on the Isthmus of Darien, in Brazil, Sumatra, New Guinea, &c.; and even in Europe, among the whites, in Denmark, England, France, Switzerland, &c.

Partial leucopathia is also developed without any known cause, but almost always after birth.

§ 631. (D.) General leucopathia differs from chlorosis, the latter never being attended by decoloration of the hair, choroid, or uvea; the paleness of the skin, slight and temporary in chlorosis, is combined with depravity of the digestive organs, difficulty of respiration, and with amenorrhœa or dysmenorrhœa; lastly, the paleness of the skin in leucopathia results from a diminution or absence of the pigment, while, in chlorosis, the pale tint of this membrane is owing to the small quantity of blood circulating in it.

When diseases of the skin were but little studied, some analogy was supposed to exist between this state of the tegument and the white scales of lepra; but at the present day, all idea of connexion between such dissimilar alterations is relinquished. Partial leucopathia, which has been also described under the name of *white ephelis*, is very distinct from all other alterations of the tegument. However, certain decolorations produced by light but prolonged pressure, approach somewhat near it; those marks, in particular, which are observed beneath the pads of bandages, &c. in those afflicted with hernia.

§ 632. (P. and T.) General congenital leucopathia has been but little studied under a therapeutic point of view; this defect of conformation has been generally regarded as incurable. In partial accidental decoloration of the skin, a new formation of the pigment may be attempted to be produced by stimulating the affected part with sulphureous *douches*, volatile liniments, blisters, &c.

§ 633. Blumenbach was the first who made any extensive researches on leucopathia, and which he considered as a pathological state.

CHLOROSIS.*

Syn.—*Febris Alba. Febris Amatoria. Icterus Albus. Greensickness.*

§ 634. Chlorosis is characterised by a morbid pallor of the skin, in conjunction with an habitual state of debility, without decoloration of the hair, uvea, or choroid. This disease is often connected with amenorrhœa, or dysmenorrhœa.

* Désormeaux, *art.* Chlorose, *Dic. de Med.* 18 vols.

§ 635. (c.) Chlorosis frequently affects young females at the age of puberty, when menstruation does not take place, or when it is irregular or difficult. Sorrow, ennui, captivity, contrary or unhappy love, the accidental suppression of the menses when they are profuse, and in some cases their too abundant excretion, are the most common causes of this disease.

§ 636. (s.) It is marked by the following symptoms: excessive pallor, yellowish, sometimes greenish, and puffiness of the face; blanched lips; lividity of the eyes, and extreme whiteness of the conjunctivæ; dryness, and ashy tint of the skin; flaccidity of the flesh; œdema of the feet; diminution of appetite, then anorexia, dyspepsia, pica, or a desire for sapid food; malacia, or a desire for substances not proper for alimentation, such as chalk, charcoal, &c.; constipation, nausea, vomiting; small, frequent pulse, palpitation; difficult respiration, particularly on mounting a ladder, or ascending an acclivity. The patient wishes repose, seeking solitude; is habitually melancholy, allowing involuntary sighs and tears to escape. If menstruation continues, it is at distant periods, its appearance lasting but a short time; the discharge decreases in quantity, becomes irregular, fluid, and serous. At the return of the natural periods the symptoms are aggravated; cardialgia and syncope supervene; the sufferer is tormented by sinister ideas; and if the disease is prolonged, organic lesions are developed, which may cause a fatal termination.

§ 637. (a.r.) On the examination of chlorotic subjects, effusion is found in the pleura, pericardium, or peritoneum; tubercles in the lungs; various alterations in the liver, ovaries, spleen, &c. But none of these appearances are constant; neither can the symptoms observed in chlorosis be attributed to alterations so variable and grave, as they become developed, and disappear, with a rapidity incompatible with a dependence on such lesions.

§ 638. (d.) Chronic inflammation of the mucous membranes, and of the viscera, has always, at certain times, *pallor* of the skin, as a symptom; but this is not so intense as in chlorosis; these affections, again, are most frequently attended by a febrile state, and present peculiar symptoms. The distinctive characters between chlorosis and leucopathia have been already indicated. (§ 632.)

§ 639. (p.) The cure of recent chlorosis is easily effected. When of long standing, and complicated with lesions of the

viscera, more or less serious, it is always a grave disease, and is so in proportion to the number, seat, and intensity of these.

The decoloration of the skin, in chlorosis, seems to result from the small quantity of blood which circulates through this membrane, and perhaps, from some alteration in this fluid; it becoming thinner than in the healthy state. If so, this disease is a complex affection, interesting, at the same time, the blood, and the tissues through which it is distributed.

§ 640. (T.) In the treatment of chlorosis, tonics, bitters, and feruginous preparations, have been generally recommended. A well ventilated apartment; fresh, dry air; a wholesome and slightly stimulant regimen, exercise, &c. are conditions, some necessary, and all of them favourable to the treatment.

§ 641. Chlorosis would not have found a place in this work, had not several other complex affections, constantly attended by an alteration of the skin, been also noticed.

EPHELIS.

Syn.—*Ephelis*, Willan. *Ephidrosis. Tan. Sunburn.*

§ 642. The term *ephelis (ephélide)* the literal acceptation of which has been well explained by E. Blancaerd and Castelli, is employed here to designate the brown spots caused on the skin by the action of the sun.

§ 643. These spots are sometimes few, large, irregular, and of a deep brown, (E. *umbrosa*, Frank;) sometimes, on the contrary, they are small, circular, and very numerous, having a faint yellow tinge, approaching lentigo in form and colour, (E. *lentigo*, Frank.) They appear in the spring, and during the heat of summer, on the face, neck, upper part of the chest, and hands, in children, and fair persons.

§ 644. Women use veils to prevent the formation of these spots; some wash their hands and faces with gummy, albuminous solutions. To restore the *tanned* skin to its natural tint, frequent ablutions with cream, whey, aromatic distilled waters, and some more active fluids, have been advised; but they generally fail, and the tan disappears on the return of winter.

LENTIGO.*

Syn.—*Lentigo. Freckles.*

§ 645. Lentigo, known more generally under the name of *freckles*, is characterized by small yellowish spots, of a circular form, like lentils. They may be scattered, or assembled in groups, on the face, chest, and thoracic extremities. The maculated points have a yellowish cast, and never surpass the level of the skin. Appearing in infancy without any appreciable cause, they are usually observed in individuals who have fair, red, or warm coloured hair. They sometimes remain to an advanced age, but usually decrease about the time of puberty. The epidermis does not present any asperity over the maculated points. And these are never attended by any smarting or itching; but the skin is deprived of its lustre and whiteness, which no topical or internal medication will restore. They disappear at uncertain periods, in consequence of the modifications which age produces in the skin. Lentigo differs from ephelis, by the latter being developed, during summer, on the hands, face, and other uncovered parts, and disappearing, or growing pale, on the return of winter, while the spots of lentigo are permanent. Ephelis occurs indiscriminately in all children and adults exposed to the heat of the sun, while lentigo is remarked principally in persons who have red or fair hair.

§ 646. The spots of lentigo are so well known, that it would be superfluous to enlarge upon it. I will merely add, that when a piece of skin affected with lentigo is macerated, the colouring matter remains firmly adherent to the dermis, after the epidermis has become detached.

CHLOASMA*.

Syn.—*Pityriasis Versicolor,* Willan. *Maculæ Hepaticæ. Dandriff.*

§ 647. Chloasma is an alteration of the skin, known by the development of one or more dry, indolent patches, of a pale brown, or yellow colour, on the face, neck, chest, abdomen, or limbs.

§ 648. (s.) The colour of chloasma sometimes resembles

* Lorry, *De Morbis Cutaneis,* art. *Lentigo.*
† Frank, *Prax. Medicæ Universæ Præcepta,* art. *Chloasma.*

the pale yellow of the dead leaves of certain plants; at other times, it is as yellow as rhubarb or saffron. The form and dimensions of the patches are very variable; they may be several inches in diameter, or only a line or two. At first isolated, they multiply, enlarge, and unite in groups of more or less extent. They do not commonly rise above the level of the skin. Sometimes, however, they are slightly prominent; their surface becomes the seat of itching, which is increased by heat and exercise, or the use of strong liquors. The epidermis then shrivels, and becomes detached in small furfuraceous lamellæ. (*C. pseudo-porrigo*, Frank; *pityriasis versicolor*, Willan.)

§ 649. The duration of chloasma is very variable. Women have been known to be affected with it, for a few days only, during menstruation; the spots then disappear without desquamation. Several pathologists have designated, under the names of *C. gravidarum*, and *C. amenorrhicus*, similar spots which have occurred during pregnancy, or the suppression of the menses.

This alteration in the pigment of the skin is frequently developed in individuals otherwise healthy. It is observed also in persons affected with chronic inflammation of the stomach or lungs. Notwithstanding the vulgar opinion which attributes these spots to diseased liver, it is certain that they are rarely connected with affections of this organ; the pathologist who first named them *Ephélides hépatiques* created an error, contrary, at the same time, to accurate language and clinical observation.

§ 650. (A. R.) Several portions of skin affected with chloasma were treated by putrefaction in the open air, and by maceration. In the former, the raised epidermis did not carry with it the colouring matter, which remained on the external surface of the dermis, under the form of a brown, blackish or greyish layer, easily removed by the back of the scalpel. In the latter, the colouring matter was divided between the dermis and epidermis, on the surfaces of which it presented itself under the appearance of a blackish or greyish liquid matter, stagnant in small depressions, and disposed in layers of unequal thickness. On the surface of the dermis there was remarked besides, a band of a blackish colour, and so deep, that it could not be removed without injuring the tissue of the skin.

§ 651. (C.) How chloasma is produced is almost unknown; a pretty strict analogy, however, between its marks and those

which are observed to follow blisters, lead to the supposition that the former, like the latter, are preceded by a morbid accumulation of blood in the maculated parts.

§ 652. (D.) These marks cannot be confounded with any other morbid coloration of the skin. Ephelis differs both in its tint and its cause; lentigo, by its form and red colour, corresponding to the hair. Nævi, of the milk and coffee colour, singularly resemble chloasma in hue, but differ from it in being congenital and incurable.

§ 653. (P. and T.) Chloasma, manifested in women a few days after conception, sometimes disappears at the end of the first month of pregnancy; but it has been known to continue through the whole period of gestation, and even after accouchement. In the last case, and whenever the spots exist free from all other affections, sulphureous baths may be employed, under the use of which, for a month or six weeks, they often disappear. This treatment is far preferable to other remedies which have been recommended; such as acid lotions, and frictions of the affected parts with emulsions, camphorated liniments, borate of soda, or cherry-laurel ointment.

When chloasma is produced under the influence of some organic alteration, or when co-existent with chronic disease of the stomach, intestines, uterus, &c., these primary lesions must be first attended to.

§ 654. Notwithstanding the common opinion that chloasma is symptomatic of diseased liver, it is fully proved that this alteration of the pigment of the skin is often a very trifling affection, and successfully treated by the use of sulphureous baths.

BRONZED TINT OF THE SKIN, PRODUCED BY THE NITRATE OF SILVER.

§ 655. Nitrate of silver, employed internally now for some years, in the treatment of certain nervous diseases, and particularly epilepsy, sometimes produces a bronzed tint of the skin, analogous to that of *mulattos*, and which may increase to blackness.

§ 656. This coloration appears to have been first observed by Swediaur. "A Protestant minister," says he, "labouring under obstruction of the liver, took, by the advice of an empiric, a solution of arg. nit. Having continued its use for several months, the skin changed insensibly, and at last became nearly black. This colour remained for several years,

and then began to diminish.* J. A. Albers, of Brême, prescribed, in 1801, the arg. nit. for an epileptic woman, about 30 years of age. This patient, relieved by the remedy, continued its use for three years and a half. Towards the end of the last year, she being pregnant, the skin became blueish, particularly of the face, neck, hands, and nails; the sclerotic was also coloured. The blue tint increased at the approach of the menstrual period; the colour of the blood was natural; and she was in other respects quite healthy; and, despite of various measures had recourse to, the skin retained its blue colour.† Struck with the singularity of this phenomenon, Albers inquired if other practitioners had observed it. Reimar, of Hamburg, wrote to him that he had met with two cases. Professor Rudolphi said that a similar result had been observed by a physician at Greifswalde. Doctors Schleiden and Chaufepié have communicated three cases of this coloration. Dr. Roget, of London, prescribed lunar caustic for a young woman affected with epilepsy, and she continued its use for four or five months; and he remarked, after the suspension of the remedy, that the tongue and pharynx assumed a blackish-brown shade. At the end of some months, a darkness was observed beneath the eyes, and successively on different parts of the body. This change was permanent, and in no way influenced by the menstrual discharge.‡ Three similar cases are mentioned by Butini,‖ in his work on the internal use of the arg. nit. Professor Sementini has published a memoir on the same subject. M. Planche,§ in giving an analysis of this work, says that he saw, in 1817, in Guy's Hospital, a woman, 70 years of age, the whole of whose body was of a deep blue tint, after being treated by the nitrate of silver. Lastly, I have myself seen this change in the colour of the skin, in four epileptics who had been submitted to the influence of this remedy.

§ 657. I saw at the Bicêtre two other epileptics, treated unsuccessfully with the nitrate of silver, and who presented this dark tint of the skin. One of them had this morbid alteration very marked, particularly on the hands and face; it was fainter on the parts kept constantly covered. This

* Fourcroy, *Medécine Eclairée par les Sciences Physiques*, tom. 1, p. 342.
† *Med. Chir. Transact.* vol. 7, p. 284.
‡ *Med. Chir. Trans.* vol. vii. p. 290.
‖ Butini, *De Usu Interno Prepar. Argent.* Genevæ, 1815.
§ Planche, *Journ. de Pharmacie.* Fev. 1822.

patient had several cicatrices of the same tint as the skin. The mucous membrane of the tongue and the conjunctivæ were of a similar colour as the tegument; the hair and nails had undergone no change.

§ 658. When diffused throughout the animal structure, does the nitrate of silver undergo any particular modification, or does it operate some peculiar alteration on the mucous body? Or, again, does it meet on the surface of the body with nitrate of potass, and thus become transformed into an insoluble muriate, as some authors have imagined?

§ 659. The alteration of colour in the skin caused by this salt cannot be confounded with any other change in the pigment; it is very different even from the black colour produced by rubbing the lapis infernalis over the skin.

§ 660. This bronzed tint of the skin has not, as yet, yielded to any of the means employed for its removal. It generally diminishes after some years' duration; but I am not aware that its entire disappearance has ever been effected. Perhaps this coloration might be dissipated by the employment of some stimulating baths; since Badeley* has ascertained that, after the application of blisters, the skin assumes its natural tint.

MELANOSIS.†

Syn.—*Fungus Melanodes. Melanoid Structure,* Wardrop.

§ 661. Melanosis is the accidental deposition of a black liquid, or solid matter, in the parenchyma, or on the surface of healthy or diseased organs.

§ 662. This deposition has been observed at the surface of the body, under three principal forms:

1°. In *superficial* melanosis, one or several regions, or nearly the whole surface of the skin, presents a morbid black tint. This membrane assumes the appearance of the skin of a negro, but is not at all changed in thickness or texture. A lady, aged about 30,‡ became pregnant; at the seventh month of gestation, her forehead became of an obscure iron-rust colour; then, by degrees, the whole face grew of a fine black colour, except the eyes and lips, which retained their

* Badeley, *On the Effect of Nitrate of Silver on the Complexion.* (Med. Chir. Trans. vol. 7.)

† Breschet, *Cons. sur une Alterat. Organique, appelée Dégénérescence Noire et Melanose.* Paris, 1821. Fawdington, Case of Melanosis, with General Observations on this interesting Disease. London, 1826. Noack, De Melanosia, 4to. Leips. 1826.

‡ Lécat, *Traité de la Couleur de la Peau Humaine.* Amst. 1765. p. 136.

natural tint. At particular times this colour was deeper, and at others, paler. This head belonged to a very fair body, so that it appeared like a head of black marble fixed on a neck of alabaster. This lady had naturally very black hair; but some of it, as it grew out of the skin, seemed coarser and still blacker than the rest, and this was remarked for several lines beyond the roots. There was no head-ach, and the appetite was good. The face, after it had become black, became very sensible to the touch. Two days after delivery, this colour disappeared by cutaneous perspiration; her linen was stained black; the infant was of a natural colour. In the following pregnancy, and even in the third, the same phenomenon occurred at the seventh month, and ceased at the eighth; but, during the ninth month, the patient became subject to convulsions, having a fit daily. Messrs. Wells, Anglada, Chomel, Rostan, &c.* have related similar cases. Marie Francoise Glin, a dissolute widow, born atPiest (Eure-et-Loire), in 1746, had always enjoyed perfect health till her seventieth year, the period of her disease; all her periodical changes had taken place without inconvenience. Reduced to extreme distress, she subsisted principally on public charity, and had a public entry for her residence. Her daughter, on going out to work, left to her care, during the day, two of her young children; these being found to be affected with syphilis, the daughter did not hesitate to charge the mother with being the cause of the children's disease. This odious imputation deeply afflicted the widow; and her chagrin was carried to an extreme degree, upon learning that her daughter had thrown herself, with her two children, from her window; her grief then became so acute, that the next day she was found completely black. Being admitted into the Salpétrière about eighteen months after this event, she was examined from head to foot by Rostan, and presented the appearance of a negress. The black colour, though general, was not of the same intensity at all points; the face, palms of the hands, soles of the feet, the folds of the groins, and axillæ, were not of so deep a colour as the rest of the body; the chest, particularly the breasts, the abdomen, and limbs, were very dark; the anterior parts of the legs were sprinkled with spots, on which the skin retained its natural colour, forming a singular contrast to the rest. The lower extremities, increased in size,

* Wells, *An Account of a Female of the White Race of Mankind, part of whose Skin resembles that of a Negro.* *Bulletin de la Faculté de Med. de Paris*, an. 13, No. 4; 1814, No. 6, 1817; No, 9 and 10, *Nouveau Journal de Médecine*, Mai, 1819.

were shapeless, having neither projection nor depression. The hardness of the dermis did not admit of the finger leaving any impression; the whole surface of the body was covered with lice; all the organs, on minute examination, were found in a state of integrity, also their functions; the patient, fearful and restless, implored pity, and said she was very ill. The 27th of October she was attacked with peripneumony, which terminated her days on the 2d of November. During the whole course of the disease the skin preserved the same colour, but became evidently paler in the twenty-four hours which elapsed before the post-mortem examination. It may be remarked, that a blister having been applied, the vesication, composed of the epidermis and mucous net-work, was very black; while the surface, which it denuded, was of its natural colour. *Post mortem examination:* This was conducted with all the care which so interesting a case deserved. The incised skin presented, immediately beneath the epidermis, a linear black layer, which appeared to be seated in one of the laminæ of the mucous tissue. The dermis was of its natural colour. *Head:* no appreciable change. *Chest:* the right cavity of the thorax contained a full pint of greenish-yellow serous fluid, which so completely filled it, that the first incision of the most prominent point admitted of its escape; the inflamed pleura was covered by a layer of reddish albumen, and the lung entirely hepatized. The left cavity presented nothing remarkable; some bronchial glands of the size of pigeon's eggs, grey, and lardaceous, surrounded the divisions of the trachea. The heart was perfectly healthy. *Abdomen:* all the intestines were pale, and distended with gas; in other respects, there was no change in them; the liver was pale, of a light yellow colour; there were no other remarkable conditions observed.*

§ 663. This adventitious black colour of the skin, more frequent in men than women, and caused by the deposition of melanotic matter on the outer surface of the dermis, can neither be confounded with ecchymosis, hæmacelinosis, the blackish-green tint of certain cases of icterus, nor with the superficial blackness produced by the sulphuret of mercury; but some nævi very nearly approach, in colour, partial and superficial melanotic coloration.

§ 664. Blackish yellow colorations of the skin supervene during pregnancy, and sometimes disappear after delivery; in

* Rostan, *Bulletins de la Faculté de Paris*, tom vi. p. 524.

all other cases, their etiology is very obscure, and their cure uncertain. They may be complicated with other more or less grave affections.

§ 665. 2°. *Melanotic concretions* are another form, more frequent and less obscure, of this peculiar deposit. In this case there exist a number of spherical tumours, some of which are of the size and colour, and even appearance, of laurel or juniper berries. Their interior is generally black, and bears much resemblance to the parenchyma of truffles when cut into. According to M. Breschet, these small tumours sometimes appear to have their origin in the tissue of Malpighi. When melanosis shews itself in this form on the skin, a similar deposition usually takes place in several other organs. Alexandrine Gautire, cook, aged 59, of a pretty good constitution, entered the hospital of St. Louis, 27th August, 1816, for an affection which had been developed two months previously, after violent grief. The disease commenced by an universal lassitude, so great, that the patient could not support herself on her legs; she felt, at the same time, a sort of numbness throughout the muscular system, and a few days afterwards was confined to her bed; loss of appetite and sleep soon followed; diarrhœa and vomiting came on, and small black tumours were developed in the substance of the skin, on various parts of the body. At the time of admission, she was in the following state: there were numerous tumours of the form, and strikingly of the colour of cassia-seed, situated on the anterior part of the thorax, and some of the interstices between them were filled up with small spots resembling flea-bites. These tumours were so close together on the breasts, that they formed one large patch. They were observed also on the abdomen; the largest, two inches in circumference. The arms and thighs, particularly on the inner parts, were covered with them too. The forearms and legs were exempt. The patient was extremely debilitated, had no appetite, lost her sleep, and vomited the little food she did take: diarrhœa continued; respiration difficult; frequent cough; pulse extremely soft, and frequently imperceptible to the finger. These symptoms increased progressively in intenseness. They then became aggravated by œdema, which gave the skin a white shining tint, forming a still greater contrast to the blackness of the tumours. The patient died 25th September without a struggle. *Examination:* The tumours, on incision, presented a homogeneous structure, of a black colour, sometimes of considerable density, at others pulpous. This sub-

tance, always contained in a cyst, appeared evidently to be the same as that described as *melanosis*. These tumours were found in nearly all parts of the subcutaneous cellular tissue, but were not so numerous on the limbs as on the trunk, particularly on the abdominal parietes, where they were not so regularly round, and were softer. The cellular tissue surrounding the lymphatic glands was, so to speak, loaded with them; they formed by agglomeration knots as large as the fist, which enveloped the nerves and vessels going to the extremities. The nerves were still healthy; but the vessels were already confounded with the black masses, from which they could not be separated without rupture. Even in the parenchyma of the thyroid gland similar tumours were found, perfectly distinct from the globules of the gland. The lungs, which were of a rose-colour, presented some small tumours of the same nature; but, towards their roots, and below the bronchial glands, they were more numerous, and of a larger size; the glands themselves were not discoloured. In the mediastinum, and beneath the costal pleura, they were also observed, varying in size from that of a filberd to a walnut. In the epiploon and mesentery, these tumours were present in great numbers. The duplicatures of these membranes were as if stuffed. These were smaller than most of the others, seldom exceeding a cherry-kernel in size. They were seen also surrounding the abdominal viscera, none of which were altered, with the exception of the liver, which was fatty, and the gall-bladder, which contained in its substance five or six of the tumours. The heart and brain were healthy; the bones were not more brittle than those of subjects who die of acute disease.*

§ 666. *Melanotic tumours*, simple or compound, constitute a third very remarkable alteration. Quite recently I dissected, with M. Ollivier (d'Angers,) one of these tumours, which had been developed on the sole of the foot of an adult. This tumour, which was of a brown colour, had an appearance analogous to that of truffles, was about two inches in its greatest diameter, and surpassed, by a line, the level of the healthy skin. In dissecting this tumour, it was found that it consisted of the skin, changed and impregnated with a black matter. Externally, small white patches were observed on the surface of this tumour, of from three to five lines diameter, and appeared to be nothing more than small isolated portions

* Laënnec, *Traité de l'Auscultation Médiate*. 2d edition.

of thickened epidermis. Viewed on the inner surface, by which the tumour was connected to the subcutaneous cellular tissue, the skin presented a pretty uniform bistre tint. The tumour was surrounded by healthy skin, and had well defined limits: in fact, it was the skin, become thickened, softened, fungoid, and black. There were no vessels observed, nor schirrous tissue, nor cerebriform matter; and the colouring matter was so adherent, that none could be obtained by pressure. The subcutaneous cellular tissue, bones, and the soft parts covering them, were healthy. The skin alone was affected, and no other melanotic appearances were found in this subject.

§ 667. Under the name of *Anthracine cancer*, M. Jurine* has described tumours of a more complex nature, consisting, at the same time, of melanosis and the structure peculiar to cancer. Like simple melanotic tumours, these compounds are announced by a very black spot, which is soon transformed into a granulous tumour resembling a mulberry. At a certain period it changes colour, and acquires an olive bistre tint; lastly, it softens, ulcerates, and the disease then assumes a cancerous character; its aspect, progress, and the symptoms it gives rise to, all resemble those of fungoid tumours.

§ 668. Simple or compound melanotic tumours should be removed, whenever situated on a part of the body exposed to blows or repeated friction, which always accelerates their growth. In other cases, the operation is better avoided.

NÆVUS.†

Syn.—*Spilus. Nævus Maternus. Mother-Marks.*

§ 670. All kinds of congenital marks have been indiscriminately classed together under the name of *nævi*. Although very various, two principal groups may be formed of them: congenital alterations of the *pigment*, and *vascular* hypertrophy, or productions on the skin of new-born infants.

§ 670. *Pigmentary nævi.* The congenital affections of the pigment, which the ancients called *spili*, present an infinity of varieties in form, number, dimensions, colour, &c. Under the name of nævus *chloasma*, may be designated yellow congenital marks, singularly approaching in tint the colour of

* Alibert. *Nosol. Naturelle.* 4to. 1817.

† Jacquin, *Mem. et Observ. sur les Marques ou Taches de Naissance.* (Jour. Gen. de Medecin de Chir., &c. Tom. xxiii. Paris, 1812.)

chloasma, but differing from it, inasmuch as they resist the means which cure the other. A young woman, twenty-six years of age, had, on the anterior and lateral part of the neck, on the left side, a congenital mark, of a brown-yellow colour, almost oval, and of the size of a five-franc piece. This spot bore much resemblance to what has been described as *chloasma*. Following the vulgar belief, she attributed the existence of this mark to a desire on the part of her mother, during pregnancy, for coffee. These congenital marks have sometimes a brown or blackish tint (*N. niger.*) A young man had, on the inner and upper part of the right thigh, a black congenital mark, flat, of about two inches diameter, and the edges of which were irregular, and as if notched. The hair growing from this surface was rather swollen at the point just where it emerged from the skin. Gaultier* mentions congenital bronzed marks. An individual, aged fourteen, born in Switzerland, who for some months attracted the curious as an exhibition under the name of the *living angel*, had the following appearance: over the whole posterior part of the trunk the skin was of a bronzed shade, from the nucha to the loins; this colour extended over the shoulders and lateral parts of the neck. This part was thickly covered with very fine black hair; the skin of the rest of the body was tolerably white. The parts which had most hair were the deepest coloured; on the back was a surface, of an inch in diameter, which preserved its natural colour; the hairs were few on this patch, coloured at their bases, and had a minute black circle surrounding them. The hairs were scanty on the lateral parts of the neck, and many of them had this black circle round them also. It extended but a little way round some of the hairs, while around others its irradiation was more marked. It seemed to result from the colouring matter of the skin meeting that which was furnished by the bulbs, the effect being the bronzed tint. On some parts this colour passed into black on the skin. The pupil was very black, the iris brown. This individual possessed great versatility of character, was very unsettled in his undertakings, had a joyous bearing, but was wild and stupid. A slightly alliaceous odour mixed with that of mice exhaled from the coloured parts; the temperature of them was also increased.

I saw at the central bureau a young man whose eyelids and adjacent parts of the cheeks presented a bluish tint,

* Gaultier, *Recherches sur l'Organisat. de la Peau de l'Homme.* Paris, 1819.

similar to that produced on the skin by the explosion of gunpowder. More recently, I observed at La Charité, a man, who had on the outer surface of his legs a congenital mark, which, at first sight, appeared like a bruise. I afterwards saw a child which had a blackish-grey mark on the lumbar region, the colour of which exactly resembled the skin after a slight layer of mercurial ointment has been smeared over it.

§ 671. *Pigmentary* nævi are sometimes surmounted with hairs of various size, form, and colour, though commonly brown and short. The tint of some of these congenital marks diminishes after birth; others remain through life without any alteration. These congenital defects can only be removed by means of cutting instruments, caustics, or irritating lotions; these measures necessarily leave cicatrices, almost as disagreeable as the disease itself.

§ 672. 1°. *Vascular* nævi* are a very distinct class from the preceding; in these the morbid tint of the skin is produced by venous or arterial blood. These vascular nævi may be developed at the expense of the skin, or beneath this membrane.

The former are distinguished by the name of *nævi flammei*, or vascular *cutaneous nævi*, and are characterised by one or several flat violet-coloured patches, similar to the stain produced on the skin by Bordeaux or port-wine. They are of a more or less deep-red tint, and assume a darker shade under the influence of all causes which accelerate the motion of the blood, as violent exertion, remaining long in a room of elevated temperature, the heat of the bed, the use of strong drinks, too liberal nourishment, affections of the mind; and in women, erethism of menstruation. The tumefaction is inconsiderable, or imperceptible; the surface of the skin is flat, rather unequal, and more or less harsh. These red congenital marks affect more especially the reticular body of the skin, the blood-vessels of which may acquire a considerable development.

M. Alibert has described and represented the appearance of one of these *nævi flammei*† under the inaccurate name of *ecchymome congénial*. The mucous membrane in the neighbourhood of the altered skin is sometimes affected. Petit Jean was admitted into La Pitié, 16th Nov. 1826, for pulmonary catarrh, and presented a nævus of this variety. The left

* Abernethy, *Surgical Works*. 1825. *On the Treatment of One Species of the Nævi Materni*.—Bell (John), *Principles of Surgery*, vol. i. discourse 11.

† Alibert, *Nosol. Nat.* p. 351. 4to. Paris, 1817.

half of the upper lip, the temporal, malar, and palpebral regions of the same side, presented congenital marks of the colour of wine-lees, as if mottled, irregularly circumscribed, the interstices being of the natural colour of the skin. These spots did not project beyond the level of the skin, nor disappear under pressure, and were never painful or hot. The red tint was not the consequence of any peculiar pigment; it was owing to the accidental development of a great many vessels on the external surface of the dermis. If the patient cut the skin slightly with a razor when shaving, he had great trouble in stopping the blood. There were observed also, in the space which separates the malar region from the lower eyelid, two small red vascular tumours, of the size of a grape-seed, soft, capable of being flattened, and decreasing in size on pressure; they were separate from each other about two lines. The skin around the bases of these small tumours was redder and more tumid than on the other marks. They had been developed only two years, following slight wounds inflicted at these points. Marks of the same kind existed on the mucous membrane of the mouth, on the left side. A young man, twenty-four years of age, presented a curious example of *vascular* nævus, affecting only the *right side of the body*. The upper and lower extremity, and right half of the trunk, were covered with marks of a wine-red colour, very close together, and on some parts confluent. Their colour, which did not disappear by pressure, became more vivid on exercise of the body, fatigue, and under the influence of an elevated temperature. The subcutaneous veins of the right side were very largely developed. The mucous membrane of the mouth also presented, on the same side, spots of a violet-red colour. The swollen gums seemed more vascular than in the healthy state.

§ 673. These *vascular* cutaneous nævi, if left to themselves, will remain stationary a long time. If accidentally inflamed, they ulcerate, and with difficulty cicatrize. Eugène D. had a vascular nævus of the skin on the right upper extremity. It more especially affected the superior, posterior, and anterior parts of the shoulder; the anterior, inner and outer surface of the arm; inner, anterior, and posterior regions of the forearm; and the dorsal face of the hand and fingers, to the middle phalanges. This nævus, covering the whole length of the limb, was irregular at its edges, and had not any projection beyond the surface of the surrounding skin. It was of a violet tint, which was deeper on the hand. Five weeks after

birth this nævus inflamed, and ulcerated on several points. In the course of two months and a half, the ulcerations progressively extended, united, and invaded the whole of the mark. This large ulcer secreted a moderate quantity of blood and pus, and began to cicatrize at several parts in about five months. The hand and forearm had not yet been subjected to the horizontal position; the edges of the wound contracted, and formed bridles similar to those which follow burns. From this time, the hand remained bent back upon the forearm; and this half flexed on the arm by another bridle; and the arm itself could not be abducted completely without painfully stretching another bridle, attached to the anterior portion of the axilla. To sum up, this nævus had been finally superseded by a long cicatrix, in form of a bridle or thick cord, which extended from the anterior edge of the axilla down the whole of the inner surface of the arm and forearm, came round the external part of the latter, whence it proceeded to the back of the hand, where it divided into several branches, directed on the dorsal face of the fingers. Other bands were observed on the arm and forearm, rather prominent and transverse, which became confounded with the principal bridle.

§ 674. Tonic and astringent lotions, aided by compression, generally fail in the treatment of these nævi. However, Boyer* reports a case of vascular nævus of the upper lip, which was cured by this method; and Mr. Abernethy also used with success cold applications and pressure.

§ 675. Vascular cutaneous nævi sometimes assume the form of red granules, or very small ovoid tumours, pediculated, the bases of which are insensibly confounded with the skin. This variety of vascular nævus is known by one or more rose-coloured spots, or those of a paler colour, which infants have when born. These marks are usually not of much extent or depth, and nearly resemble flea-bites. They, at times, continue stationary for several years, and increase at the age of puberty, or during difficult menstruation; but they most frequently extend in size and depth, acquire a more intense colour, and become transformed into red, unequal *tumours*, irregularly circumscribed, consistent, compressible, and elastic; and less active during repose than when the child cries, or is agitated; they are indolent, not inflammatory, and generally exempt from pulsation, unless when situated over the course

* Boyer, *Traité des Maladies Chirurg*, vol. ii. p. 296. Paris, 1814.

of an artery. These congenital vascular tumours have been principally observed on the forehead, root of the nose, eyelids, lips, lobes of the ears, labia, shoulders, and sternum. They, in general, make a less rapid progress than similar alterations developed after birth.

This variety of vascular nævi can only be attacked with any prospect of success by a cutting instrument, or ligature if pediculated; but, before deciding on ablation, their limits should be accurately ascertained.

§ 676. *Subcutaneous* vascular nævi* are more frequently developed on the face than on any other region. The size of these tumours is diminished by pressure, but increased by crying, &c.; but they have no distinct pulsation, like aneurism by *anastomosis*. These tumours sometimes remain stationary; more rarely diminish and disappear entirely. They may gradually acquire the largest dimensions, and have been known to inflame and ulcerate, causing repeated and abundant hæmorrhage. When detached from the body, they contract as the contained blood escapes. These tumours are found, on dissection, to be collections of minute cells, through which are distributed a great number of arteries and veins.

§ 677. When *subcutaneous* vascular nævi are not very large, and are circumscribed, ablation may be practised, if it is preferred to exciting inflammation and ulceration, as has been done with success by Mr. Wardrop. The former proceeding, however, appears the most sure and expeditious.

Mr. Wardrop advises tying the trunk of the artery by which the blood is sent to the tumour, when this is large and deep seated, and to attack it immediately after with the knife or caustic. Thus ligature of the carotid is practised for nævus of the cheek. Lastly, when similar vascular tumours are developed on a finger, or any other part of a limb, some surgeons have recourse to amputation.

§ 678. The mode of formation of *nævi* is but little known; the vulgar opinion, which attributes these alterations to moral affections of the mother, has but few medical men among its supporters at this day. M. Chaussier remarks, that nævi are more frequent in children whose mothers are subject to inflammation of the skin. This opinion, in which I agree, is founded on a great number of well authenticated facts.

* Wardrop, *Some Observations on one Species of Nævus Maternus, &c.* Med. Chir. Trans. v. ix. p. 199.

ICTERUS.*

Syn.—*Aurigo. Icteritia. Jaundice.*

§ 679. Under the name of *icterus* is designated a yellow tint, produced by bile, or the colouring matter of this excrementitious fluid, deposited in the skin, conjunctiva, and some other membranes; in the blood and the urine.

§ 680. This yellow coloration of the skin sometimes depends on mechanical obstruction to the flow of bile, caused by the presence of calculi in the hepatic ducts, or inflammation, compression, or obliteration of these canals. Icterus may exist independently of these obstacles, and appears then to be dependent on a particular alteration of the blood.

This disease affects all ages and both sexes indiscriminately, and does not offer in new-born infants the peculiarities which have been supposed.

§ 681. This yellow tint of the skin appears at once, or is manifested successively, on the conjunctivæ, at the angles of the eyes, then on the temples, forehead, commissures of the eyelids, around the lips, upon the alæ of the nose, cheeks, chin, palms of the hands, soles of the feet, on the neck, chest, roots of the nails, &c. The superior half of the body is usually covered before the lower part. The colour shews itself in the direction of the folds of the skin, often in patches of greater or less extent, sometimes under the form of rays, analogous, except in colour, to those produced by wheals, or large parallel bandages. The interstices between the fingers, the anterior part of the trunk, the inner and forepart of the limbs, are the points on which the yellowness is usually most intense; the tint varies from a lemon-colour to a greenish, and deep-brown yellow; these different shades being often observed on the same subject.

Other morbid phenomena attend this affection; the tongue and palatine veil are covered by a yellowish coat; the urine, yellow at first, becomes opaque, turbid, reddish, then of a saffron colour, or even a blackish red; it stains linen yellow, and this, at times, before the skin has assumed this tint, and it deposits a sediment of a brownish-yellow, red, brown, or even black; the stools are scanty, the excrement greyish, resembling clay, and the blood contains bile, or, at least, its

* Cornac, *Essai sur la Jaunisse ou l'Ictère.* 4o. Paris, 1809.—Bourgeoise *De l'Ictère.* 4to. Par. 1814.

colouring matter.* According to the conditions which give rise to icterus, symptoms of gastro-enteritis, acute or chronic hepatitis, chole-cystitis, pancreatitis, &c. may be associated with the yellow colour of the skin. It is frequently attended by a thick coating of the tongue and teeth, and other morbid signs; such as bitter taste, desire for acid drinks, anorexia, thirst, disgust of meat, pain, and weight in the epigastrium and right hypochondrium, nausea, bilious vomiting, colic, &c.

§ 682. (A.R.) This yellow tint of the skin diminishes after death; it is deeper on the external than internal face of the dermis. The cellular tissue, mucous membranes, particularly the serous membranes, the inner coat of the arteries, and some other parts, are usually of a yellow colour; the secretion of the serous membranes has nearly always a marked yellow tint. When no particular lesions are met with, it is called *essential* or *spasmodic* icterus. For the most part, icteric subjects present unequivocal signs of inflammation of the stomach, liver, duodenum; or this morbid colour is the result of contraction, compression, or obliteration of the biliary ducts.†

§ 683. (D.) The yellow tint of skin observed in some individuals of a dry bilious temperament, is more brown than that of icterus, and does not affect the conjunctiva. This disease is easily distinguished from the pale yellow tint produced by long continued ague, from the earthy colour attendant upon cancer of the stomach and uterus, from ephelis, chloasma, and the yellow of ecchymosis when the blood is partially absorbed. It is not so easy to decide whether icterus is consecutive to inflammation of the stomach, duodenum, liver, or their appendages, or if it is independent of these causes; it will be necessary to examine carefully the state of the digestive organs and abdominal viscera.

§ 684. (P. and T.) This coloration soon disappears when the exciting cause is removed. Icterus, symptomatic of inflammation of the duodenum, liver, or appendages, requires general and local bloodletting, hip-baths, emollient clysters and cataplasms, diluent drinks, &c. If consecutive to cancer of the liver or pancreas, or other grave alterations, it is as incurable as the diseases which produce it. Lastly, the treatment of *essential* icterus is as vague as its formation is obscure.

* Orfila, *Chimie Médicale*. 3d edit. 1824, v. ii. p. 474.

† Andral (fils) *Observ. sur l'Obliteration des Canaux Biliaires*. Arch. gen. Paris, 1824.

CHAPTER V.

MORBID SECRETIONS OF THE SKIN.

§ 685. Two kinds of extrinsic secretion are well known to take place from the skin; cutaneous perspiration, and follicular sebaceous secretion. These may be changed or modified by the influence of morbid conditions.

SWEAT.

Syn.—*Sudor. Diaphoresis. Perspiration.*

§ 686. Cutaneous perspiration, insensible and vaporous in the state of health and repose, is frequently observed to become liquid, and is then called sweat. The production of this excrementitious humour may be considered as a physiological phenomenon, when caused by violent exercise, swift and long continued running, or by the action of a hot-air or vapour bath. Under different circumstances, sweat is a symptom common to several diseases, which cannot be overlooked in their history, neither can it become the object of a particular treatment; the sweats of intermittent fevers yield to cinchona; those of pneumonia, to bleeding, &c. But there are cases in which sweating may be considered an affection peculiar to the skin, and independent of any concomitant lesion, and to which may be applied the too general proposition of Haller: *Estque sudor morbi genus.*

§ 687. M. Dupont published a case of *general chronic sweat,* independent, according to him, of all other affection.* Hartmann† mentions the singular case of a woman, who, during pregnancy, sweated on the right side of the body only. Examples of sweating of the *axilla* and *foot,* without any appreciable alteration in the texture of the skin or other organ, are more common. M. P. twenty-nine years of age, presented himself at La Charité, 24th March, 1827, on account of an habitual and abundant sweating of the feet, which had existed for four years. This sweat was more abundant on the right than on the left foot; at times, particularly during the night, he complained of pain in the right

* Dupont, *Hist. d'Une Sueur Chronique, &c.* Journ. Gen. de Med. 180- v. xxx. p. 33.

† Hartmann, *Diss. de Sudore Unius Lateris.* 4to. Halæ, 1751.

heel, similar to that produced by the point of a nail being introduced into the skin. The soles of the feet were rather red and softened, as if they had been soaked in hot water for sometime. This was less remarkable in the left than in the right foot. The patient observed that this secretion was more abundant in winter than in summer, and that he was obliged to change his stockings, &c. several times a day. This man, of a sanguine bilious temperament, and good strong constitution, had no other disease of the skin. He had contracted blenorrhagia five times, but it had never been followed by any consecutive symptoms. The use of tepid baths, of the waters of Barèges, was successful in effecting a cure.

This abundant and fœtid excretion from the feet sometimes continues to an advanced age.* It is more abundant and fœtid during the heat of summer, and when the affected individual makes long marches. It is difficult to believe, with M. Lobstein, that the secreted humour is contagious; but it is well ascertained that its sudden suppression may be followed by colic, odontalgia, and divers cutaneous neuroses and inflammations. The stockings require to be frequently changed. If developed in a robust person of good constitution, it may be rendered more supportable by the use of sulphureous pediluvia. If the diminution or suppression of this secretion is followed by any grave symptom, it must be re-established by enveloping the feet in flannel covered with gummed taffeta.

The sweat altered in composition may acquire a sour, rancid odour, or one similar to that of musk. Jean Schmidt, in the *Ephémerides des Curieux de la Nature*, mentions the circumstance of a saddler boy, 23 years old, and pretty robust, whose hand exhaled a smell of sulphur, so strong and penetrating, that it soon filled the chamber in which he remained. Individuals have simulated these fœtid sweats, to escape from military service, by rubbing the axilla with the animal oil of Dippel, assafœtida, the residue of old cheese, rotten fish, &c.

Lastly, the sweat may be changed in colour, according to its composition; cases have been cited of green, black, blue sweat, &c. Never having observed any of these changes, I

* Lobstein, *Bulletins de la Société Med. d'Emulation.* Paris, 1825.—Lasteyras, *Essai sur certains Ephidroses Locales ou Générales dont la Médecine ne doit pas tenter la Guerison.* 4to. Par. 1813.

refer the reader to the different works in which they may be found.*

MORBID SECRETIONS OF THE SEBACEOUS FOLLICLES.

§ 688. Morbid secretions of the cutaneous follicles may exhibit the various forms of a *waxy covering*, small *vermiform bodies*, *freckles*,† *circular elevations*, or *lupia*, according to the number of follicles affected, the quantity and rapidity of their secretion, disposition of their orifices, and the consistence of the fluid secreted by these little organs.

§ 689. 1°. The greasy, *waxy*, and yellowish *covering* of the skin, is caused by a disease of the follicles but little known, and which has not been described by any pathologist. The skin naturally secretes an oily matter, which Cruikshank collected under the form of flakes, from a woven woollen shirt which he had worn night and day for a month, in the hottest part of summer. This matter, rubbed on paper, resembled fat; burnt with a white flame, and left a carbonaceous residue. The morbid increase of this oily secretion gives rise to the ceruminous *covering* which is about to be described.

§ 690. Although this disease may be developed on all parts of the body, it is more particularly observed on the nose, eyebrows, scalp, and certain other parts of the skin, where the natural excretion of this matter is more abundant.

A young woman, 26 years of age, of feeble constitution and irregular menstruation, observed, at the commencement of the summer of 1825, that the alæ of the nose and adjacent parts continually secreted a yellowish oily matter, which was deposited under the form of small worms. I easily found that these worms were nothing more than the sebaceous matter of the follicles, renewed as she removed it. This fluid gradually accumulated, hardened, and formed thick fatty layers, which could be removed without the slightest pain. Beneath, the orifices of the sebaceous follicles were larger and more apparent than usual. The exercise of the principal functions was free and regular. This slight affection required only two months' employment of vapour baths.‡

* Sauvages, *Nos. Method*, class ix. *Fluxus*, art. *Ephidrosis*. *Ephem. Nat. Cur.* Dec. 11 an. 4. Dec. 3 ann. 7 and 8, &c.

† Acne *punctata* of Willan, known in England under the vulgar name of *grubs*. French, *tannes*.—T.

‡ The author relates several cases; one very curious, where the whole body was covered with this ceruminous coat: v. ii. p. 247, et seq.

§ 691. This ceruminous covering, in adults, may be compared to the whitish, fat, unctuous coating observed in newborn children. It is always most abundant on the groins, axilla, behind the ears, on the scalp, and wherever the sebaceous follicles are most numerous.

It has been advised not to disturb this covering, and the kind of cap it forms on drying, on the scalp, a few days after birth. Its utility does not appear to be established, as all infants are not provided with this covering; and I have never seen any bad effect result from its removal, when the child has been protected from the effects of cold and humidity. The greasy secretion of the *scalp*, left to itself, increases in thickness, agglutinates the hair, dries, shrivels, and becomes partially detached in plates or small fragments. Whatever its thickness, this covering may be always removed by lotions, slight friction, or emollient cataplasms, care being taken to keep the head covered for a few days.

§ 692. 2°. Under the name of *grubs** have been vulgarly designated small filiform bodies, from a line to three in diameter, formed by a fatty matter easily broken down between the fingers, and which is contained in the follicles of the skin. The outer extremity of this small body, supposed by the ignorant to be a worm, is black or brown. They are chiefly observed on the nose, over the tract of the zygoma, on the sternum, round the nipples, and other parts where the follicles are most apparent. On compressing the skin between the fingers, a small whitish filiform body escapes, which may be removed by the point of a needle. The development of these is so considerable in some individuals, as to give the skin rather a disgusting appearance. I was consulted by a tiler, aged 21 years, who from his infancy had his face, scapular, and sternal regions covered with these bodies; on these parts the skin appeared as if picked with black, and numbers of them might be extracted one or two lines in length. On their removal, the orifices of the follicles were very apparent. The patient said they were worse during winter. I recommended merely the frequent use of warm baths. When few in number, they are generally voluminous. A woman, 40 years of age, had them four times the size of a pin's head, situated on the right cheek. An unmarried woman, about the same age, presented one beneath the right nipple, as large as a cassia-seed.

* Acne *punctata*, of Willan.

When seated on the nose, they are sometimes complicated with psydraceous pustules, and inflammation of some of the sebaceous follicles. In this case, frequent ablution with bitter almond emulsion is found advantageous.

§ 693. 3°. Under the name of *follicular elevations*, are designated small, whitish, globulous granulations, usually of the size of a pin's head, formed by sebaceous follicles, filled with a fatty, whitish, solid matter. These elevations are most frequently observed on the eyelids and other parts of the face. On some of them may be distinguished by the naked eye, or with a lens, a small black point, which is nothing more than the orifice of the follicle. If, after dividing it with the point of a lancet, the sebaceous matter which they contain is expressed, it is a long time before it again accumulates ; but, to prevent this more effectually, the follicles should be destroyed by cauterisation.

§ 694. 4°. Accumulation and retention of sebaceous matter in the follicles of the skin, may also give rise to the formation of real *folliculous tumours*,* which have been called *lipoma, meliceris, atheroma, steatoma*, and which have been confounded with encysted tumours. They may be developed on any region provided with follicles, but are chiefly observed on the scalp, face, and back. They are soft, indolent, and unattended by any alteration of the skin which covers them. The matter they contain has often the appearance of curdled milk ; it acquires a very fœtid odour when the sides of the distended follicles become inflamed. When these tumours are seated on the trunk, and not very large, the orifice of the follicle is perceptible for a long time ; but no traces of it are found after the tumour acquires a certain bulk.

In December, 1826, I dissected one of these follicular tumours, developed on the fronto-parietal region, near the median line, which was as large as a partridge's egg. It surpassed the level of the skin about four lines at its centre ; the scalp covering the tumour was of its natural colour, but deprived in a great measure of its hair ; the hair was thick on the other parts of the scalp, up to the circumference of the tumour. Its lower surface rested immediately on the bones of the cranium, being separated from them neither by pilous follicles nor adipose vesicles. It was adherent on its opposite side to the skin, from which it could not be entirely detached, except where separated from it by a few adipose vesicles and

* Sir A. Cooper and B. Travers' *Surgical Works*.

pilous follicles. The absence of hair over the tumour was owing to that of the pilous follicles, which were destroyed or atrophied by compression. This tumour had a true cyst without aperture; it contained a matter, the surface of which was white and firm, like wax; the centre was soft and of a brownish yellow, resembling cream and coffee. The part of the cyst adherent to the skin was cellulous, red, and vascular; the opposite side was smooth and white, like serous membrane.

§ 695. Follicular tumours are usually numerous. I have counted fifteen on the same scalp. The latter ones always appear in a slow progressive manner; they are firm to the touch, and have no sense of fluctuation, but are not so hard as subcutaneous encephaloid tumours. Some lupiæ contain hair in their cavities, the sides of which are more resistent and stronger than those of folliculous tumours of the face.

§ 696. More rarely, a tolerable number of these tumours are seen developed on the trunk and limbs. The eight lupiæ situated on the body of a young girl, whose history was published by M. Dagorn,* differed in size and structure from folliculous tumours. But should not diseases of the cutaneous follicles, and *atheromatous* tumours, developed on the trunk, face, and limbs, mentioned by Tilesius,† and which Bateman has thought proper to class as a variety of molluscum, form one group?

§ 697. The etiology of these tumours is very obscure; they sometimes appear to be hereditary, or owing to repeated pressure, &c. They are more commonly observed in old persons than adults, and the latter are oftener affected with them than children.

§ 698. In their treatment, recourse must be had to *compression, incision, cauterisation,* or *extirpation.* When the orifice of the distended follicle remains evident, after introducing a small stilet into its cavity, the sebaceous matter may be expressed without pain; but it is soon reproduced. When freely divided, they are more easily emptied; and if inflammation supervenes, this is sometimes followed by a radical cure. The extirpation of these tumours, when seated on the scalp, may be followed by erysipelas of more or less severity;

* Dagorn, *Observat. Chir. sur une Jeune Fille agée* 18 *Ans. qui portait sur de Tronc Huit Loupes, &c.* Paris, 1822.

† Tilesius, *Hist. Path. singularis Cutaneæ Turpitudinis. J. G. Rheinhardi.* Leip. fol. 1793.

some practitioners prefer leaving them to take their course, to attacking them with the knife, particularly if very numerous.

§ 699. Folliculous tumours of the scalp differ from the encephaloid tumours, which are sometimes developed on the same region, by their indolence and other characters. M. Ollivier, of Angers, shewed me a remarkable case of the latter in a woman, who had none of the symptoms of cancerous disease.*

§ 700. Cerebriform matter, like melanosis, tubercles, &c., may be accidentally deposited in several organs, in persons who, to all appearance, are endowed with the best health, and who present none of the external characteristics of cancerous disease.

CHAPTER VI.

DEFECTS OF CONFORMATION AND TEXTURE.

§ 701. In this chapter it is proposed to treat of several defects of conformation and texture in the skin, the mode of development of which is, in general, very obscure. Among these morbid dispositions, there are some the study of which possesses but slight interest to the pathologist, and these it is merely necessary to indicate. Such, in particular, is *congenital absence* of the skin, the elements, or some parts only of which may be wanting, over a more or less extensive surface of the body. The first case occurs when the splanchnic cavities are not entirely closed; the congenital absence of the epidermis, without any division or fissure of the skin, is an example of the second. The skin may, at times, present defect of conformation by *excess*, characterised by folds or pouches of greater or less extent on the surface of the body.

§ 702. I shall briefly notice the alterations which accidental *distention* and *contraction* of the skin produce in its texture and external appearance. When the skin of the breasts has been much distended by the large development of these organs, during suckling, in women who have nursed several children, it presents irregular lines or *wheals*, of a

* *Vide* Case, vol. ii, page 272.

thicker white than the rest of the tegument, which are caused, as I have proved on dissection, by the straining, rupture, and destruction of the areolæ of the dermis, which becomes thinner and less transparent. In gross persons of a full habit, or those affected by ascites, and in women who have borne many children (*Vitiligo obesorum ; V. hydropicorum ; V. gravidarum*, Frank,) the skin of the belly offers similar white lines, for the most part transverse.

§ 703. Two other effects are produced on the skin, by temporary, or gradual and permanent contraction of this membrane. The first, vulgarly called *goose-skin*, is distinguished by minute points, in the form of elevations, caused by the impression of cold on the skin. The other, principally seen in old people, whose tegument, more ample and loose than the enclosed organs, does not return perfectly to its proper state, and *wrinkles* in the natural folds of the skin, or those produced by muscular contractions.

VASCULAR VEGETATIONS.

§ 704. Under the head of *vascular vegetations* on the skin, I designate a rare and but little observed affection, characterised by small, red, persistent vascular elevations, scattered, or disposed in groups, scarcely surpassing the level of the skin, and then acquiring one or two lines in length, forming true vegetations.

§ 705. These vascular vegetations, the etiology of which is very obscure, are usually developed on the face. At first, few and scattered, they become confluent, after several successive eruptions. They sometimes continue stationary for years, while, under certain conditions, they become, suddenly, very numerous, and without any appreciable cause. When these vegetations are scattered over the skin, this membrane usually preserves its natural colour in the intervals between them ; but it occasionally assumes a red tint analogous to that observed in vascular *nævi*, when numerous and close together. If pricked with the point of a pin, these vegetations furnish a drop of blood ; their incision is always followed by a pretty considerable hæmorrhage.

§ 706. If these productions are seated on the limbs, they are seldom numerous ; and as they occasion neither inconvenience nor deformity, individuals affected with them do not ordinarily apply for assistance. But if they are numerous on the face, there are few persons who are not

desirous to get quit of them. They never spontaneously disappear, but have a tendency to become aggravated.

§ 707. Styptic lotions, employed successfully in syphilitic vegetations, are inefficacious in this disease. The isolated vascular vegetations, the linear groups, or bands formed by these elevations, scarcely surpassing the level of the skin, cannot be attacked by ligature. Excision or cauterization, to be of utility, should interest the whole thickness of the skin; either of these operations is followed by cicatrix, and deformation, if repeated on all the points affected, as the nose, chin, &c.

Convinced, from experience, of the inapplicability of these surgical means, I tried the action of the chloruret of gold and soda, which easily destroys syphilitic growths, the organisation of which is not less perfect than that of these vascular vegetations.*

CUTANEOUS AND SUBCUTANEOUS VASCULAR TUMOURS.†

§ 708. Cutaneous and subcutaneous vascular tumours, when not congenital, are characterised by an abnormal development of the vascular tissue of the skin, or the corresponding subcutaneous cellular tissue.

§ 709. There are two very distinct kinds of vascular tumours:

1°. Those (*erectile tumours*, Dupuytren,) developed in consequence of compression or contusion, or without any apparent cause, are reddish or brownish, and commonly granulated on the surface, having almost always an extensive base, and being more or less deeply implanted in the skin and subcutaneous cellular tissue, or between the muscles. They offer alternate dilatation and contraction, isochronous with the arterial pulsation. Soft to the touch, when not excited, the slightest irritation occasions resistance and a remarkable fulness. When divided by a cutting instrument, an abundant flow of blood takes place, which is difficult to arrest. These vascular tumours never disappear spontaneously; they have a constant tendency to enlarge, and to invade and disorganise new parts. Developed in a high degree, these tumours have been known to open spontaneously, and enormous fungi to spring from their base, giving rise to hæmorrhages, which are

* The result not given.

† Dupuytren, *art.* Tumeurs Erectiles. *De la Médecine Operatoire*, par Sebatier, v. iii., p. 244. Paris, 1824.

always troublesome, and which have, at times, had a fatal termination.

Most commonly, these vascular tumours appear in the *subcutaneous* cellular tissue of the lips, on the inner surface of the arms and thighs, on the breast, lobe of the ear, &c., shewing themselves, at first, under the form of a small, free, reddish, moveable, indolent elastic swelling, the growth of which is slow, at least when not aggravated by violent exertion, contusion, &c. The skin is affected consecutively, assuming the characters which have been described.

The anatomical appearance of these tumours is perfectly similar to that of normal erectile tissue. They are formed of masses of greater or less extent, circumscribed, sometimes surrounded by a thin fibrous envelope, exhibiting internally an appearance of cells or spongy cavities, consisting, in reality, of an inextricable lacing of arteries and veins, which communicate by innumerable anastomoses, like the capillaries, but much larger. These small veins are readily injected from the adjacent ones, which are sometimes varicose; it is not so easy to inject the arteries. When these tumours interest only the skin and subcutaneous cellular tissue, the neighbouring muscles are separated without being altered; but more frequently the muscles themselves participate in this vascular degeneration. The adjacent large vessels are commonly exempt from disease.

§ 710. These tumours differ from vascular *nævi* in the conditions under which they become developed. Erectile tumours do not present, like varicose, dilated veins around them. These vascular, unequal, elastic tumours, of an uniform consistence throughout, even to their base, are easily distinguished from abscess; but it is frequently difficult to determine the limits of these tumours, for they sometimes extend very deeply, and this is not apparent on the surface. Professor Boyer has published two remarkable cases of this anatomical disposition.

§ 711. The treatment of cutaneous and subcutaneous vascular tumours should be governed by the same principles as that of vascular *nævi*. Among the means employed, extirpation, compression, ligature of the vessels running to the part, and cauterization, may be mentioned. The knife is the most sure means of destroying vascular tumours; compression is not to be relied upon, except when the tumour is very small, and situated over a bone, so that it can be easily, exactly, and firmly pressed upon. For the rest, the treatment of this

disease being strictly surgical, I refer the reader to the works of celebrated surgeons, more especially to the very excellent one of Professor Dupuytren.

§ 712. 2°. The lobes of the nose sometimes become the seat of general swelling, partial tumefaction, or of several tumours, characterized by a morbid development of the *vascular* and cellular tissue of this organ. These tumours of the nose, indicated in several works under the name of *sarcomatous excrescence*, and described and drawn under the still more inaccurate one of *carcinomatous tumours* of the nose by Civadier,* form in a slow and progressive manner, and often without any known cause. This affection shews itself under three principal forms: sometimes both lobes of the nose become affected with a kind of hypertrophy, accompanied by a very marked development of the vascular network of the skin, which takes on a vinous red tint; at times, one or more small tumours, the size of the tubercles of cuperosa, shew themselves on the alæ of the nose; lastly, this affection may present itself under both these forms. Vascular hypertrophy of the alæ of the nose extends gradually towards the root of this organ; the small tumours may remain a long time before they exceed the size of a filbert, or they may quickly acquire a considerable volume. They not only deform the face, but prevent the air from entering the nasal fossæ, and hinder the introduction of food into the mouth.

§ 713. Hypertrophy of the nose, accompanied by a morbid development of the vascular and subcutaneous tissue of the skin, differs in structure from erectile tissues. On incision, these tumours furnish, like erectile growths, a large quantity of blood, but they are distinguished from the latter by the laminous, hard, and serrated tissue, which is one of the principal elements of their composition. In external character and organization, this alteration of the nose has still less analogy with cancer.

§ 714. When called to treat this disease at its outset, bloodletting is of service. A woman, aged 34, who had had this affection developed on the nose for six months, experienced much relief from the repeated application of leeches to the part affected.

§ 715. The utility of sanguineous emissions is more equivocal when the base of the nose has been considerably in-

* Civadier, *Description de plusieurs Tumeurs Carcinomateuses situées sur le Nez et aux environs extirpées avec succès.* Mém. de l' Acad. Roy. de Chirurgie. 4to. v. iii., p. 511.

jected and tumefied for several years. These affections, more deforming than inconvenient, are seldom subjected to medical treatment.

§ 716. Patients often apply for advice when the base of the nose becomes surmounted by several cellular and vascular tumours. Civadier, and many other surgeons, have removed these with success. Imbert Delonnes* reports having extirpated one of these tumours, which weighed above two pounds, and descended on to the chest of the patient. When they are connected to the nose by a narrow peduncle, which is not commonly the case, the ligature may be employed.†

MOLLUSCUM.‡

Syn.—*Steatoma. Atheroma. Wen.*

§ 717. Molluscum is a chronic affection of the skin, characterized by solid tumours, developed at the expense of this membrane, slow in their growth, and of dimensions which vary from the size of a pea to that of a pigeon's egg.

§ 718. (s.) These tumours are sometimes of a rounded, globulous shape, but more frequently of a flatted, oval, irregular form. They most commonly have a broad base; but more rarely present a peduncle. In some cases they have a reddish tint; but oftener preserve that of the skin. Their development and growth do not appear to be connected with any internal derangement; they are seldom the seat of any marked irritation, and when arrived at a certain degree of development, they may remain stationary for a long period, and even during life.

§ 719. The structure of this tumour has not been described by any pathologist. M. Velpeau, however, has published, as *peculiar tumours of the skin,* a case which appears to have been one of molluscum, and in which these small tumours were constituted by the external lamina of the degenerated skin, having nearly the consistence of scirrhus, but not so homogeneous, the incision having a granulated surface,|| &c.

§ 720. (c.) The etiology of molluscum, like that of most chronic diseases of the skin, is very obscure.

* Imb. Delonnes, *Progrès de la Chirurg. en France.* Paris, an viii.

† *Ephem. Nat. Cur.* Dec. 3., ann. vii. and viii., Obs. clxxxiv.

‡ Bateman's *Practical Synopsis of Cutaneous Diseases,* 5th ed. 8vo. *art.* Molluscum, p. 274. Lond. 1819.

|| Velpeau, *Ach. Generales de Médecine.* Tom. xii., p. 511.

§ 721. (D.) The tumours of molluscum are distinguished from those of the follicles, by their never containing sebaceous or atheromatous matter. The tubercles of cancer and lupus, and syphilitic, melanotic, vascular, and subcutaneous encephaloid tumours, differ from those of molluscum, both in external characters and structure.

§ 722. (P. and T.) The small tumours of molluscum may appear simultaneously on different parts of the body, without causing any derangement of the principal functions. The case published by Velpeau proves that these tumours may be dispersed; yet the external applications employed with this end, have, in many cases, been quite ineffectual. But, it may be remarked, that the rarity of this affection does not admit of the trial of varied and repeated remedies. No internal medicines are likely to favour the resolution of these tumours. Fowler's arsenical solution, recommended by Bateman, is too dangerous a remedy, and its influence over the disease too equivocal to be much recommended.

§ 723. I employ the term molluscum in a more restricted and better determined sense, than that in which Bateman used it. Indeed, this author does not appear to have sufficiently discriminated between this affection of the skin, and the tumours of the sebaceous follicles. The round, prominent, hard, smooth tumours, of different sizes, *having a white fluid exuding from the summit*, which, according to him, characterize *molluscum contagiosum*, are they any thing but follicular tumours? Is it proved that this disease is contagious?

The case of Tilesius,* cited by Bateman as molluscum, seems rather a remarkable one of follicular tumour? The fungoid eruption of which Bontius† speaks, and the affection described by Alibert as *pian fongoïde*, approach molluscum by their external characters; but the want of knowledge as to the structure of these tumours leaves much uncertainty as to their nature. Béclard‡ has also observed tumours which, during life at least, have presented great analogy to those of molluscum. "The skin, (he says,) is sometimes elevated by a greater or less number of, and sometimes innumerable, tumours, of very variable size, and formed by the accidental production of a white, fibrous tissue, much more compact than the cellular, but not so firm as the ligamentous tissue, like that

* Tilesius, *op. cit.*

† Bontius, *De Medicina Indorum Libri Quatuor.* 4to. Paris, 1646.

‡ Béclard, *Elémens d'Anatomie Générale*, p. 294. Paris, 1823.

which is seen often in polypi, and particularly in the submucous tumours of the vagina and vulva.

WARTS.*

Syn.—*Verrucæ. Porri.*

§ 724. Warts are small appendices of the skin, of nearly the same colour as this membrane, and may be divided into two kinds:

1°. *Common warts* are usually observed on the hands, and are small eminences of one or two lines in diameter, and surpass the level of the skin about half a line or a line; they are rough, harsh, and nearly insensible on their surface. When cut vertically, the epidermis is observed to thicken towards the centre of the wart. The thickened chorion receives into its substance prolongations, called the roots of the wart. Some of these processes, enveloped in an epidermic covering, are separated from each other, giving the wart a fissured appearance. Small black points are at times observed on cutting a wart; and M. Cruveilhier is said to have seen blood-vessels under the form of red lines, in the tract of the dermic processes.

2°. *Pediculated warts* are small cutaneous appendices in the form of the finger of a glove, having a smooth shining surface, often of the colour of the skin of the nipple. They are composed of two lamina of very fine skin, reddish at times, reflected, and united by a very slender cellular tissue. This species, seen most frequently on the neck, back, and limbs, is sometimes flat, and attached by a large peduncle, *(fleshy wart.)* I have seen six of them, disposed in the form of a band along the anterior edge of the trapezius muscle of the right side. They are sometimes situated on the neck and limbs. Lastly, Pechlin† was consulted by a surgeon who had them in numbers all over his body.

§ 725. (c.) The etiology of warts has not been much studied. They are developed at all ages, but more frequently in youth than in old age. Habitual irritation of the skin seems to favour their development on the hands. They are observed also in persons who handle hard bodies, and whose hands are exposed to the vicissitudes of the atmosphere, and in those

* Wedel, *Dis. de Verrucis.* Jenæ, 1696.—Hanin (L.) *Des Verrues et de leur Traitement.* Rec period de la Soc. Med. de Paris, v. xliii. p. 278.

† Pechlin, *Obs. Phys. Med. libri tres.* 4to. Hamb. 1641.

who neglect cleanliness. Jenner thought they were more common in persons who had to milk and take care of cows. Some individuals seem to possess a warty diathesis, and, notwithstanding the use of lotions and particular cleanliness, warts, when several times destroyed, are reproduced. It has been pretended that the contact of the blood from a wart will cause one to appear. M. Barruel, a distinguished chemist, showed to M. Cruveilhier a chain of warts on the back of his hand, which he assured him had been developed in the track of some blood that had flowed from one of these small tumours which he had cut.

§ 726. Syphilitic vegetations may be distinguished from warts by being attended with other symptoms of venereal infection, by being seated especially on the genitals, chin or face, and disappearing under the influence of mercurials, or after the administration of the deuto-chloruret of gold and soda. Vascular and red vegetations furnish much more blood when pricked or excited than warts; cancerous tubercles of the nose and face differ from warts by characters already indicated.

§ 727. (P. and T.) Warts sometimes disappear spontaneously, or are easily removed; but in some cases may be reproduced. When connected with the skin by only a small pedicle, they may be tied with a horse-hair or a bit of silk. If attached by a large base, they may be excised with a bistoury or curved scissors, or again by caustic. When a cutting instrument is used, the wart should be soaked in warm soap and water for half an hour; afterwards very thin laminæ should be shaved off successively till a few drops of blood flow; then the base should be cauterised with the nitrate of silver. If caustics are preferred, the nitric acid, liquid muriate of antimony, kali purum, or sulphate of copper, may be employed. If pure potash, or the concentrated acids, are used, the wart should be surrounded by a piece of diachylum plaister, to prevent the action of the caustic from extending to the healthy skin. Warts never become cancerous after cauterization, as some writers have asserted. The pretended warts thus degenerated were probably cancerous tubercles. (§ 467.)

§ 728. Some authors have recommended warts to be rubbed two or three times a day with sal ammoniac. This remedy acts slowly, causing neither pain nor inflammation, and, with the exception of some peculiarly hard ones, seldom fails to destroy them. The acid juices of some plants have been em-

ployed with the same end; particularly those of the chelidonium majus, euphorbium, savine, fig-tree, &c., the gall of the *piscis cyprini;* black soap, tincture of cantharides, &c. have been also recommended. To conclude: these different applications destroy warts less quickly and less surely than the nitric acid, which I constantly use with success.

MAMILLATED EXCRESCENCES.

§ 729. This singular alteration of the skin, the history of which is very incomplete, has been described and delineated by J. B. Behrends. The following case, literally translated, was published in the February number of *Archives Generales de Médecine* for 1827.

Laurence Ruff, aged 53 years, had from his infancy his hands and feet covered with large protuberances, which became troublesome when he had to work. These tumours had sensibly enlarged, and during the last three years had acquired an enormous volume. This person was robust, tall, and well-proportioned; he had never had any other disease than small-pox and dysentery. The hands, which were remarkably large, had these excrescences on their palms, and on the fingers, and his nails were like talons or cockspurs. Similar growths occupied the inner side of the right foot, from the heel to the root of the great toe; there were only a few on the left foot, on each side of the great toe. The tumours were of a greyish-white, adherent, and of the consistence of softened horn; they gave to the touch the sensation of a mass of warts of unequal sizes. The larger were surmounted by smaller ones; some formed isolated groups, others were growing from the less prominent points. Their surface, although dry, was sensible to the slightest touch, and bled easily; they preserved an acute sensibility for several days, when some became scaly, and soon detached. Blows or pressure caused pain. Walking, particularly on a firm dry surface, was painful; the patient could not walk more than an hour at a time, and then he got only as far as a person could run in a quarter of an hour, and yet he was obliged to rest several times. He was some hours dressing and undressing, on account of the suffering he experienced in doing so. In windy and rainy weather he felt intolerable burning and shooting in the dis-

* *Beschreibung und Abbildung Knolliger Auswüchse der hende und Fuisse der Lorenz Ruff Von* Dr. Behrends.

eased parts. The movement of the fingers was difficult; flexion was impossible, but adduction and abduction were perfect.

§ 730. Coloured engravings after pictures in oil, which M. Behrends possessed, add to the accuracy of this description; the history, however, of the disease will remain incomplete until it is ascertained whether the skin alone is affected, or whether the subcutaneous cellular and adipose tissues are also interested in this affection. Contrary to the opinion of Behrends, this disease seems to be quite distinct from the horny appendages observed by Abraham Haskel, (*New England Journal of Medicine, Surgery, &c.* vol. viii. no. 1.)

ICHTHYOSIS.*

Syn.—*Ichthyosis,* Willan. *Lepidosis. Fish-skin Disease.*

§ 731. Ichthyosis is marked by a morbid development of the epidermis, often accompanied by hypertrophy of the chorion. The epidermis forms on the surface of a part, or nearly over the whole skin, a thick grey layer, divided into small irregular compartments, and not imbricated, like the scales of a fish.

§ 732. Ichthyosis may be *partial,* and affecting only part of the skin of a limb or the trunk; or *general,* extending over nearly the whole surface of the body, forming a sort of *cuirasse.* This morbid development of the epidermis always acquires its greatest thickness on those points where the skin is naturally thicker, and the epidermis harsher, as around the joints, on the anterior and outer parts of the lower limbs, near the olecranon, &c. On other parts, this adventitious covering formed on the surface of the skin is, in general, much thinner; the prepuce, eyelids, groins, and axillæ, being usually exempt, and all points where the skin is naturally softer and finer. This disease is observed not to affect the palms of the hands and soles of the feet, doubtless from the peculiar texture of these parts.

Ichthyosis is usually congenital, or shows itself in the first two months after birth. The skin about to suffer this change assumes a dull appearance, becoming at the same time harsh and farinous. After passing through several intermediate states, at last a thick epidermic layer is formed, divided into small irregular compartments, the aspect of which certainly

* Joulhia, *Dissert. sur l'Ichthyose Nacrée.* 4to. Paris, 1819.

bears more analogy to the skin of the legs of fowls than to the varied scales of fishes or serpents. At some distance, the skin appears as if it was dirty. These appearances vary according to the degree to which the disease is developed. Sometimes the alteration of the epidermis is slight; the skin, thick and farinous, offers to the touch a roughness like the skin of old people. When the affection is more marked, it is observed on the limbs, particularly when extended, under the form of a thick epidermic layer, compared by some pathologists, but not without a little exaggeration, to the bark of a tree; being in small irregular, not imbricated compartments, of two or three lines in diameter. The larger these compartments the thinner they are, and they assume different shapes, according to the lines of the epidermis; they possess all the characters of this membrane, chemical and physical. Their colour, commonly of a dull grey or earthy tint, is, in some rare cases, shining, like mother of pearl, but most frequently of a deep-brown shade. The harshness of the skin is such, that when the hand is passed over its surface, a sensation analogous to that produced by the contact of a file, or the substance called shagreen, is felt. The skin is always dry, the perspiratory and follicuous secretions being much diminished, or altogether absent. When persons affected with ichthyosis are attacked by acute disease, the crisis operates on the urinary secretion.

If the epidermic layer is detached by friction, or from any other cause, it is quickly renewed. During the heats of summer, the skin sometimes throws off this adventitious covering, but it is always reproduced on the approach of winter. Whether the fall of the epidermis is operated by this influence, by the employment of vapour baths, or from any other external means, no trace of inflammation is ever observed on the surface of the skin. The integuments are of their natural colour, only the small lines, common on their surface, are more marked than in the normal state. This disease is not attended by itching, or any other morbid sensation, neither does it appear to exercise any noxious influence over the constitution. I have observed several subjects of it to enjoy the most perfect health. It is probable that the pulmonary perspiration and urinary secretion supply, in these individuals, the defect in the cutaneous functions.

§ 733. (A.R.) A portion of diseased skin taken from over the patella or olecranon, and submitted to maceration for

some days, presented the following characters: the small compartments, so characteristic of the disease, were readily detached from the skin. These were not found to overlap one another, like the scales of fishes; the name *ichthyosis* tending to perpetuate an anatomical error. Epidermis was found beneath this first covering. The chorion was also thicker than in its natural state, and the lines or grooves traced on its surface were more marked than in the healthy condition.

§ 734. (c.) Ichthyosis, partial or general, is almost always congenital, being seldom accidentally developed after birth. The cause best known is hereditary predisposition. It is observed to be transmitted through several successive generations. The history of the brothers Lambert, published by Tilesius and Buniva, is a remarkable example of this. The male children of the same father and mother are sometimes affected by it, while their daughters are exempt. Such was the case with the Brayers, born in Dieu, department of Cantal. One, Jean B. assured me that he and his brother were afflicted with ichthyosis, and that his three sisters had not the slightest trace of the disease. Some pathologists have attributed its development to moral affections of the mother; but this is obscure and hypothetical. It has also been asserted, after vulgar traditions, that the disease is endemic in Turkey and Paraguay; and that the inhabitants near the sea or rivers containing fish, were more especially subject to the disease. Women are not so frequently its subjects as men. The disease is not very rare in Europe.

§ 735. (d.) Ichthyosis has but small analogy with squamous diseases. Willan and Bateman have thought proper to place them in the same class. Ichthyosis, almost always congenital, or developed in the first few months after birth, is attended neither by sanguineous injection of the skin, morbid heat, itching, nor any other sign of inflammation. In lepra, psoriasis, and pityriasis, the production of the scales is always preceded by redness of the skin, which may be made apparent by removing them from its surface. In confluent and inveterate lichen, developed on the trunk or limbs, the skin may become brownish, and covered by innumerable scales, somewhat similar to those of slight ichthyosis; but this state is accompanied by insupportable itching, and preceded by papules. The simultaneous or ulterior development of similar elevations, upon some adjacent part of the skin already farinous, will dissipate all doubts as to the nature of these

obscure cases. *Local* ichthyosis is not less distinct from the squamous and furfuraceous state which the inflamed skin sometimes assumes around old ulcers.

§ 736. (P. and T.) Unless very slight and accidental, ichthyosis is seldom cured. This affection is happily not at all serious. It has been advanced by some authors, without any foundation, that persons affected with ichthyosis succumb, sooner or later, to pulmonary phthisis, or colliquative diarrhœa.

Emollient applications persevered in for a length of time, light frictions, and demulcent lotions; tepid baths, frequently repeated, or alternated with vapour and alkaline baths, so as not to cause any functional derangement, are useful in ridding the skin of the scales which cover it, and preserving it in a state nearer to that of its healthy organization. In local and accidental ichthyosis the effect of flying blisters may be tried with some hope of success, as experience proves that general and congenital ichthyosis disappears temporarily after cutaneous inflammations, as variola for example.

§ 737. A modern pathologist seriously advises persons affected with ichthyosis, and resident on the sea-coast, to remove inland, and sulphureous and ferruginous preparations to be administered; the puerility of such measures is now duly estimated.

§ 738. Willan vaunts, as a famous remedy in ichthyosis, pitch administered for a length of time, to the amount of half an ounce daily. By this measure, he says, not only are the epidermic coverings removed, but a softness and suppleness is given to the skin, which is opposed to the reproduction of the disease. More recent experiments have not altogether confirmed the results announced by Willan.

Other pathologists have given arsenical preparations a trial in this disease; their inutility and danger should prevent the repetition of them.

§ 739. The knowledge of some varieties of ichthyosis may be attained by reading the works of different authors.* But one of the most remarkable cases is certainly that of the Lamberts, so accurately detailed by Tilesius† and Bu-

* Panarolus, *Jatrologismorum, seu Medicinalium Obs. Pentecostæ quinque, &c.* Rom. 4to. 1652.—Van der Wiel, *Obs. Rarior.* 8vo. Leidæ.—Donati, *De Historia Med. Mirabili Opus.* Mant. 1586.—Schenck, *Obs. Med. Rar.*—Janin de St. Just, *Journal Compl. des Sci. Med.* Paris. vol. v.

† Tilesius, *Ausfuehrliche Beschreibung und Abbildung, &c. &c.* fol. Aetenb. 1802.

niva.* M. P. J. Martin recently observed a singular variety of this disease, in which the skin was covered by small prominent scales, interspersed with large hairs like those of the wild boar.†

HORNY APPENDAGES.‡

Syn.—*Cornua. Horns.*

§ 740. Under the denomination of horny appendices are designated accidental productions of the skin, often conoid, of various sizes, projecting from the surface of this membrane, and formed of a substance analogous to that of the nails.

These are *solitary* or *multitudinous.*

§ 741. *Solitary* horny growths are usually observed on those parts of the skin covered by hair, or which have numerous sebaceous follicles. Sir E. Home§ thought that they were always the result of disease in the follicles. Sir A. Cooper‖ gave a representation of two cases of this horny substance, growing from the cavity of one of the follicles. The simultaneous development of follicular tumours and of these horny productions, is often observed. Some facts tend to establish that horny lamina may grow from cicatrices on parts of the skin previously changed, or even healthy to all appearance.

§ 742. The horny productions secreted by the internal surface of a follicle are at first soft, afterwards becoming hard and resistent. They then pass beyond the surface of the skin, and may acquire considerable dimensions. They seldom, however, exceed six or seven inches in diameter at the base, or five in length. The name of *ram's horn ichthyosis,* by which they have been designated, appears very inapplicable, since their mode of development differs essentially from that of ichthyosis, and they often resemble any thing rather than a ram's horn.

When small and recent, these horny productions are enveloped by a thin membrane, giving the appearance of being

* Buniva, *Part. les Plus Remarq. de Jean et Richard Lambert. Mem. de l'Acad. Imp. des Sciences, Lettres a Beaux Arts de Turin.* 4to. Turin, 1811.

† *Medical and Chir. Trans.* v. ix. part i. p. 53.

‡ Follet, 4to. Paris, 1825.—Dauxais, *Des Cornes,* 4to. Paris, 1820.—Caldani, *Mem. della Societa Italiana,* v. xvi. p. 126.—Meckel, *Sur les Cornes Accident. en Partic. qui viennent au Gland chez l'Homme. J. Compl. de Sci. Med.* tom. iv.—Bertrand, *Arch. Gén.* tom. v. p. 534.

§ E. Home, *Philos. Trans.* 1791.

‖ Vide *Surgical Works.*

encysted. Afterwards, this membrane only covers their base. They do not extend beyond the depth of the skin inwardly, in the substance of which they seem to be imbedded. Some are moveable, and participate in the impulse the skin receives from the subcutaneous muscles. The kind of cyst, in the cavity of which they seem to be implanted, is occasionally the seat of chronic inflammation, which may terminate in ulceration to a greater or less extent.

Professor Dubois had an old woman under his care in the *Perfectionnement*, who had on her forehead a conoid horn, six inches in length, having a base of six or seven inches in diameter. There is a cast of it in the cabinet of the *Faculté de Médecine*. Solution of continuity and contusion of the skin had preceded the growth of this production. The patient complained of constant racking headach. The summit of the horn was solid, the base was more transparent, and of softer consistence. Circular cones indicated the successive deposits of the matter of formation, presenting the same inequalities as are observed on the horns of ruminating animals. The epidermis was carried round the base of the tumour, the same as it is round the nails at their insertion into the skin; it passed some lines beyond the chorion. Portions of this growth, when burnt, gave out an odour like that of horn when submitted to the action of fire. The horn pushed aside the integuments of the forehead, and depressed the eyelids, so that the eyes were always closed. The head of this woman exhaled a fœtid odour.

§ 743. The etiology of these solitary horny productions has not been much studied. Women have them more frequently than men; and they are more common in old persons than in others.

§ 744. The form, dimensions, colour, and, above, all the consistence and structure of these appendages, and the peculiar odour produced by them on combustion, suffice to distinguish them from the dry, hard, pyramidal crusts, which sometimes surmount syphilitic, scrofulous, and cancerous ulcers. They are still further removed from fungous tumours of the dura mater, exostosis, &c. with both of which they have, occasionally, been confounded. Lastly, long appendages of the femur, humerus, &c., like those spoken of by Fallopius, Cabrol, Vicq-d'Azyr, &c. cannot well be confounded with these horny productions, even after they have pierced the skin.

§ 745. I have never seen the spontaneous removal of these

horns followed by a complete cure. Whenever it is wished to obviate the inconvenience or the deformity which these productions cause, the knife is always to be preferred to the caustic. After loosening the base by a circular incision, the follicle or cyst producing the horn should be removed, or completely destroyed. When this precaution is neglected, and the horn merely sawn or cut off, it is generally wholly, or partially reproduced. The utility of exutories, purgatives, and bleeding, in preventing the ulterior development of similar productions, is not demonstrated by rigorous experiment.

§ 746. Voigtel, Conradi, J. F. Meckel, Otto, &c. have published very interesting cases and remarks on *multiple* horny growths. In the cabinet of the École de Médecine are to be seen the hands and feet of an old woman, presented by Béclard, covered by horny laminæ of various sizes. The backs of the hands and feet are surmounted by horny productions of less dimensions than those situated on the soles and palms. These latter parts had five or six vegetations, as large as a finger, and from eight to ten inches in length. These productions were very friable, and exhibited identity of substance with the corn and epidermis. The relation existing between these growths and the skin is not so well known as that between the latter and solitary horns. (§ 742.)

§ 747. There is an alteration, seemingly a stage of transition, between these horny growths and ichthyosis. Persons are observed to have the skin covered with small horny projections, numerous and prominent, which cannot be removed without causing pain and the oozing of a reddish sanguinolent fluid. These appendages, or points, are often white internally, having a black surface. One of the most curious cases of this singular affection of the skin, is that of a man born in Suffolk, in 1710, to whom the name of *porcupine* was given. The whole surface of his body was covered with small excrescences of a sharp shape, and as large as packthread. The face, palms of the hands, and soles of the feet, were the only parts free from these points. They were of a reddish-brown colour, hard, and at the same time elastic, so that they caused a rushing sound when the hand passed over them. They were half an inch in length in some parts, and not so much in others. They appeared two months after birth, fell every winter, and were reproduced in the spring. In other respects, the man was healthy. He had six children, all having similar excrescences. A drawing of one of the

hands of the children was given in the Gleanings of Edwards,* and one of that of the father was in the Philosophical Transactions, (vol. lix. p. 21.)

§ 748. *Multiple* horny productions are frequently hereditary; of the nature and causes of their development we are ignorant.

This vicious conformation has as yet been subject to but few therapeutic experiments. Fabricius of Hilden says, (ct. ii. obs. 26, *Historia Admiranda de Puellâ Cornutâ,)* that a young girl having made use of evacuants, emmenagogues, and the thermal sulphureous and aluminous waters of Neuhaus, was freed, for some time, from these horny productions, with which her skin had been covered. The combined action of simple, alkaline, and vapour baths, will be advantageous, when these appendages are not very adherent.

CORNS.†

Syn.—*Clavi. Gemursa.*

§ 749. These are small, accidental productions of the epidermis; round, circumscribed, and very hard, usually observed on the upper or lateral parts of the toes, and sometimes on the soles of the feet, towards the anterior extremities of the bones of the metatarsus. Corns compress, irritate, inflame, and sometimes push through the skin, and may even alter the bones and subjacent parts.

§ 750. (c.) Pressure, from too small shoes or boots, immediately affecting the skin; or the toes pressing one against another, are the most common causes of corns. They may arise also from the effect of a seam or fold of the stocking.

§ 751. Corns are, in general, of the shape of the head of a nail; the epidermis forming them is so thick, that several successive layers may be removed by a cutting instrument. In the centre of these small epidermic productions, a horny point may be distinguished, whiter and deeper than the rest. The slightest pressure exercised on their surface causes acute pain. They are sometimes surrounded by slight ecchymosis, situated between the dermis and the semitransparent lamina

* Edwards (George,) *Gleanings of Natural History.* London, 1758, 60, 1764, 4to.

† Rousselot, *Méthode certaine sur le Trait. des Cors* La. Haye, 1762.—Lion, H. *Treatise upon Spina Pedum,* (Corns;) with plates. London, 1802.

of the corn; this is commonly in proportion to the thickness and substance of the little central callosity.

Corns of the lateral parts of the toes are usually situated beneath the projecting articular heads of the phalanges, where pressure is always stronger and more constant than elsewhere. These are almost always humid; their centre is depressed, forming a small cavity of a greyish colour, which contrasts with the pearly whiteness that the constant transpiration of the parts gives to the surrounding edges.

§ 752. Corns approach the *indurations* and *callosities* sometimes observed on the palms of artisans. Printers' workmen are subject to this partial thickening of the epidermis, and to painful fissures, produced by the alkaline preparations used in cleaning their types. Similar callosities are also formed round the heels, on the inner surface of the great toe, and lower surfaces of the others, on the head of the first bone of the metatarsus, &c. Callosities differ from corns, in not, like the latter, presenting a small, central, white cone, penetrating deeply, giving rise to the name of *clavi pedum*.

§ 753. Several portions of skin affected with corns having been submitted to maceration, it was observed that the epidermis very much thickened, depressed, and caused a thinning of the corresponding dermis; but I was not enabled to distinguish in the substance of this epidermic production, the vessels which some anatomists are said to have discovered.

§ 754. The development of corns may be prevented by wearing easy boots and shoes. This precaution is particularly necessary to persons who, from their station in life, are obliged to make long marches. They should also anoint the toes with tallow, as well as those parts of the shoes and stockings which come in contact with the most prominent points of the feet.

The acute pain produced by corns may be relieved for a longer or shorter time, by removing the most exuberant parts of these small eminences. This may be done by scissars, razor, scalpel, or convex bistoury, or even by the nails, after the corn has been softened by emollient cataplasms, gummy diachylon, soft wax, or the pediluvium. Two or three of these excisions, operated at intervals of from five days to three weeks, are sometimes sufficient for the cure of a corn consisting of a simple circumscribed callosity. It may also be detached from the skin by means of a short needle with a blunt point, fixed in a round flat handle; the skin should

be afterwards anointed with mutton fat, and covered with soap plaister or diachylon.

§ 755. Plaisters of mucilage, ammoniacum, soap, galbanum, different kinds of ointments, oiled cloths of all kinds, the fœcula of houseleek, the pellicle known under the name of *baudruche*, cotton-wool, simple fine rag, placed around the toes, may be all usefully employed in the treatment of corns, provided the boots and shoes are at the same time improved. Corns may be advantageously protected from pressure by covering them with two plaisters of diachylon, one of which, spread on a supple but thick substance, such as buffalo hide, pierced in the centre by an aperture large enough to admit the corn, is to be covered with the other without a hole.

Corns have been treated also by caustics: potash, muriate of antimony, nitric and sulphuric acids, nitrate of silver,* &c. These means are dangerous in ignorant hands, and excision is therefore preferable.

CICATRIX.†

Syn.—*The Healing of Wounds. Scar. Seam.*

§ 756. When the tegument, and even the subjacent parts, have been destroyed, from the effect of a wound, ulcer, or gangrene, a new substance is produced analogous to that which has been destroyed, always the same throughout its whole extent, whatever the diversity of the parts covered by it. This accidental reproduction of the skin has been termed *cicatrix*.

§ 757. After the primary symptoms, which vary according to the nature of the destroying cause, a series of secondary phenomena are observed, the manner of appearance of which is always the same: 1°, the production of a plastic layer, causing agglutination; 2°, the formation of fleshy granulations, and the secretion of pus; 3°, lastly, the cessation of this secretion, and achievement of the cicatrix.

* The treatment by arg. nit. is decidedly the most successful, and perfectly safe; in the course of a few weeks the whole of a corn may be entirely removed by successive layers, giving no pain to the patient, and without being reproduced for several years, when the same treatment should be employed.

† Moore, *On the Process of Nature in filling up of Cavities, healing of Wounds, and restoring of Parts, which have been destroyed in the Human Body.* London, 1782.

The plastic layer, like that which constitutes false membranes, is at first inorganic, but soon becomes organised, and covered with small, conical, red granulations, forming the membrane of fleshy germs. This membrane is cellular, vascular, very contractile, and prompt of destruction and reproduction. It resembles then a mucous membrane; is soon covered by a distinct epidermis, and assumes the appearance of the normal skin.

The dermis of cicatrices is, at first, extremely thin, possessing but slight resistance, but supplied with blood vessels, and is consequently redder than the normal dermis; but it becomes gradually less vascular, whiter, more solid, and firmer, than the latter; it has a shining brilliant aspect, which very probably depends on the absence of the tactile papillæ and hair, as well as on the tension of the new tegument, and its close adhesion to the subcutaneous cellular tissue. The reproduction of the epidermis and of the mucous network takes place by slow degrees; the layers first formed are easily detached from the dermis. The pigment is developed still more tardily. Bichat says this part of the skin is not reproduced after destruction, and that cicatrices are always white; but this assertion is erroneous, for the cicatrices of small-pox are black in negroes, and those formed after a solution of continuity of the integuments are always as dark as the rest of the skin.

§ 758. The dermis of completed cicatrices is less elastic, and more intimately adherent to the subjacent cellular tissue, than that of the normal state; it cannot, in fact, be removed without carrying this tissue with it. It has less firmness than the old dermis, as is seen in the facility with which the new production is torn, and exemplified by ulcers of the skin, by which it is sometimes entirely destroyed.

§ 759. Cicatrices are less sensible than the healthy skin. They are devoid of nervous papillæ; perhaps, receive fewer nerves than the skin. They differ very little in other respects from the skin, unless when this membrane has been destroyed throughout its whole thickness.

§ 760. The number, situation, size, form, and depth of cicatrices, may, to a certain extent, assist the pathologist in deciding on the nature of the alterations which have preceded them: such as variola, vaccina, zona, serpiginous syphiloid disease, &c.

§ 761. When an irregular cicatrix impedes the movement of the adjacent muscles, this inconvenience may be obviated

by a surgical operation, like that practised by Fabricius of Hilden,* Dutertre,† and Mr. Earle.‡

§ 762. In thus concluding the anatomical and pathological study of the skin, it may be remarked, that it is not rare to meet with cutaneous *productions*‖ in the interior of the body, and that these accidental tissues, ordinarily found in the ovaries, have been attributed to imperfect attempts at the formation of a fœtus, engendered or enveloped in the fœtal state by the individual containing them. I may observe also, that skin drawn into the interior, from the effect of a cicatrix or any other morbid disposition, is not long, in general, in becoming *transformed* into mucous membrane, by a mechanism opposite to that, by virtue of which the latter membrane assumes the aspect and structure of the skin, when retained on the external surface.

* Fabricius (Guliel.) *Cent.* i., *obs.* lxxxiii.

† Dutertre, *Reflexions et Observations sur les Plaies en General.* 4to. Paris, 1805.

‡ Earle, *On Contractions after Burns, or extensive Ulcerations.* Med. Chir. Trans. v., p. 96.

§ Bricheteau, *Obs. des Kystes Dermoides et Pileux, suivie de quelques Remarques sur ces Productions Organiques.* Journ. Complementaire des Sciences Med. v. xv., p. 298.

END OF PART FIRST.

SECTION II.

ALTERATIONS OF THE DEPENDENCIES OF THE SKIN.

§ 763. The nails and hair are the only dependencies of the skin in the human species. In the study of the alterations produced in the nails and hair, care should be taken to discriminate between affections of the secreting organ, (the *matrix of the nail*, and the *pilous follicle*,) and defect of conformation or texture in the part produced, (the *nail*, and the *hair*.)

CHAPTER I.

ALTERATIONS OF THE NAILS.*

§ 764. The skin, which produces, and which is in contact with the nail, ingeniously designated by Dupuytren the *matrix* of this organ, is liable to different degrees of inflammation (*onyxis*,) and to several, other diseases common to it and to the skin of other regions of the body (*puncture, ecchymosis*, &c.)

§ 765. Alterations of the nails depend for the most part on some affection of the skin producing them (*absence, thickening, increased growth*, &c. *of the nails*.) They may, however, be modified in their conformation and structure, without the matrix experiencing any appreciable lesion. Such in particular is the case, in certain affections of the nails, produced by the continual contact of alkalies, acids, salts, or colouring matters.

ONYXIS.†

Syn.—*Onychia. Whitlow.*

§ 766. The matrix of the nail may inflame, during or after the development of several cutaneous phlegmasiæ. This soft,

* Franckeneau, *Onychologia Curiosa, sive de Unguibus Tractatio Physico-medica, non tantum eorum Physiologiam*, &c. Jenæ, 1646, 4to.—Werner, *Diss. de Unguibus Humanis*, &c. 4to. Leips. 1773.—Blech, *De Mutationibus Unguium Morb.* 4to. Berolini, 1816.—Patissier, *art.* Ongles, *Dict. des Sciences Med.*

† Wardrop, *Diseases of the Toes and Fingers.* Med. Chir. Trans., 1814.—Royer Collard, De quelques Alterations des Ongles, &c. (Rep. Gen. d'Anatome, &c. 4to. vol. 2, 1826.)

pulpy, and vascular tissue, does not, however, present such a variety of inflammatory forms as the skin of other regions of the body. Under the name of *onyxis*, I designate collectively all inflammations of that portion of the dermis in contact with the nail.

§ 767. Onyxis may be partial or general; it may be developed round the edges, or at the root of the nail. It presents certain characters, according to the cause which has produced it, varying, as it assumes an acute or chronic form.

§ 768. 1°. One of the most common varieties of onyxis is that occasioned by contusions, and particularly by punctures beneath the nail. These lesions, in appearance so slight, are usually followed by acute inflammation of the matrix of the nail, characterised by heat, vivid pain, and afterwards by a layer of pus deposited between the nail and the skin. A purulent serosity is also secreted around the nail, between it and the epidermis, which becomes detached, after being forced up by the pus. Lastly, the nail drops off, if the inflammation has been acute; the dermis is denuded, and a new nail is shortly produced.

This inflammation, which several pathologists have confounded with panaris, or phlegmon of the finger, is essentially distinct from the latter affection; it frequently resists the effects of emollient applications, local baths, topical bleeding, and similar means. If produced by the introduction of an extraneous body under the nail, the latter should be scraped with a bistoury, until it is so thin as to make but little resistance; a slight incision being then made over the irritating body, it is easily withdrawn, giving a free issue to the secreted pus. This operation is far preferable to the simple vertical incision of the nail.

§ 769. When this kind of onyxis is caused by contusion, the nail may be broken, its matrix deeply injured, furnishing for some time a very fœtid sanguinolent secretion; the subcutaneous cellular tissue often becomes the seat of a very painful inflammation, which must be treated with rest, general and topical bleeding, emollient baths, and cataplasms. When the inflammatory symptoms are dissipated, lotions containing the chloride of lime, may be successfully employed in getting rid of the fœtid odour exhaling from the part.

§ 770. 2°. A second variety of onyxis, not less remarkable, is that known as *the nail growing into the flesh*,* (*Resserre-*

* Robbe, *Que l'Affection désignée sous le Nom d'Ongle rentré dans les Chairs, &c.* 4to. Paris, 1826.

ment de l'ongle, Plenck; *Ongle incarné,* Monteggia.) This inflammation is frequently the result of the mechanical irritation produced by the nail, in consequence of its malconformation, too great hardness, or its irregular and too great development, &c. It may be caused also by tight shoes compressing the toes, at the same time obliging the soft parts to fold over the cutting edges of the nails.

§ 771. The great toe, particularly its inner side, is almost always the seat of this variety of onyxis; it is much more rare on the other toes, and the fingers are never affected with it. At the outset, the patient experiences pain in walking, but as this is slight and supportable, he does not give the foot rest; the pain soon increases, the skin gives way to the pressure of the nail, and walking is more difficult; the ulceration throws out a fungus, so painful as sometimes to disable the patient from standing. In a more advanced stage the inflammation reaches the root of the nail, the adhesions of which become loosened. The patient walks only on his heel; the irritated skin secretes abundance of sanious pus; soft, fungous growths are developed, and the pus exhales a more fœtid odour as it becomes mixed with the perspiration of the foot. Tormented by the pain, the patient raises the edge of the nail, cutting or scraping it, thus procuring temporary relief. Lastly, if a long time neglected, ulceration, attended by the growth of enormous vegetations, takes place, and the inflammation sometimes reaches the periosteum.

§ 772. It is said that certain cases of this species of onyxis have been mistaken for gout by an inexperienced practitioner. Such an error can only arise from a superficial examination of the affected parts. It is more difficult to distinguish this from the other varieties of onyxis. However, M. Dupuytren judiciously observes, that in partial and *lateral* onyxis, produced by the mechanical irritation of the nail, the fungosities produced are found anteriorly, and at the sides of the nail, while in onyxis, independent of this cause, it is at the base of the nail that these vegetations are observed.

§ 773. When lateral onyxis has existed for only a few days or weeks, if the inflammation has been produced by painful pressure, exercised by the edges of the nail being too hard and too long, the excision of this appendage, the application of leeches to the plantar surface of the toes, combined with the employment of emollient baths and cataplasms, suffice to prevent the progress, and obtain the cure of the disease; but when one of the lateral edges of the matrix of the nail is

deeply fissured, ulcerated, or covered by vegetations, recourse must be had to different operative proceedings. *Method of Albucasis and of Paul of Ægina:* The nail being raised with a stilet, and completely disengaged from the surrounding flesh, the fungosities are removed by a bistoury, and a liquid caustic is then applied. If the disease consists of only malconformation of the nail, the diseased skin may be cauterised with a red iron; as has been done by Mr. Wardrop. *Practice of Ambrose Paré:* This surgeon recommends a straight bistoury to be thrust in towards the base of the soft parts covering the nail, dividing them from before to behind, and then to cauterise them with a white hot iron. This proceeding, recently employed with success by M. Lisfranc, and Brachet, is particularly applicable to recent lateral onyxis. *Desault's Method:* Fabricius ab Aquapendente has advised the introduction of small portions of lint under the edge of the nail, raised and freed, restraining the fungous growth of the flesh by compression. Desault modified this proceeding, and placed beneath the nail *growing into the flesh*, a small lamina of iron, varying in size to the extent of the incarnated edge of the nail, and which, curving over the side of the toe, defends it from the irritating cause, compressing at the same time the fungous growth. Richerand proposed to substitute lead for the plate of iron, towards the end of the treatment. This method is very painful, difficult of execution, and requires the patient to keep his bed for some months, and the disease is frequently reproduced. *Practice of Messrs. Guilmot and Faye:* The former advises the nail to be cut from the moiety of the edge opposite to that which is diseased, to its anterior edge, a section which should be accomplished by degrees, without tearing the fine laminæ. The nail, ceasing to be pressed by the healthy side, (which is detached from the flesh,) the cure takes place. M. Faye, after scraping the back of the nail very thin with the blade of a knife, makes a V incision, with loss of substance, on the free edge of the nail, nearer the diseased than the healthy side; he then pierces the nail on either side of the division, and passes a metallic thread through both edges of the incision, by which means they are brought, gradually, close to each other. The *imbedded* portion of the nail thus removed from the ulceration, the cure is obtained. These methods are applicable to recent cases of *incarnation* of the nail, without fungosities. *Method of Dupuytren:* The patient being placed in a chair opposite the surgeon, the latter, furnished with a pair of strong strait scissors having one

blade very sharply pointed, places this beneath the nail, and by a rapid motion carries it towards the centre of its base, dividing the nail from front to back into two parts; he then seizes the anterior part of the diseased portion with a pair of forceps, or both parts, if he wishes to remove the whole nail. To operate the removal, he everts each half on itself, destroying its adhesions. If the soft parts are elevated, he passes a round cautery over them. This is a painful proceeding, but it procures a prompt and permanent cure.

§ 774. Onyxis, like many inflammations of the skin, may be developed without any apparent cause, and in particular, independent of those which produce the two preceding varieties. In this case, it is always a chronic affection.

This variety of onyxis, indicated by Wardrop as *onychia maligna*, and described with much detail by Dupuytren, in his clinical lectures, has been recently studied by M. Lêlut,* who has observed, and represented with great accuracy, the successive alterations of the matrix. This inflammation, which more frequently affects the great toe and thumb than the other toes or fingers, is characterised at its outset by slight tumefaction, and a red circle round the roots of the nails. The kind of decussation formed by the skin at the anterior concavity (of the nails) soon changes into a purplish red swelling, more elevated and highly sensible, at the points where the nail seems most adherent, and this is not long in being surmounted by bloody, mamillated ulcerations. A suppuration, usually very abundant, of a brownish, greyish, or greenish yellow, very fœtid, and sometimes mixed with blood, particularly when the inflamed surface remains exposed to the air, exudes from between the root of the nail and the skin. The nail thickens, tarnishes, and turns of an earthy yellow, or blackish green colour, becomes detached from its root, inclining to whichever side it is most adherent. The greater part of the root soon becomes denuded; lastly, it falls spontaneously, or is removed by slight tractions, sometimes leaving small portions of its substance on the anterior and posterior parts of the matrix. Thus exposed, the latter presents a red, unequal, inflamed surface, environed by an inflammatory swelling, which bleeds from the contact of the air, or movement of the diseased limb. Commonly, large horny productions soon replace the fallen nail. There are then observed on the matrix small yellowish lamellæ, at first rather

* Lêlut, *Etudes Anatomico-Pathologiques sur l'Onglade*. Inedited.

soft, and may at times be mistaken for inspissated pus; they are of a brownish or greenish yellow; generally grow obliquely, but sometimes perpendicularly from the centre or angles of the matrix. Two or three horny laminæ are at first perceived, but often unite, forming one, more or less irregular. These productions sometimes appear to keep up the inflammation; and the finger, as Wardrop has remarked, assumes the form of a spatula. The inflamed skin around these horny productions bleeds when exposed to the air, and is intolerably painful. Red streaks on the affected limb announce that the inflammation has spread to the lymphatics or veins; and if the disease occupies the toes, walking is impossible. A general febrile state may declare itself, and the want of sleep is not always to be remedied by the use of narcotics.

This variety of onyxis cannot be confounded with the two preceding; however, the imbedded nail, long neglected, or aggravated by injudicious applications, may produce it consecutively. This chronic inflammation of the whole matrix is a tedious and painful disease. In one case, a treatment of six months scarcely produced any amelioration of the affection.

§ 775. Chronic inflammation of the matrix rarely yields to antiphlogistic treatment. Mr. Wardrop has obtained some successful cures by the employment of mercurials; in one case* their action was not beneficial. If the antiphlogistic treatment is unsuccessful, which it generally is, and if the continual reproduction of horny lamina prevents the cicatrisation of the ulcer, the matrix of the nail must be extirpated.

To practice this operation, Dupuytren seizes the extremity of the affected toe or finger between the thumb and index of the left hand, and with a convex bistoury in his right, he makes a semilunar incision, having its concavity situated anteriorly, on the dorsal face of the toe, about four lines behind the free edge of the skin which covers the nail; he afterwards seizes the latter with a pair of forceps, throwing it back upon itself. If it is preferred to divide the nail into two halves, these are removed one after the other; the wound made in this operation cicatrises in the space of two or three weeks at most.

§ 776. When chronic inflammation of the matrix of the nail is developed in scrofulous children, it is sometimes complicated with swelling and softening of the corresponding phalanx of the finger. If the affection of this seems to be incu-

* Case cciv. vol. ii.

rable, amputation may be performed, as recommended by M. Baffos, under similar circumstances.

§ 777. 4°. Besides these three principal varieties of inflammation of the skin in contact with the nail, some others have been observed. Thus, in lepra, psoriasis inveterata, chronic eczema of the fingers, &c. the edges of the matrix are sometimes attacked with a chronic inflammation analogous to that of which the adjacent skin is the seat.

§ 778. Astruc, Cullen, Bertin, and several writers on syphilis, have designated, under the name of *onglade*, another variety produced by the venereal virus; but they have not given any case indicating the characters by which it is to be distinguished from other kinds of chronic onyxis. This syphilitic onyxis is always consecutive to papules, pustules, squamæ, or tubercles developed on the arc of the skin which surrounds the nails. When the existence of one of these primary lesions (§ 570.) has been ascertained, it is only necessary to prevent the exciting cause from acting on the matrix. It is more difficult to discriminate between ulcerated onyxis produced by syphilis, and chronic onyxis independent of this disease; the characters of the former will be indicated, however, by the simultaneous existence of some other lesion of a syphilitic nature.

Syphilitic onyxis should be treated from the commencement by antiphlogistic and other measures appropriate to this disease; if the matrix is deeply altered, ablation must be practised.

§ 779. Several cases of *incarnated nail*, onyxis caused by external violence, and chronic inflammation of the matrix of the nail, are to be found in the works of Royer Collard, and Robbe, and in Dupuytren's Clinic, which may be consulted with advantage.

SUBUNGUEAL ECCHYMOSIS.

§ 780. *Contusions* of the dorsal extremity of the finger extend through the substance of the nail to the pulpy tissue which is covered by this organ, causing ecchymosis, and more or less considerable effusion of blood there. When the nail is loosened at the root, it soon becomes detached from most of its adhesions; it falls, and is soon succeeded by a new nail. In this case, the treatment should be restricted to soothing the local irritation when great, and favouring the absorption of the infiltrated or effused blood, leaving to nature the double process of eliminating the old, and regenerating the new nail.

§ 781. When the nail is rent and imperfectly torn up, in wounds and crushing of the fingers, the isolated portions should be cut off with sloping scissors, but the other parts should be respected, and left to fall spontaneously. By removing the parts which yet adhere, intense pain is produced, and the inflammation which supervenes is needlessly increased.

§ 782. The matrix, after the evulsion of the nail, may become the seat of *hæmorrhage*, but this is easily subdued by pressure.

ACCIDENTAL CONFORMATION OF THE MATRIX OF THE NAIL.

§ 783. The nails are sometimes observed to be uncovered towards their roots, as if the skin retracted towards the fingers. *(Ficus unguium.)* I have remarked this particularly in curriers. At other times, on the contrary, the skin and epidermis are considerably prolonged over the nail, forming a sort of tunic, which has been termed *pterigium unguis*.

DEFECTS OF CONFORMATION AND TEXTURE OF THE NAIL.

§ 784. The nails may be wholly deficient, or but partially developed. This defect of conformation, extremely rare, appears, in certain cases, to be hereditary. Bleck says there is in the Berlin Museum a fœtus presenting this abnormal disposition of the fingers.

§ 785. The *accidental* absence of the nail may be the result of acute or chronic onyxis, or of its evulsion. If the skin which secretes it has been superficially inflamed, it is *reproduced*, but not always in a regular manner.

§ 786. *The fall of the nail* is often the result of acute or chronic imflammation of the matrix, consecutive to contusion, burn, or frost-bite of the finger, or arises from no appreciable cause. The nails, like the hair, in certain kinds of baldness, may become detached without any trace of inflammation.

§ 787. The nail is sometimes *placed* in an injurious position. Bartholin affirms having seen a young girl, whose nail of each index-finger was situated on the lateral part of the finger; and in one subject, where the fingers were wanting, the same anatomist saw the nails implanted on the imperfect hand. *(Hist. Anat.* cent. ii. liv. 44. tom. i. p. 240, and seq.)

§ 788. *Supernumerary* nails are also met with in six-fingered persons. M——, residing in rue d'Artois, had two supernu-

merary fingers joined to the thumbs; one of them, consisting of a single phalanx, less voluminous than the last of the little finger, was articulated with the inner lateral surface of the first metacarpal bone; the other finger, composed of two phalanges, not so long as those of the thumb, to which it was attached, was united in the same way to the corresponding metacarpal bone. Both were provided with nails analogous to those of the other fingers.

§ 789. *Abnormal enlargement of the nail,** constitutes a species of deformity not always having the same origin.

1°. *In old people,*† when the nails are long neglected, they acquire considerable dimensions. Very recently, I had the care of an old man at the Charité, who had for some years been the subject of prurigo and lichen, and, to appease the vivid and intolerable itching of which he was the victim, he had allowed his nails to grow till they had become quite talons. In 1719, Rouhaut, chief surgeon to the king of Sardinia, sent to the Academie des Sciences, at Paris, a description and drawing of monstrous nails, occurring in a poor woman of Piedmont. The largest of all was the nail of the left great toe. From the root to its extremity it was four inches and a half in length; the laminæ composing it were placed one over the other, like the tiles of a roof, with this difference, that the superior passed beyond the inferior laminæ. This nail, and some others, presented inequalities in their thickness and curvature, depending on the pressure of the shoe and neighbouring toes. My friend, M. Bricheteau, a distinguished physician of the dispensaries, sent me two monstrous nails, taken from the great toes of an old woman in the Salpétrière. These nails, of great thickness, were three inches in length, and twisted spirally like the horns of a ram. Saviard also saw at the hotel Dieu, in 1687, one who had, on each great toe, instead of a nail, a horn like that of a ram, and which formed a cross, the extremities of which extended to the metatarsus, respectively covering all the toes of each foot.‡

2°. Malformed nails, of great size, have been remarked both in *infants* and adults.‖ Ash published, in the Philosophical Transactions, the history of a girl aged 12 years,

* Several authors have given figures of these affections. Vide *Commercium Litterarium. Eph. Nat. Cur. Bartholin, Malpighi, Oper. Posthum.*

† Morgagni, *De Sed et Caus. Morborum.*

‡ Saviard, *Nouveau Rec. d'Obs. Chirurg.* Paris, 1702.

‖ *Ephem. Nat. Cur.* Dec. 2, Ann. i. p. 385.

who had horny vegetations on almost all her joints; they were mamillated at their base, having hard summits. The fingers and toes presented vegetations of this nature; the knees and elbows had many of these horny productions, some four inches in diameter. These vegetations were partially shed and reproduced. Musæus* gives the description of a similar case. The nails of a girl, 20 years of age, became so large, that some, particularly on the hands, acquired the length of five inches. They were distinctly observed to be formed of several whitish layers internally, being of a reddish grey superficially, presenting here and there black points. These nails fell off in about four months, and were succeeded by others. Horny laminæ were also manifested on the elbows, knees, and shoulders; exactly resembling the degenerated nails. The latter formed a kind of talons, and were sensible only at their insertion into the skin. The same girl had horny vegetations on several other parts of the body, particularly on the backs of the hands; one of them four inches in length; they first shewed themselves after recovery from the small-pox.

3°. Great enlargement of the nails has been sometimes observed in individuals attacked with *chronic rheumatism* or *anchylosis*. The skeleton of Simorre, deposited in the cabinet of the École de Médecine, Paris, presents a remarkable example of universal anchylosis, with considerable development of the nails. The crooked and anchylosed fingers are terminated by nails more than a décimètre in length, and of nearly equal thickness. The nails of the toes are of the same anormal development. Mélin, called the *nail girl*,† exhibited quite an analogous, and not less curious appearance.

§ 790. Whether this anormal development of the nail be the result of neglect, or an augmented secretion of the matrix, the portion which projects beyond the fingers or toes should be excised, so that it may not prevent the motions of the hands or feet. If the nail has no very considerable thickness, this may be done with a pair of strong scissors, after it has been softened by the employment of the footbath. Sometimes recourse is obliged to be had to the use of pincers, or a small saw, to effect the excision, when the horny laminæ are very thick and resistent.

§ 791. The development of the nail may be *insufficient*. In some paralytics, the secretion of the nail seems to be di-

* Musæus, *Diss. de Unguibus Monstrosis*. Hafniæ, 1716.
† Saillant, *Mémoire sur la Maladie de la Femme, dite aux Ongles*. Paris, 1776.

minished. When the matrix has been partially removed or destroyed, the nail is always irregular or incomplete.

§ 792. The form of the nail may be altered as well as its dimensions. Royer-Collard cites the case of a young girl whose great toe nail was raised by an osseous tumour, which had existed for several months on the phalanx of the toe. I have seen the bases of deformed nails, pushed up by warts growing from a portion of the matrix, near the free extremity. Louis Lion, aged 20, a saddler, had on the index-finger of the left hand a large wart, occupying the whole extremity of this finger; it was made up of several warts developed under the inferior edge of the nail, which was thrust up almost vertically. This unequal, hard, almost horny wart, was of a greenish black colour, and extended along the outer side of the nail, (which was imbedded in its substance,) beyond its root; several isolated warts existed on the same and other fingers, principally the medius. The whole were destroyed by nitric acid.

§ 793. The nails are sometimes strongly curved, (*Ungues adunci*, Hipp.) in phthisical subjects arrived at a high degree of marasmus. This remark, made by Duret, in his *Commentaries on Hippocrates, (phthisici unguibus sunt more cujusdam serræ uncinati,)* is applicable to several other diseases.

§ 794. When the matrix has been altered, the new nail has sometimes one or several longitudinal grooves, or grows in the form of an irregular cone. Lastly, nails which have been divided longitudinally, may overlap at the corresponding edges, if they continue to enlarge.

§ 795. Besides these defects of conformation, the substance of the nail may be altered, *(defædatio, degeneratio, scabrities unguium,)* thickened, softened, and as if eroded. This affection, which is almost always the result of chronic onyxis, has been also observed in persons affected with plica, and delineated by De Lafontaine.*

§ 796. It has been already remarked, that after chronic onyxis, a considerable portion of the reproduced nail does not possess either the transparency, or shining, polished aspect of the primitive one. A very different cause, the action of acidulated water, sometimes alters the nails of artisans. There is then distinguished on the surface of the horny laminæ a number of parallel lines, running into one another, and forming a sort of brush-like appearance.

* De Lafontaine, *Traité de la Plique Polonaise.* Traduct. Franc. Paris. 1808.

§ 797. There are cases in which the horny substance of the nail is altered without any apparent cause, or evident affection of the matrix. Bleck reports a case, the more remarkable from its being hereditary.*

§ 798. Many anatomists have supposed the nails to be the result of a super-position of several horny laminæ. I saw this disposition of the nails in a cartwright, aged 70, who was admitted into La Pitié, on account of chronic cystitis. The nails of the hands of this patient were thickened, and formed of several softened horny laminæ deposited one on another. The anterior edge of some of the nails was worn obliquely into a diamond shape, exhibiting distinctly the different layers of which they were composed, the more superficial being the larger. The free surface of the nail of the ring finger of the left hand presented inequalities, and that of the right hand a longitudinal and angular furrow.

§ 799. *Accidental coloration of the nails.* Loder observed the nails of the hands of a paralytic to have a chalk-white tint. The small white patches which sometimes appear on the nails, in spring, the ancients called *flores unguium.* Fallopius says that, in his time, as in ours, the vulgar gave them the name of *dreams*† (mendacia.) They are hardly worthy of notice.

§ 800. In icterus, the nails have sometimes a yellow appearance; they are black in subungual ecchymosis; livid in the access of ague and cyanosis; of a milky white in anasarca, &c.‡ but these different tints are given to them by the coloured matrix.

§ 801. Lastly, accidental coloration of the nails is produced by certain inorganic substances; they turn brown on the contact of the arg. nit., black when impregnated by the sulphurets of lead, mercury, &c.

§ 802. *Reproduction and accidental production of nails.* When the nail is torn away by violence, or detached by disease, a new nail is slowly formed, more or less resembling the old one; but it is only in very rare cases that nails become developed on the phalanges which are not naturally provided with the vascular spongy tissue constituting the matrix of the nail. Tulpius appears to have been the first who observed this

* Vide *op. cit.*

† *Gifts* in England.

‡ Double, *Signes Séméiotiques Fournis par les Ongles.* (Jour. Gener. de Med.) Vol. xxxiii. p. 397.

pathological phenomenon.* Marèchal de Rougères,† Voigtel,‡ and Ormancey,‖ have since published cases of similar productions on the second phalanges of the fingers, after the loss of the first. A woman had an ulcer for several months on the end of the middle finger of the left hand, following a panaris, which had caused the loss of the third phalanx, the whole articular surface of the second, and part of the compact substance of this bone. On inspecting the ulcer M. Ormancey thought it was kept up by gradual exfoliation of part of the bone; he extracted the portion in sight with a pair of forceps, afterwards applying to the ulcer a pledget of lint, lightly spread with saturnine ointment, maintained by a suitable bandage. This dressing was continued till cicatrization was completed. Some months subsequently, the patient came to M. Ormancey, who observed, not without astonishment, that the nail had been reproduced, but, instead of following the usual direction, it inclined from the dorsal surface towards the palmar face of the finger, as if to protect the little stump. An analogous case occurred recently at La Charité. A woman having had paronychia, had entirely lost the bone of the last phalanx of the index-finger. The stump, soft and fleshy, which covered the extremity of the second phalanx, was terminated by a small blackish nail, carved in the form of *ergot*. It is probable that in this case the soft parts of the third phalanx and matrix had not been totally destroyed.

CHAPTER II.

ALTERATIONS OF THE HAIR.§

§ 803. Most alterations of the hair, like those of the nails, result from affections of the roots, or productory organs. The

* Tulpius, *Obs. Med.* Ams. 1641.
† Journ. de Med. v. xxvii. p. 177.
‡ *Handbuch der Pathol. Anat.* Halle, 1805.
‖ *Journ. de Med. de Chir. de Pharmacie, &c.* Paris, 1809.
§ Meibomius, *De Pilis eorumque Morbis.* Helmstat, 1740.—Pfaff, *De Varietatibus Pilorum et Prater Naturalibus.* Hales, 1799.—Wedemeyer, *Hist. Path. Pilorum.* Gott, 1812.—Buek, *Diss. de Pilis eorumque Morbis.* Halle, 1819.—Villermé, *art. Poil. Dict. des Sci. Med.*

pilous follicles inflame, in several phlegmasiæ of the hairy scalp, in favus and granulated tinea, some impetigo, &c. Plica, according to Schlegel, is but a peculiar inflammation of the bulbs of the hair? In admitting the opinion as probable, it should be remarked that observations made on other inflammations of the pilous bulbs are not favourable to it. In fact, in impetigo of the scalp, in favus and granulated tinea, syphiloides, &c. the inflammation of the bulbs of the hair causes its fall, and not its elongation and intrication. The new hair, far from being larger than in the healthy state, is nearly always fine, slender, and void of colour. Indeed, inflammation of the pilous bulbs is rather admitted by induction than ascertained by ocular demonstration; on account of their small volume in man, they are submitted with difficulty to anatomical research.

§ 804. The pilous follicles may become atrophied, or destroyed, in consequence of pressure exercised upon them by subcutaneous tumours, (§ 695;) and still oftener, from the effects of tinea favosa and ulcerated syphiloid disease.

§ 805. The functions and diseases of the hair have but little influence over other organs. Yet, some observations tend to prove that it is injurious, in some acute diseases,* to cut the hair; the subsequent growth of this appendage calling on the follicles for a vital activity, the effects of which are felt in internal organs.

§ 806. Comparative pathology might furnish some useful facts, as to diseases of the hair, yet has been but little cultivated with this view. It may be remarked, however, as a curious fact, and as assisting to throw light on the nature of plica, that M. F. Cuvier has observed the bulbs of the feathers, in several birds, to be highly injected and inflamed.

PLICA.†

Syn.—*Plica Polonica.*

§ 807. With J. A. Schlegel, I designate under the name of *plica* a peculiar inflammation of the pilous bulbs, commonly accompanied with an abnormal development and intrication of the hair. This disease is sometimes complicated with chronic inflammation of the matrix of the nail.

* Lanoix, *Obs. sur le Danger de Couper les Cheveux dans quelques Maladies Aiguës.* Mem. Soc. Med. d'Emulation de Paris, v. 1, p. 1.

† Schlegel, Jena, 1806.—Jourdan, *art.* Plique (*Dict. Abreg. des Sciences Med.*)

§ 808. Plica may be preceded by other affections of more or less consequence. It often declares itself after acute fever, attended by viscous sweat. The scalp becomes painful to the touch. The bulbs of the affected hair are tumefied, and filled with a greater quantity of matter than they generally contain; they are so sensible that the slightest movement of the hair causes acute pain at the root; a morbid humour exudes from the inflamed pilous bulbs, agglutinating the hair, which is sometimes entangled, and as it were, felted. The hair is at times stuck together in separate masses, of various sizes and length, and more or less flexible, like cords, (*P. multiform.* Alibert,) or these, uniting, may acquire a considerable length, resembling the tail of a horse or other quadruped, (*P. à queue,* Alibert.) Lastly, the hair is entangled and glued together, without any separation, forming one entire mass, more or less voluminous, (*P. en masse*, Alibert.) The hair of the chin, axilla, pubis, *long* or *short*, may be affected with this disease. Professor Kaltschmid, at Jena, had in his museum the mons veneris of a woman, the hair of which was so long as to be easily made to surround the belly of the person to whom it belonged. The nails usually become long, yellow, livid, black, and sometimes crooked.

§ 809. Plica probably consists of a peculiar inflammation of the bulbs of the hair. Anatomical researches, more accurate and minute than any hitherto made, can alone place its nature beyond doubt. It may be remarked, however, that J. Frank says the bulbs of the hair are tumefied, and that the head presents here and there confluent ulcerations. Are these ulcerations consecutive to inflammation of the pilous follicles, or to pustules analogous to those of tinea mucosa and granulata? What are the conditions which favour or determine the intrication and variation observed in the abnormal development of the hair?

§ 810. (c.) Suppression of the perspiration of the scalp, seems the most ordinary cause of plica. If this disease is more common in Poland than in other septentrional countries, it is perhaps as much owing to the custom which there prevails of shaving the children's heads, as to the humidity and cold which reigns in the marshy parts of that country.

§ 811. (d.) According to Schlegel, the affection of the pilous bulbs constitutes the fundamental character of plica. The matting of the hair may arise from other causes. It is from this observation not having been made, that so many controversies have arisen on the seat and character of plica,

which is often confounded with simple *matting* of the hair, (*false plica.*) Sufficient attention has not yet been directed to the origin of the sweat which takes place on the regions of the skin attacked by this disease.

§ 812. (T.) To prevent the development of plica, it is advised to guard against the prolonged impression of cold and humidity, and break the custom so prevalent in Poland, of shaving the head when wearing the national costume. The use of warm baths, pediluvia, a residence in a mild temperature, tepid aqueous lotions to the head and other parts affected, cutting the hair, and great attention to cleanliness, are the means which appear the most generally applicable to the treatment of this disease.

§ 813. The more or less grave affections which precede, accompany, or follow the development of plica, present also particular indications, which observation alone can teach us to fulfil.

§ 814. I have never seen a case of plica. The examples which are said to have been observed at Paris have not been described with any accuracy. This remark is applicable to many observations made even in Poland. For the most part, mention is made of the intrication or length of the hair only, without describing the state of the skin ; or it is merely stated that the scalp was the seat of a more or less considerable sweat, without ascertaining whether this exudation was the result of an augmentation of the secretion of the sebaceous follicles, or of the development of vesicles or pustules. Lastly, simple *matting* of the hair has been reported as cases of plica.

CANITIES.

Syn.—*Hoariness.*

§ 815. Under the name of *canities* is designated congenital, senile, or accidental whiteness of the hair. This decoloration may be partial or general.

§ 816. The hair almost always begins to whiten at the end. Hairs are, however, sometimes observed to be white at the part adjacent to the skin, and black the remainder of their length. This disposition, the reverse of the preceding, is caused by their being first secreted of a black colour, and then turning white, in consequence of an affection of the bulbs.

§ 817. In *old persons*, the hair of the head is usually the

first affected by canities; man usually begins to grow grey between the ages of 30 and 40. The hair of the chin, pubis, axillæ, and other regions, is more tardy in assuming this appearance. Canities almost always begins on the temples. The white hairs, at first but few, soon increase in number, and at last cover the head. The fall of these hairs is seldom succeeded by a new growth; thus this affection usually precedes baldness. Light hair seldom whitens, but falls at an earlier age than dark coloured.

§ 818. *New-born children* have sometimes tufts of hair quite white. Schenck* reports the case of a young man whose beard was white from its first appearance. Canities has been observed in persons of from 18 to 20 years of age. Fits of passion, sudden and painful news, diseases of the scalp, such as tinea, deep wounds, habitual cephalalgia, extensive hæmorrhage, excess in venery, abuse of mercury, &c. may produce this affection.

§ 819. It is sometimes partial. An adult with brown hair had a white tuft over the left temple. Similar cases may be found in the periodical publications.

§ 820. Decoloration of the hair usually is gradual in its appearance; but there are cases of its taking place suddenly, too well authenticated to be doubted. A person, to my knowledge, says Bichat,† had his hair turn suddenly white on the receipt of bad news. An analogous case has been recited by M. Cassan.‡ Perat, cited before the Chamber of Peers, in the trial of Louvel, experienced such a shock, that in the course of one night her hair changed entirely white. The hair, then, is subject to the influence of phenomena dependent on the general vital principle?

§ 821. Hair developed on cicatrices deprived of the pigment is commonly white. This has been remarked, for the most part, in cases of general or partial leucopathia. In senile canities, the skin of the cranium does not partake of the decoloration of the hair.

§ 822. It has been said that white hairs are devoid of the marrow of the internal structure, and that the place which it had occupied remains an empty canal; I know not whether this canal has been injected.

§ 823. The decoloration of the hair which occurs in gene-

* Schenck, *Obs. Med. Rar.* Fol. Franc., 1609.
† Bichat, *Anatomie Générale*, p. iv. p. 815.
‡ *Arch. Gen. de Med.* Jan. 1827.

ral, congenital, partial, and accidental leucopathy, or that which comes on in old age, requires no medical treatment. It is in vain to cause the evulsion of the hair by epilatory powders, &c. the new hair is as white as the old. Some hairdressers use a solution of the nitrate of silver to colour grey hairs; this preparation makes the hair brittle.

§ 824. If canities is partial, and consecutive to *chronic inflammation* of the scalp, which has extended to the bulbs of the hair, the latter, after its fall or avulsion, is sometimes reproduced of its primitive colour. It often occurs, that though one part of the hair is secreted white, another portion may be coloured; these hairs should be plucked out, as they are likely to be succeeded by others of the proper colour. Veterinarians have made similar remarks on animals. Horses present white hairs on the cicatrices of wounds; these are sometimes replaced by others of the natural colour, or nearly so; most frequently, however, the white hairs are reproduced, or none at all. It is almost superfluous to observe, that when the bulbs have been destroyed by wounds, ulcers, &c. the hair is never reproduced.

§ 825. Alibert reports, that in the times of trouble and terror which sprung from the political system that plunged France into an abyss of calamities, an unhappy young man, who was to be executed the following morning, had the whole of his hair turn white in a single night.

ALOPECIA.*

Syn.—*Phalacrotis. Baldness.*

§ 826. Under this term of *alopecia* is comprehended the senile, accidental, or premature fall of the hair, partial or total.

§ 827. Alopecia commonly affects the scalp. The chin in men, the genitals, axillæ, eyebrows, eyelashes, in both sexes, may be affected partially or generally.

§ 828. *Senile fall of the hair* (*Calvities*) operates in a slow and progressive manner, without any appreciable alteration in the scalp. In men calvities frequently extends over the whole superior and anterior part of the head, so that there only remains a semicircle of hair, extending from one temple to the other. In women the hair whitens, but does not fall so frequently as in men. Bichat remarks, that before the fall of

* Rondelet, *Op. Omnia Medica.* Genev. 1628.—*Alopecia a Morbo Gallico.*

the hair, the cavity of the bulb gradually diminishes in old persons, and the small canal that contains the root at last entirely disappears. In some baldness there is partial destruction of the follicles by subcutaneous tumours. This alteration of the pilous follicles does not arise in accidental alopecia. Bichat saw, in the body of a man who became almost entirely bald after a fever, called by him *putrid*, all the canals of the hair in their integrity, and at the bottom the new hair being formed. There is, then, some difference between the fall of the hair in old people, and that which depends on certain diseases: complete death takes place in the former, while in the latter the root of the hair only is detached.

§ 829. *Accidental* alopecia may result from diverse alterations in the pilous follicles.

1°. It sometimes supervenes during convalescence after acute diseases, and appears to be often preceded by slight erythema, or pityriasis of the scalp. This fall of the hair is attended with pretty abundant furfuraceous desquamation. The comb detaches a considerable quantity of epidermic pellicles, which are reproduced with great rapidity, and beneath which the skin is usually erythematous. In this variety the hair becomes detached, successively, over the whole surface of the scalp.

2°. At other times, the fall of the hair coincides with a morbid secretion from the sebaceous follicles, (§ 695.)

3°. Alopecia is sometimes the consequence of inflammation of the pilous follicles, caused by the previous development of tinea favosa, impetigo, chronic eczema, &c.

4°. One of the most remarkable varieties of alopecia is that which Bateman designated under the improper name of porrigo *decalvans*. The scalp of persons affected with it presents one or more circular patches entirely bald in the midst of a luxuriant head of hair. The skin is shining without being red, and is often remarkably white. The area of these circular spots, progressively increases. If several exist close together they unite, and if left to itself the disease may affect the greater part of the scalp. Bateman supposed that small pustules were developed at the root of the hair, but acknowledges never to have seen them. I am, myself, ignorant of the nature of the affection of the pilous follicles in this variety of baldness; I can affirm, however, that there does not exist, on the surface of the scalp, either vesicles, pustules, or any other form of phlegmasia; the skin is always colourless. The new hair growing on these surfaces is, in general, of a finer tex-

ture and lighter colour than the original. It is generally grey in adults. I have observed this affection both in children and adults, but cannot point out its causes of development.

5°. Some pathologists imagine baldness to be symptomatic of syphilis.* The syphilitic alopecia mentioned by Rangon, Fallopius, Massa, Fracastor, &c., are rare; and other cases which have been published are so defective in details, as not to have established their specific character.

§ 830. The beard may be affected by all varieties of alopecia, including even porrigo *decalvans*.

§ 831. Alopecia has been observed to affect one side of the body only. Ravaton reports the case of a man, who, after violent emotion, was attacked with amaurosis of the right eye, and decoloration and fall of the hair of the head, eyebrows, and ciliæ of the same side.

§ 832. Lastly, baldness may be *general:* then the fall of the hair of the head, eyebrows, axillæ, pubis, &c., takes place simultaneously or successively. A man, some months subsequent to hypercatharsis, had all his hair fall off. At the end of a year none had re-appeared on the trunk. The beard, which had been very strong, was thin and spare; the hair of the head was as luxurious as at first, but much finer, (Lémery.)

§ (D.) 833. In baldness, the diagnosis is more particularly directed towards ascertaining the cause which has produced the fall of the hair, and the nature of the affection of the follicles. The treatment of alopecia, consecutive to inflammation of these small organs, must be different from that of other diseases, which may also cause the fall of the hair.

§ 834. (T.) *Senile* alopecia is incurable. *Congenital* baldness is usually the consequence of a retardation in the growth of the hair, which commonly appears after the first or second year. The treatment of *accidental* alopecia must vary according to its producing cause. If the consequence of eczema, impetigo, tinea favosa, it does not require any particular attention beyond that necessary for the disease itself. If the skin is dry, tense, furfuraceous, the affected parts should be shaved, and anointed with oil or some pinguent.

In porrigo *decalvans*, and baldness unattended by inflammation of the skin or pilous follicles, the affected parts should be excited by decoctions of the leaves of walnut, nightshade, centaury, flour of mustard, or properly diluted alcoholic and

* Rondelet, *Opera Omnia Medica*. 12mo. Genevæ, 1628.—*Alopecia a Morbo Gallico.*

aromatic fluids. Embrocations with essential oils may be also beneficial.

§ 835. Pelletan has given a remarkable case of alopecia coincident with other symptoms of syphilis.

DEFECTS IN THE CONFORMATION AND TEXTURE OF THE HAIR.

§ 836. Congenital *absence* of the hair is a very rare defect; it seldom continues beyond the first years of birth, and should rather be considered as a retardation of the development of the hair.

§ 837. *Supernumerary** hairs have been observed on different regions of the body *where they do not naturally exist.*† *Nævi materni* are sometimes furnished with large stiff dark coloured hairs. Bichat‡ saw a poor fellow at Paris who had his face covered from his birth with hairs analogous to those of the wild boar; and he thinks, with reason, that the stories among the vulgar, of men having the heads of boars, bears, &c., relate to similar cases. M. Villermé saw at Poictiers, 1808, a child six or eight years old, who had a great number of brown patches, of different sizes, scattered over the body, covered with hairs, which were very little finer or smaller than those of the boar; the hands and feet were exempt from them. These hairs, and the patches on which they grew, occupied perhaps a fifth part of the surface of the whole body. I saw some of these hairs on a cabinet-maker, aged twenty-six years, in the Pitié, in 1826. He had black hairs on both his shoulders, varying from six lines to an inch in length; fine, and slightly crisped; their bulbs pushed up the skin, forming small brownish elevations.

§ 838. Some pathological conditions may give rise to the development of accidental hairs. Professor Boyer used to cite, in his lectures, the case of a patient who had an inflammatory tumour of the thigh, which in a short time became covered by numerous long hairs. The following case is a still more singular example of these accidental productions. A young woman, about twenty-four years of age, having a fair skin and deep-black hair, of a weakly constitution, and reduced, after painful pregnancy, miscarriage, and extraordinary

* Clinique Chirurg, vol. i. p. 283. 1810.

† Bergen, (Car. Aug.) *Diss. de Pilorum Præternaturalium Generatione et Pilosis Tumoribus.* 4to. Francf. 1745.—Bose, *Programma de Præternaturali Pilorum Proventu.* 4to. Leips. 1776.

‡ Bichat, *Anat. Gen.* tom. iv. p. 827

dysphagia, to a state of the most complete marasmus, was convalescent in the summer of 1826, after six or seven weeks' illness, which she had thought would have carried her to her tomb. Scarcely had she began to take nourishment, and to recover her strength, when the skin, dry, earthy, and as if glued to the bones, became covered, particularly on the back, loins, chest, and abdomen, with a multitude of small elevations, very analogous to those manifested on the sudden impression of cold. At the end of some days these little projections appeared brownish, and shortly a hair was observed at the summit of each; at first very short, fair, and silky, they increased in numbers so rapidly, that in the course of a month the whole surface of the body and limbs, with the exception of the hands and face, *was entirely coated with hair.* A few months afterwards this hair fell spontaneously, and was not reproduced.

§ 839. I have several times observed a *well-marked development of hair* on the chin and upper lip of young women menstruating irregularly.* Hippocrates gives an analogous case: "In Abderis, Phœtusa, Pytheæ uxor," &c.† It may be remarked that this development of beard is not unfrequent in women of a certain age, and is not very rare in mothers of several children.

§ 840. Among the hairs of the beard and scalp *compound*‡ hairs are sometimes observed, longer than those among which they are found. These compound hairs are often divided at their free extremity, and formed of hairs of different colours, which may be separated after they are plucked out; they are produced by united follicles, terminating externally by a single aperture.

§ 841. Hairs may accidentally acquire an *inordinate length;* this is especially observed in plica, (§ 809.)

§ 842. The development of hair may be modified by the state of the organs of generation. Moreau presented to the Faculty of Medicine at Paris a child, in whom the precocious development of the testicles had caused such a growth of hair, that at six years old the chest of this child was as hairy as that of an adult. On the other hand, it is remarked that eunuchs often lose the greater part of their beard.

§ 843. Hairs may occasionally have a *vicious direction,* which requires not only that they be plucked out, but the

* Burlin, *De Fœminis ex Mensium suppressione Barbatis.* Altdorf, 1664.
† Lib. vi. sec. 8.
‡ Ollivier, *art.* Poil, (*Dict. de Med.*) 18 vols.

ablation or destruction of their bulbs. Vacca proposed a new and advantageous operation for *trichiasis*, (*Arch Gen. de Med.* tom ix.) There are still more remarkable *deviations* observed in hairs. Thus, they have been known to grow in a direction diametrically opposite to their natural one. Deviation in the roots of hairs is consequent on that of their bulbs. It is not rare to see small hairs rolled spirally beneath the epidermis of the limbs. The slight irritation which they cause is followed by the formation of a small elevation, from which a silky twisted hair shoots forth.

§ 844. The texture of hairs may also differ very much. Alibert mentions a woman, whose hair, very *crisp* before marriage, became, after pregnancy, constantly humid, so that it was absolutely impossible to dress it. The hair of the axillæ also became oily.

§ 845. Hair may undergo many changes in colour, owing, no doubt, to some modification in the part of the bulb secreting the colouring matter. Alibert cites the case of a lady, who, in a grave fever following laborious accouchement, lost a beautiful head of hair, in consequence of an inundation of a viscous fluid, which covered the whole head; and, after recovery, had black hair produced to replace that which had been fair. He also relates the case of a person, born with brown hair, losing it in sickness, and having red grow in its place. White hair has been known to be succeeded by hair of the same colour as the individual had in youth. It has been asserted even that the white hair of a woman, sixty-six years of age, changed to black a few days before death; the bulbs had, it is said, an extrordinary size, and appeared as if engorged with the colouring matter, while the white hairs had only a dry root, which was much smaller than that of the black. The patient died of pulmonary phthisis.* Recently, a very extraordinary case has been published, of a woman whose hair, naturally fair, assumed a yellow-red colour each time she was attacked by fever, and returned to its natural tint as soon as the febrile action subsided.† Lastly, M. Villermé gives the case of a young lady, aged sixteen, who had experienced flying pains in the head, and who perceived, during the winter of 1817-18, that several places on her head were entirely devoid of hair, and six months afterwards she had not a hair left. In the early part of January 1819, her

* *Journal Général de Med.* tom. iv. p. 290.
† *Journal Compl. des Sciences Med.* tom. v. p. 59.

head became covered with a sort of black wool in the places first denuded, and with brown hair over the rest of its surface; part fell off when grown to the length of three or four inches; and others changed colour at different distances from the roots, being chesnut coloured at and near the roots. The party-coloured hairs had a singular appearance, being half white, half chesnut.*

§ 846. In terminating these observations, it may be remarked that the hair may be tinted green, blue, red, &c., by impregnating it with different colouring matters. It does preserve accidental coloration as long as the epidermis.

MATTING OF THE HAIR.†

§ 847. Matting of the hair consists in an inextricable twisting. It has been chiefly observed in persons who, for some weeks or months, have neglected the care of their hair. It is often remarked in convalescents from grave maladies of long duration, and in old indigent persons received into almshouses. This affection is very common in Poland, where it has been observed by Messrs. Davidson, Kreutzer, Boyer, Roussille-Chamseru, Gasc, &c.

§ 848. Entanglement exists independently of any alteration in the hair or bulbs; it may occur in individuals attacked by chronic phlegmasiæ of the scalp, particularly when the hair has acquired great strength. Matted hair may present itself under very various forms, (§ 809.) This does not differ from what is observed in plica; but the bulbs are affected in the latter disease.

§ 849. If the entanglement is inextricable, the hair should be cut off.

* *Dict. des Scien. Med.* tom. xliii. p. 302.

† Roussille-Chamseru has given several cases of matted hair under the name of *plica*, which should be applied only to a certain affection of the bulbs of the hair. (*Bull. de la Faculté de Med. de Paris*, 1809.)

SECTION III.

EXTRANEOUS BODIES OBSERVED ON THE SURFACE, BENEATH, OR IN THE SUBSTANCE OF THE SKIN.

§ 850. Extraneous bodies seen at the surface, beneath, or in the substance of the skin, may be organic or inorganic: the former living, or dead; the latter solid, or fluid.

INORGANIC EXTRANEOUS BODIES.

§ 851. Numerous foreign bodies directed or applied to the skin, are capable of causing wounds, contusions, strangulations, &c.; others may be introduced into the substance of this membrane, and produce more or less serious effects, either remaining where they first penetrated, or traversing the subcutaneous cellular tissue, or other soft parts. The reader will find, in the works of our celebrated surgeons,* a faithful description of the various symptoms produced by these extraneous bodies, and an account of the operations which should be undertaken for their extraction.

§ 852. The cutaneous perspirable matters, the sweat and sebaceous fluid, alone, or mixed with different pulverulent substances, form, by accumulating on the surface of the skin, a peculiar covering, known by the name of *dirt*, and as variable in its nature as the elements of which it is composed. Several French pathologists have designated, under the name of *dry crust of the scalp*, a peculiar sort of yellowish dirt, usually situated on the upper part of the head in new-born children, (§ 692.) These different kinds of coverings may be removed by simple, alkaline, or vapour baths or lotions. The use of these hygienic means† should be particularly recommended to artisans employed in the preparations of salts and metallic oxydes, or other unhealthy occupations.

§ 853. Different substances applied on the surface of the skin impress various colours on it. The women of our cities

* *De la Med. Operat.* par Sabatier. New edition, revised by Dupuytren.—Boyer, *Traité des Mal. Chirurg.* Paris, 1826.

† Londe, *Nouveaux Elémens d'Hygiène.* Paris, 1827.

often employ certain preparations, known under the name of *rouge*, &c. when the wrinkles of age have tarnished the beauty of the skin. The Greenlanders smear the face white and yellow; the New Zealanders blue; the Japanese colour the lips and eyebrows blue; the old Canarians painted red, green, and yellow; the ancient Britons blue; the negroes of the kingdom of Yuida red, &c.*

§ 854. If the study of these practical trifles might be excluded from the present work, it is not so with some other *artificial colorations* of the skin. Ambrose Paré relates that, in his time, beggars smeared themselves over with soot and water, to simulate jaundice; and he justly remarks, the deception was easily discovered. Icterus has been sometimes simulated by staining the surface of the body with a strong infusion of rhubarb, saffron, &c.†

§ 855. Motion, friction, and transpiration, pretty quickly change colouring matter applied to the surface of the skin: the wish to make the stains permanent first led to the invention of *tattooing*. The American Indians, from the septentrional extremity of the continent to the islands of the South Sea, all follow this custom. They deposit the colouring matter in *linear incisions*, carried pretty deep, if we are to judge by the tattooed heads in our Museums. In several of them, however, the skin appears as if chased, without cicatrices, as if the tattooing had been retouched after death.

§ 856. In Europe, tattooing is practised only among sailors, and soldiers idling in garrison. After tracing the characters to be drawn on the skin, with ink, a number of *punctures* are made, with needles charged with colouring matter, close together. The only inconvenience ever experienced, and that but seldom, is the production of phlegmonous erysipelas.

§ 857. The marks thus made, by the introduction of indigo, saffron, charcoal, &c. are indelible, like those from the explosion of gunpowder. They cannot be removed by blisters, or any other topical applications, at least, not without at the same time destroying the chorion, in the substance of which the colouring matter is seated.

§ 858. Having macerated several portions of tattooed skin, I am convinced that the epidermis is not coloured; the colouring matter is deposited beneath it, approaching more or less the inner surface of the dermis, according as the needles

* Consult *Cadet de Gassicourt*, art. *Fard*, (Dict. Scie. Med.)
† Jaunisse *Simulée avec la Chélidoine*. (Jour. Gen. Med.)

have penetrated; lastly, the chorion was more resistent, and as if indurated at the points occupied by the colouring matter.

FOREIGN ORGANIC BODIES.

§ 859. Animals may become developed on, or accidentally inhabit, the human skin. Some are born, live, and are reproduced on the surface of the tegument; such are the *pediculus humanus corporis*, the *ped. capitis, ped. pubis, pulex irritans:* others penetrate the skin, such as the *pulex penetrans;* and, according to some authors, the *acarus scabiei.*

§ 860. Other insects, deposited on the skin in the form of eggs, become developed as larvæ, and assume their proper form; such is the *œstrus*, so common in the sheep, ox, and horse. Lastly, a species of worm, (the *filaria* of Medina,) is sometimes developed beneath the skin.

§ 861. Other animals have been supposed to inhabit the skin of man, on the authority of Etmuller, who affirms having observed, in new-born infants, a peculiar disease, produced by small worms lodged beneath the skin, and causing great itching and inquietude, allayed only on the expulsion of these animals. According to him, this pretended worm, which physicians have named *crino*, is of black cinder colour; it has two antennæ, and a tail terminating in a fasciculus of hairs; but in the present day, these observations of Etmuller, and some published more recently, on the same subject,* are generally regarded as erroneous. There have been mistaken for worms, freckles and the sebaceous matter of the skin, after it has been reduced to filaments by friction, &c. The *furia infernalis* of Linnæus appears to be equally imaginary. The characters which have been assigned to it by this celebrated naturalist are, for the most part, applicable to the *gordius*, and *filaria.*

§ 862. The larvæ of *musca*, and of some other genera, may be accidentally developed in the meatus auditorius of neglected children, on the surface of ulcers, &c. Other insects occasionally inflame the skin by their punctures. The *bug (cimex lectularius*, Linn.) by means of his proboscis, applied to the skin, pumps up the blood, and leaves in the wound an acrid liquid of a peculiar nature. The puncture of this insect is followed by the development of a papulous or tuberculous elevation of a yellowish red. The *gnat (culex pipiens)* pro-

* Bassignot, *Hist. de la Maladie connue sous le Nom de* Crinons *qui attaque les nouveau-Nes, à Seyne en Provence*, (Mém. de la Soc. Roy. de Med. 1776.)

duces a still more painful puncture, followed by a small hard tumour, of a yellowish red tint, attended by heat and vivid itching. The *cockroach*, or *bête d'août*, and reaper's mite *(acarus autumnalis,)* on fixing on the skin, cause insupportable itching, soon followed by voluminous papules, or small yellow inflamed tubercles. These insects are destroyed by washing the skin with pure alcohol, or strong vinegar. Lastly, other insects, (spiders, hornets, &c.) may puncture, and deposit in the skin extraneous matter, productive of more or less acute inflammation.

PEDICULI.*

§ 863. Lice are parasitic, apterous insects, having a flat body, covered by a coriaceous skin at the edges, and transparent at the centre. They have a distinct, small, oval or triangular head, furnished at its anterior part by a fleshy nipple, enclosing a small sucker, which appears simple; they have two filiform antennæ with five joints, and two small round eyes; the corselet, nearly square, is rather narrower in front. They have six short thick legs, of equal length; these are composed of two pieces, a cylindrical thigh and leg, and a strong conical scaly claw, bent. The abdomen round, oval, or oblong, lobulated, or divided by eight rings at least, on the sides; it is provided with six sensible stigmata, and has a scaly point, at the posterior extremity, in males.

§ 864. Swammerdam, not being able to discover the male organs, in his dissections, and constantly meeting with an ovary, concluded that these insects were hermaphrodites. Lewenhoeck afterwards distinguished males and females among *pediculi*, and gave exact drawings of the male organs. According to him, the male has a curved sting, which he carries in the abdomen, and with which he makes punctures; he thought the itching produced by pediculi was caused by these punctures, and that the introduction of the trunk was not felt. The male, according to De Géer, has the end of the abdomen rounded; while in the female, which has no sting, it is sloped off.

§ 865. Pediculi are oviparous; and the female, being fecundated, deposits her eggs, known as *nits*, among the hair and clothing. The young soon leave their eggs; they change their skin several times, and are then in a state to reproduce. To ascertain the time of propagation and growth of these

* Dumeril, C. *art.* Pou, (*Dict. des Sci. Nat.*) tom. 43, pl. 53; fig. 1 and 2.

insects, Lewenhoeck took females, and placed them in a black silk stocking, which he wore night and day. At the end of six days, each of them, without having diminished in size, had deposited fifty eggs; at the expiration of twenty-four days, the young ones were reproducing others, so that the generations of two females would amount to eighteen millions of individuals in the space of two months.

§ 866. The three species observed in man, are distinguished as *pediculus humanus capitis*, De Géer; *P. hum. corporis*, and *P. pubis*, Linnæus. They all live by the blood they suck with their trunk, which is only to be seen when in action. Under the name of *phthiriasis* has been designated the existence of a great number of lice upon one region, or over the whole surface of the body.

§ 867. *Pediculus capitis.* Linnæus regards this as a variety of the *P. corporis*, from which it differs in having a harder and higher coloured skin, and in having the corselet and abdomen bordered on each side by a blackish brown ray. The body is of a grey-brown; the lobes of the abdomen rounded. M. Latreille thinks it should form a distinct species. The *P. capitis* lives on the head, and is easily transmitted from one individual to another. Uncleanliness, and diseases of the scalp, do not produce them; their prodigious fecundity is alone sufficient to explain their development and propagation. They are often observed in neglected children, or those whose heads are covered with long hair; in persons who neglect to remove the dirt formed by transpiration, and the use of powder, or who are attacked by inflammations of the scalp, such as eczema, mucous tinea, tinea annulare, favosa, &c.; they are met with in persons convalescent of acute or chronic diseases; but this is only because carelessness favours their propagation, and uncleanliness renders their destruction difficult. Some false ideas, current among the vulgar, are also among the causes of their propagation. It is supposed that individuals affected with lice are more than commonly healthy; that these insects suck the *bad blood;* and lastly, that the existence of numerous pediculi on the scalp constitutes a sort of *exutorium*, which is to be suppressed only with great caution.

§ 868. The existence of these insects is known by more or less violent itching. In children, this at first is sometimes accompanied by insomnolency, and a marked nervous excitement. They multiply in a very disgusting manner, under the crusts of tinea favosa, tin. annulare, and in the vicinity of

the ichorous exudation of eczema of the scalp, and tinea mucosa; but even when thus numerous, they never cause marasmus, or death. The cases of *death from lice*, reported, without any remarks, in the *Dict. des Sciences Med.* and its Abridgment, are only calculated, in the present day, to frighten children who are neglectful of their hair. I regard as equally apocryphal the following case of Rust's, reported by Bremser, and borrowed by a host of authors. This physician was called into consultation on a male child, 13 years of age, who had a *very large tumour* on his head, and for which numerous remedies had been used in vain. The tumour was very elevated, soft, and without fluctuation; presented no traces of inflammation, past or present, nor any lesion of the tegument. The patient, who appeared cachectic, complained only of an insupportable itching in the interior of the tumour; this had been developed after a nervous fever, and had acquired, in the space of eight months, a very considerable volume. On an incision being made into it, there issued forth an immense number of small white lice; it had no other contents, and the patient soon recovered.

§ 869. In *pediculi capitis*, it is the common custom to use the comb frequently, and to shave the head to get rid of the nits. The same end is more quickly attained by washing the head with alkaline solutions, in which a quantity of stavesacre seed has been infused. Washing the scalp with oil of lavender, or a decoction of the lesser centaury, and powdering it with pulverized parsley-seed, has been also recommended; a slight mercurial friction over the head has been also advised; but this has been said to produce, in many children, very grave consequences, such as coma, depression of the nervous system, and convulsions.

§ 870. *Ped. humanus corporis*, (common louse, clothes' louse; Linnæus, Geoffroy, Fabricius.) Body white, large, and flat, without spots; eyes black. The lobes of the abdomen are not so elongated, and are less marked than in the *P. capitis*. This species exists on the trunk and limbs, rarely on the head. The nits are agglomerated, and deposited, in general, in the folds of the linen and other vestments of dirty people, particularly of those clothed in woollen, and who do not change their clothes sufficiently often. This insect is particularly developed in prisoners, galley-slaves, sailors, and old people engulfed in misery.

The term *phthiriasis* has been more especially applied to the inordinate development of this species. The *morbus*

pediculosus is the result of one or more of these insects depositing their eggs accidentally. The *nits* or eggs of this variety are also deposited among hairs. The insect is formed on the surface of the skin of the limbs, chest, and axilla, and on the linen and vestments. The skin undergoes no alteration, at least, unless they are very numerous and recently developed. In this case, small papulous elevations, reddish and conical, and more rarely, large tubercles, have been observed. Scratches and excoriations of various dimensions frequently exist. Lastly, concomitant or accidental lesions may arise, such as prurigo, ecchymosis, &c.

§ 871. Such is the *morbus pediculosus*, stripped of the hypotheses, and the erroneous or incomplete facts with which its history is charged. It would not have been dwelt upon here, had not these erroneous opinions been republished, with the most blind confidence, in some recent works. This will lead to some remarks on the pretended spontaneous generation of these insects. Aristotle, Theophrastus, and Avicennus, admit it, and attribute it to corruption of the flesh, or heat and putrefaction of the blood; but this was at an epoch when the prodigious fecundity of these animals was not known. Some moderns have adopted this hypothesis without scruple, and support it by the following observations. 1°. Bremser asserts that innumerable lice may be very rapidly developed on the head of a young child, without any eggs being previously observed on the scalp, or the mother or nurse having pediculi. 2°. M. Mouronval affirms that several patients affected with *prurigo pedicularis*, coming to the Hospital St. Louis, were ordered simple baths, to cleanse the skin, after which they had clean linen given to them, and were placed in clean beds, and that a few minutes afterwards the shirts of these patients were covered with small lice, which could only have been produced by the skin. 3°. Bernard Valentin gives the history of a man, aged 40, who had an insupportable itching over his whole body, and whose skin was full of tubercles; these, on being opened, were found to contain neither blood nor serosity, but such an immense number of lice of different sizes, that the patient *died of fright*. 4°. In this singular disease, (*phthiriasis*,) says Lieuteaud, lice appear in prodigious numbers, not only upon, but they are *engendered* also under the integuments, and even under the pericranium. What is more surprising, he continues, on our examination of the bodies, was, that after *piercing through the cranium*, and the envelopes of the brain, *lice were found lodged in the very*

substance of this organ. To these different assertions, it may be opposed, that the observations of Valentin and Lieuteaud were false or erroneous; that Mouronval's cases only lead to the conclusion, that he supposed, after the administration of the bath, there no longer existed among the hair either lice or nits, and that he was deceived; lastly, Bremser's case is unimportant, unless it could be proved that the child did not contract either nits or lice from other persons, and that its clothes were not accidentally infected with them.

§ 872. The development of *pediculi corporis* has been represented as a very grave affection. After vulgar traditions, it has been repeated by some moderns, that Herod, Ennius, Sylla, and Philip II. of Spain, died of the pedicular disease.* But the examination of the viscera of these illustrious persons would, I am convinced, have led to different conclusions.

If we are to believe certain other statements, the spontaneous development of pediculi has produced the cure of gout and sciatica. Manget says that a celebrated surgeon of Geneva, who suffered severely for years, from rheumatism in the left thigh, was completely relieved on the development, *on this limb*, of a considerable number of lice, of which he got rid by using the warm baths of Aix, in Savoy. M. Serurier cites, in the *Dict. des Sci. Med.* the case of an old man, affected with gouty rheumatism, in whom a great number of *ped. corporis* were developed, although cleanliness had not been neglected; during the whole time these insects occupied the skin the pains ceased, but again returned on the disappearance of the *pediculi.*

§ 873. *Pediculi corporis* are easily destroyed by means of sulphureous baths, sulphuro-alkaline frictions, sulphureous fumigations, or baths of deuto-chloruret of mercury. An ointment composed of three parts of sulphuret of mercury, one part of hydrochlorate of ammonia, with thirty-two of hog's-lard, has been used with great success. The clothes must be fumigated with sulphureous or mercurial vapour.

Numerous other preparations have been recognised: staves-acre seeds, larkspur, Levant cod, tobacco, mercurial salts and oxydes, &c. The effects of some of these remedies should be carefully watched; tobacco frictions have sometimes occasioned vomiting and convulsions, mercurials, salivation, colic, and other more or less serious symptoms.

* Even in our own time and country, certain families have been said to be affected with hereditary *morbus pediculosus*.—T.

§ 874. Those authors who believe in the spontaneous generation of *pediculi*, have recommended bleeding, purging, bitters, antiscorbutics, and mercurials, and a host of other remedies, noxious or beneficial, with a view to subdue the occult cause giving rise to their development.

§ 875. *Pediculis pubis* (Linn. Fab. Geoff.) This species is smaller than the preceding; the body rounder, flatter, and fuller; the corselet, very short, is almost confounded with the abdomen, which presents posteriorly two indentations in the form of horns; the legs are curved. It remains fixed to the same spot, and is attached very closely to the skin, hardly appearing beyond its surface. It is found at the base of the hair on the genitals, of the beard, eyebrows, eyelashes, and axilla; it sometimes propagates over the trunk or limbs, when these are very hairy. But it has been remarked that it never occupies the scalp. Its puncture, which is very sharp, has led some naturalists to give it the name *pediculus ferox;* in France it is known under the term *morpion.**

§ 876. *Pediculi pubis* cause an insupportable itching. When very numerous, the skin is full of small red spots, like drops of blood; these are said to be the excrement of these insects. They may be detached from the skin by the nails. Papulous elevations often appear on the points which these insects have occupied. They propagate like the preceding variety, and multiply with extreme rapidity.

§ 877. Frictions with mercurial ointment over the parts occupied by *pediculi pubis* are usually sufficient to destroy them, without the necessity of shaving off the hair, among which the nits of these insects are deposited. Calomel powder sprinkled among the hair, baths of deuto-chloruret of mercury, sulphureous baths and fumigations, are more expensive and less efficacious.†

§ 878. In conclusion, it may be remarked, that symptoms, similar to those produced by *pediculi*, may be occasioned by *acarides*, insects very nearly approaching the *ixodes*, but forming a different genus, according to M. Bory-St.-Vincent, characterised by a small sucker, accompanied by two feelers of four joints. M. Bory-St.-Vincent observed these insects on a woman, 40 years of age, who, after having experienced violent itching over the whole surface of the body, was very

* In England under the vulgar name of *crab*.

† Simply sprinkling the white precipitate of mercury among the hair, is almost always successful, in completely destroying both this variety and the *P. capitis*.—T.

much astonished on perceiving thousands of acarides on the parts she had been scratching. In a case of prurigo *senilis*, Willan also observed an insect, which could not be classed as a *pediculus* nor *pulex*. It probably belonged to the genus *acarus*, if we may judge from the incomplete description and bad drawing given by this author.

PULEX.*

§ 879. Fleas are insects without wings, with a distinct head and corselet, and a mouth formed by a beak or sucker. Two species are observed in man: *Pulex irritans*, *P. penetrans*.

§ 880. *Pulex irritans*, Linn. (common flea,) is an apterous insect, recognised by its oval compressed body, invested by a pretty tough skin, divided into twelve segments: having a small compressed head, round at the top, truncated and ciliated in front; with two small round eyes on each side. Near the origin of the beak are inserted what have been taken for antennæ; these are composed of four nearly cylindrical pieces; the beak, of three; the abdomen is very large; the legs strong, particularly the posterior, adapted to leaping, with large hips and thighs; the tarsus is composed of five parts, the last terminating in two elongated claws; the two anterior limbs are inserted almost under the head.

§ 881. The *puncture* of the flea causes as much pain as that of the bug. The small ecchymoses they leave differ from petechiæ by always presenting a small central point, of a more intense colour: this is the place where the sting has penetrated. They appear to attack other animals in preference to man.

§ 882. *Pulex penetrans*, Linn.† (penetrating flea, or *chigre*.) The beak of this species is a third longer than the anterior limbs, which distinguishes it from the preceding. The chigre is a real plague to the inhabitants of the Antilles and meridional America. This insect has been described by Sloane in Jamaica, by Margrave, in Brazil, and by Catesby, in Carolina. The female penetrates beneath the skin, in these countries, more especially under the nails of the toes, and towards the heel; it lodges and is nourished there. At first, it causes only slight itching; but as the insect grows, inflammation is set up. It acquires the size of a pea, produces a great many

* Dumeril, *art.* Puce, (*Dict. des Sci. Nat.*) vol. 44, pl. 53, fig. 3 A. Paris, 1826.

† *Dict. des Sci. Nat.* pl. 54, fig. 4-5, *a. b.*

young, which extend themselves beneath the skin, where their presence causes pain, ulceration of a bad character, and even gangrene.

§ 883. These insects are destroyed by washing the parts affected with decoction of tobacco, or other acrid plants. Chigres may be sometimes extracted with a needle. If allowed time to propagate, they can be removed only by making an incision into, or removing the skin beneath which they are lodged. If this operation is neglected, it is asserted that death may ensue from the prolonged sojourn of this animal, and that frequently, in the colonies, negroes are known to perish from this cause alone. Uncleanly individuals, living in warm, dirty, and ill-ventilated situations, are those most obnoxious to the attacks of this insect.

ACARUS SCABIEI.

Syn.—*Sarcopta.*

§ 884. Some writers affirm having observed in the vesicles of itch an apterous insect, nearly invisible to the naked eye, flat, provided with red feet, and which they have designated *acarus scabiei.*

§ 885. Towards the close of the sixteenth century it was supposed to be established that the cause of itch was an insect, which, by penetrating beneath the epidermis, caused this vesiculous eruption. Ingrassias and Joubert had already suspected the existence of this insect; but it is in the *Theatrum Insectorum* of Moufet that it is spoken of for the first time in detail. This author describes it as a nearly invisible animal, residing beneath the epidermis, producing small vesicles filled with a limpid fluid, and occasioning a very vivid itching, &c. Hauptmann published the first drawing of one of these, taken, he said, from nature, and represented it with six limbs. New facts, published by François Rédi, appear to place beyond doubt the existence of an insect in the vesicles of itch. The letter of Giovanni Cosmo Bonomo,* relating the experiments of Hyacinthe Cestoni, printed in several modern works, is too interesting in the history of science to be passed over. "While guided by your views, and under your auspices, I made experiments on insects, I by chance read that the mite (ciron) was a very small worm, found be-

* *Observations sur les Cirons, ou Insectes de la Peau des Galeux*, published in a Letter by Dr. G. C. Bonomo, 1687.

neath the skin of itchy persons, and the bite of which caused a very vivid itching. Having since found that Guiseppo Lorenzo adopted the same opinion, I had the curiosity to verify the fact myself. I communicated my intention to M. Hyacinthe Cestoni, and he assured me that he had several times seen poor women, whose children had the itch, *draw out with the point of a pin* from the smallest pustules, before they became ripe and purulent, he knew not what, but which made a *slight cracking* when crushed with the nail; and that, at Leghorn, the itchy patients reciprocally rendered one another the same service; he added, that he did not know whether the mites were really worms. Thus, both of us resolved to establish the question. We then procured a patient, and inquired the part where the greatest itching existed; he pointed to a great number of pustules not yet become purulent. I opened one of them with the point of a very fine pin, and after having expressed a small quantity of the contained fluid, I drew forth a small, white, nearly imperceptible globule. On examination by a microscope, we recognised with all possible certainty that it was a worm of a figure approaching that of a tortoise, of a whitish colour, the back being of a more obscure tint, furnished with some very fine long hairs. The little creature exhibited much vivacity in its movements: it had six limbs; the head, pointed, was armed with two small horns or antennæ, at the extremity of the snout. (*I herewith send you a drawing of it.*) Not content with this first observation, we repeated it a great number of times on itchy patients of various ages, temperaments, and sex, and at different seasons of the year; we always found animals of the same shape. They were met with in nearly all the aqueous pustules; I say nearly all, because it was sometimes impossible to find them. *It is, at times, very difficult to perceive these insects on the surface of the skin, on account of their extreme diminutiveness, and the resemblance of their colour to that of the skin. They first introduce their pointed head, and then move sidewise, and backwards and forwards, till they entirely disappear beneath the epidermis, where we could easily recognise them, saving themselves by making grooves, or sort of covered ways, or routes of communication from one point to another;* thus one insect often produces several aqueous pustules. We have found also two or three together occasionally, and usually very close to each other. We were very curious to ascertain whether these small animals lay any eggs; and, after much research, we had at last the satisfaction to assure ourselves of

this fact; for, having placed a mite under the microscope, for M. Isaac Colonello to draw from, he saw, in making the design, a small white egg proceed from the posterior part of the insect, *scarcely visible*, and almost transparent; it was of an oblong figure, like a pine-apple, (*refer to the drawing.*) Cheered by this success, we renewed our search for eggs with the utmost attention, and found many at different times, but were not able to observe them issuing from the body of the animal under the microscope. * * * * * * * * * * *

"Mites easily pass from the body of one person to another by simple contact; for these minute animals *being endowed with great agility, and not all being continually occupied in burrowing passages beneath the epidermis, they are often met with on the surface of the skin,* and they promptly attach themseves to the first person near them; and though received in such small number, they multiply prodigiously by depositing eggs, &c."

§ 886. Morgagni affirms having made similar observations. I had occasion, he says,* to see a lady of elevated rank during my practice in my own country. After she had experienced several crises, *at the conclusion of a very tedious and grave disease,* I remarked that she was entirely psoric, which was manifested by a very abundant eruption over the whole body, but particularly on the hands. The itching this patient felt was so violent as to prevent her enjoying the slightest repose. As the vesicles of this eruption were filled with serosity, and resembled those in which insects were discovered, *I desired the attendant to open one,* and putting on my spectacles, I examined it with care, and was not long in recognising *an errant animal,* presenting the form which modern writers have so well described. Not being satisfied with examining one vesicle only, I repeated the experiment on several; in all I found insects exhibiting signs of life. *I was convinced that no person who approached this lady was affected with itch.* I am of opinion that these little insects were hidden in the vestments, and being thus concealed, reached the patient.

§ 887. The latter researches of Linnæus, De Géer, and Fabricius, were principally directed to establish the character of this insect, so variously described. Its existence having been questioned by many pathologists, M. Galés instituted new experiments in 1812, and affirms having seen more than

* *De Sed. et Caus. Morb.* epist. 55.

three hundred mites of itch ; that they had always the same form, and were nearly all of the same size ; and their legs varied from six to eight in number: this he attributed to the different sexes.

§ 888. On the other hand, very able observers, Galeotti and Chiarurgi, at Florence, MM. Lugol, Biett, and Mouronval, at Paris, have searched in vain for this insect, by means of strong lenses and excellent microscopes. I have not been successful in my researches, though I have taken some pains about them. I have never met on the surface of the skin of psoric patients any other insects than *pediculi;* and the *je ne sais quoi,* which *cracked* under the nail, spoken of by M. Cestoni, was probably nothing more. On opening the vesicles of itch, and expressing the fluid they contain, I have never been able to distinguish the *white animated globules* mentioned by Bonomo, nor *the covered ways* traced by these pretended insects beneath the epidermis. Willing to extend these researches, I procured lenses from M. Vincent Chevalier, jun., a very clever optician, and familiar with microscopic observations. Three children, brothers and sisters, affected with itch, and who had not been subjected to any treatment, were the subjects of these renewed researches. After opening with the point of a lancet a psoric vesicle, acuminated and well-characterized, I collected the transparent serosity on a plane of glass, which was immediately placed by M. Chevalier under one of his achromatic microscopes, of 1500 magnifying power. The liquid appeared to be composed of circular immobile globules, in which we were unable to distinguish any animated being. M. Asselin, a physician of Cherburg, MM. Henri Petroz and Pellétier, members of the Royal Academy of Medicine, who assisted at these experiments, like myself, saw nothing in this liquid but the circular immobile globules. We re-examined this fluid five, ten, and fifteen minutes after it was collected ; it was dissolved in tepid and cold water, in different proportions, but we could not perceive any traces of the *acarus* under the microscope. Not content with evacuating the whole fluid contained in the vesicle, I scraped its interior lightly with the edge of the lancet, so as to remove all which might adhere to the skin; I collected only a drop of sanguinolent serosity, in which, after repeating our experiments, and varying them, we could discover nothing resembling an insect. The same experiments were repeated, with no better success, on the serosity of a vast number of well-marked psoric vesicles, developed between the fingers,

on the wrists, and folds of the arms of these children. The examination of the purulent serosity of inflamed vesicles was equally devoid of any result.

§ 889. On examining the dust of an old cheese, we very easily distinguished a great number of *mites* (*A. siro*, L.) M. Asselin and myself were struck by the resemblance between these animals, so well delineated by Lewenhoeck, and the pretended *A. scabiei* represented by M. Galés, &c. This resemblance was so great, that, without controversy, more analogy exists between the drawing of *A. scabiei* and the *mite* of cheese, than between the two figures of the *sarcopta* of itch, published by Cestoni and M. Galés.*

§ 890. To resume: it is evident that the *acarus scabiei*, differently drawn by Hauptmann, Cestoni, and M. Galés, does not exist in the vesicles of itch, as developed in man; and if the observations already cited from Cestoni and Morgagni are brought forward, it may be answered, that Bonomo and Cestoni both speak of the covered ways which the *acarus* makes under the skin, and that they alone have seen them; and it is extraordinary that Morgagni should perceive, with simple spectacles, an insect which cannot now be discovered with the very best microscopes.

ŒSTRUS.†

§ 891. This is a dipterous insect, characterized by almost total absence of mouth, such as is designated by M. Dumeril under the name of *astomus*. Its larvæ, deposited beneath the skin of man, but more frequently of oxen, cause a small circumscribed, painful inflammation.

§ 892. The species of *œstrus* which lies under the skin of animals has been described with great accuracy by Mr. Clark.‡ M. Say§ thinks, with Linnæus, that there really exists a species of œstrus, the larvæ of which inhabit the body of man; an opinion which was rejected by Fabricius, and modern entomologists, and which M. Say founds on the following case:

"After a very painful march, (M. Brik writes,) I went to

* Compare Lewenhoeck, *Arcana Naturæ ope Microscopiorum Detecta*. Delphis, 1695, 1781, p. 379.—Bonomo, *Work cited*.—Galés, *Essai sur le Diagnostic de la Gale*, 4to. Paris, 1812.

† Dumeril, *art.* Œstre, *Dict. des Sciences Naturelles*, t. 35. 1823, 4to.

‡ *Transactions of the Linnæan Society of London*.

§ *Philadelphia Journal*, vol. ii. p. 353.

bathe in the Chama, a little stream which flows into the lake of Maracaibo. A short time after coming out of the water, I was bitten by an insect on the left leg, over the anterior and upper part of the tibia. I felt, for some days, a great itching, but no pain, and I continued my journey without inconvenience till I felt suddenly an acute pain, which, being repeated several times, at last became constant. On my arrival, and during my stay at *Il Rosario de Cucuta*, I walked with great difficulty; there was then a considerable phlegmonous tumour on the tibia, having a black spot in the centre: the usual applications were unsuccessful, and the tumour became still more inflamed. This continued some days, accompanied by extreme pain. On returning to Maracaibo, I descended to Cottatumba, in a boat without a covering, and was wetted to the skin by the cold rain which fell each night. I suffered much from pain, which became worse than ever. During this passage, which was of twelve days, I scarified the part, but without relief, and at times I thought I felt something alive move under the skin.

"On my arrival at Maracaibo I could scarcely move, and was at last confined to the house. After a fortnight in this state, the tumour began to suppurate; when open, in almost its whole extent, I covered it several nights with a tobacco poultice. In the day I sprinkled the ashes of my cigar over it. In making the cataplasm, rum was used instead of water. Four days after these measures were employed I had considerable relief, and on the fifth day I drew out with a forceps a dead larva. In a few days the wound began to heal, and on the tenth day I was perfectly well, only experiencing from time to time some pain at the point from which the larva had been extracted. This larva had worked along the periosteum of the tibia to the extent of two inches, and I attribute the pain I suffered to the irritation of some nervous filaments."

§ 893. M. Say supposes the larva of which M. Brik speaks to belong to the genus *œstrus*. It was full bodied, the posterior larger than the anterior half, and rather compressed; the rings of this part were armed with a transverse series of small black tubercles, horny, enlarged at their base, and terminating at the summit in a small filiform claw, directed forward. These series, six in number on the back and sides, were in pairs under the belly. Near the posterior extremity of the body there were numerous small tubercles similar to the preceding, but not forming a regular series. The anterior half of the body was quite bare, cylindrical, or rather of the

form of an elongated truncated cone, of a diameter much smaller than the posterior part; at the summit the folds of the posterior part of the body were short, and the fissure which separated them narrow.

§ 894. M. Say compares this larva with that of the œstrus of the ox, horse, sheep, &c. and to the hæmorrhoidal œstrus, of which it exhibits several characters. There are, says he, several opinions with respect to this larva, among the Spaniards and Creoles; some call it *ouche*, and say that it is only a worm, which crawls on to the body from the earth, penetrates the skin, and grows there; others maintain that it is produced by the puncture of a winged insect called *zancudo*, (this term is used by the Spaniards of Meridional America, to designate different species of culex;) it is called by some *husano*. M. Say himself thinks it is produced by a winged insect, which deposits its eggs in the skin, after having punctured it.

FILARIA (OF MEDINA.)

§ 895. Under the name of *filaria** a genus of entozoophytes is designated, the principal characters of which are here enumerated: cylindrical body, filiform, elongated, slightly diminishing towards the extremities, which are obtuse; mouth orbicular, very small, terminal, as, probably, the anus; male organ short, nearly round, and situated before the point of the tail; intestinal canal, very distinctly seen extending the whole length of the body. It inhabits the cellular tissue of all classes of animals.

§ 896. Of all species of the filaria, that best known has been observed in man. It is known among naturalists as the *thread-worm of Medina*,† and among physicians under the inaccurate term of *dracunculus*. The body is of a dirty white colour, and turns yellow in alcohol. Its size, nearly equal the whole length, varies from that of the string of a violin to that of a straw. Its length may vary from nine to forty inches, (Heath;) a foot, a cubit or more, (Kæmpfer;) three feet and a half, Rhine measure, (Grundler;) more than two ells, (Kunsemüller;) from eight to twelve feet, (Gallandat:) again,

* Rudolphi, *Entozoorum sive Vermium Intestinalium Historia Naturalis.* Amst. 1808, *art.* Filaria. — Blainville, *art.* Filaire, (*Dict. des Scien. Med.*)

† Grundler has given, in his treatise "De Vena Medinensi," an original drawing from this *filaria*, which has been copied into the Encyc. Method. and several other works.

to eight ells, (Fermin.) The tail is terminated by an inflected curve. The head is furnished with a sucker, formed by the fulness of the lip, which surrounds the mouth, the orifice of which is very small. The *filaria of Medina* bears great analogy to that *of the ape.*

§ 897. The history of this entozoophyte presents a remarkable peculiarity, of which it is impossible, at present, to give a satisfactory explanation: the inhabitants of the torrid zone are almost exclusively affected by it. The principal observations made on this animal have been collected in Arabia Petræa, on the borders of the Persian Gulph, of the Caspian Sea, and river Ganges; in Upper Egypt, Abyssinia, Guinea, &c. I am not aware that it has been observed in man, in Europe, notwithstanding the much greater extent to which anatomical researches and clinical observations have been recently carried.

§ 898. The *filaria of Medina* has been most frequently observed in the subcutaneous cellular tissue of man, and particularly in that of the inferior extremities. In 181 cases collected by M'Gregor,* it was situated in the feet in 124; in the legs in 33; in the thighs in 11; in the scrotum in 2; and in the hands in 2. Kæmpfer found it in the cellular tissue of the hollow of the ham, and in the scrotum; Pere found it in the head, neck, and trunk; Bajon asserts having seen it twice, under the mucous membrane of the globe of the eye, &c. Chardin pretends that it is almost always solitary; while Bajon and Bosmann affirm that it is not at all rare to meet with several individuals in the same patient.

§ 899. It appears demonstrated that this animal is developed only in the human body. Læfler, who resided several years in Africa, where the inhabitants are subject to it, never learned that it had been observed in the water; and Lind, who examined with attention the waters of this country, never found either worms or their eggs. This filaria has been mistaken for a true *gordius,* which is supposed to have the faculty of introducing itself, and living under the skin.

§ 900. The occasional very large dimensions of filariæ extracted from beneath the human skin, have led to the belief that these animals cause the development of the phlegmon which discovers their existence, some months or weeks after their formation. This inflammation of the cellular tissue

* M'Gregor, *Medical Sketches of the Expedition to Egypt from India.* 1804

soon terminates in suppuration; and, on the spontaneous or artificial opening of the abscess, one or more inches of filaria appear at the aperture. The animal is extracted by light, and repeated traction. It is said that the incomplete extraction may be followed by serious symptoms; it appears that, by means of appropriate incisions, it would always be easy to discover, and get rid of, this foreign body.

§ 901. It is difficult to procure filariæ, for the study of their organization. There is one well preserved in the collection at the *Jardin du Roi.* It measures about twenty-three inches from the head to the tail, and a line in diameter, throughout its whole length. It is slightly flattened, and its two terminal apertures are very distinct. M. Henri Pétroz, *pharmacien en chef* to La Charité, possessed one, extracted from the foot of a Guinea negro. This was twenty-five inches in length, and two thirds of a line in diameter, throughout nearly its whole length. It was yellowish like cat-gut; this was owing, probably, to its long preservation, rolled, and dried on a small piece of wood. Of the two extremities, one, the tail, was inflected, and near it could be seen, with a lens, a small tubercle, the middle of which was pierced by an aperture. The other extremity, examined by a microscope of 1500 magnifying power, appeared unequal, irregular, and slashed. It is probable that the head had been broken, altered, or destroyed. Lastly, M. Blainville reports (*Trad. Franc. de l'Ouvrage de Bremser sur les Vers Intestinaux,*) that he possesses a filaria, which had been sent to him by M. Delorme, the author of some very interesting observations on this entozoophyte.*

§ 902. Several authors have confounded the *filaria of Medina* with the *gordius aquaticus.* This error is the more easily fallen into, as the *gordius* is in the form of a thread, like the *filaria,* but the former differs from the latter, by the body presenting transverse folds like the annulati, to which they belong, and by inhabiting water, mud, inundated soils, &c. while the filaria is a true entozoophyte. All the gordii observed by Blainville had the anterior extremity of the body divided in the shape of a forceps; this is never the case with the filariæ. In combating the opinion of Joerdens, who thought that the *gordius aquaticus* might be introduced beneath the skin of man, M. Bosc judiciously remarks that the

* *Journal de Physique, Chimie, &c.* par Ducrotay de Blainville. Août, 1818.

organization of this species of *gordius* was not adapted to perforating the integuments, and that it has never been observed in the subcutaneous cellular tissue of man. After examining some individuals of this species which we had collected, my friend Dr. Asselin and myself were struck by the accuracy of the observation of M. Bosc. Pallas met no where with so great a number of the *gordii aquat.*, as in the lake of Waldei; and he could not learn that this worm had been ever introduced under the skin of individuals who plunged the whole or part of their bodies into this lake.

SECTION IV.

DISEASES PRIMARILY FOREIGN TO, BUT WHICH, AT TIMES, PRODUCE ALTERATIONS OF THE SKIN.

§ 903. The skin may undergo, in its conformation and texture, divers changes, the description of which would be naturally placed with some affections of the subcutaneous cellular tissue, with which they are related. Although the history of these diseases does not necessarily find a place in this work, it has been thought proper to describe one of them, (*Elephantiasis of the Arabs,*) on account of the remarkable changes which it sometimes causes in the organization of the skin. I am the more induced to enter into this description, from this disease having been recently confounded with lepra, and elephantiasis of the Greeks, from which it differs, both in its primary seat, and external characters.

ELEPHANTIASIS OF THE ARABS.

Syn.—*Elephantiasis. Lepra. Barbadoes Leg. Cochin Leg.*

§ 904. Under the name of *elephantiasis of the Arabs* has been described, and some authors even now designate, all intumescence of the cellular tissue of the limbs, scrotum, labiæ, face, &c. not dependent on phlegmon, œdema, or vascular tumours. Intumescence of this description may be consecutive to chronic inflammation of the cellular tissue, which becomes hardened, resistent, and truly hypertrophied, or may

be produced by abnormal development of the adipose, or other tissues which enter into the structure of the limbs or face. M. Alard* restricted the sense of this term, by applying it to a certain inflammation of the skin, and subcutaneous cellular tissue, announced at its outset by the formation of a hard, knotty, and painful cord, following the course of the lymphatic vessels, and characterized afterwards, by a hard, shapeless, and permanent engorgement of the skin, subcutaneous cellular and adipose tissues of the parts affected, the dimensions of which gradually increased.

§ 905. When this peculiar inflammation is developed in a healthy person, the invasion is usually sudden and unexpected. A more or less vivid pain is felt along the course of the principal lymphatic trunks, or in one or more of the glands of some region; most ordinarily one of the *abdominal limbs* are affected. A hard cord soon appears, in the direction of the pain, knotted and tense, resembling a wreath of small subcutaneous tumours. The inflammation progressing, the tegument covering the lymphatic vessels and glands inflames, assuming an erysipelatous tint; the inflammation extends to the subcutaneous cellular tissue near the disease, and is followed by considerable tumefaction. Other phenomena accompany this local affection. At its commencement, there is prolonged shivering, very vivid thirst, general disorder, anxiety, violent vomiting discharging the contents of the stomach, and sometimes a small quantity of blood. In some particular cases, the brain itself becomes affected, and delirium supervenes; an intense heat succeeds the shivering, accompanied by increased action of the heart, and followed by abundant general, or partial sweats, and diminution of the febrile action. After thus subsiding, these morbid symptoms, local and general, reappear in the form of *paroxysms*, at more or less distant intervals, always preceded by renewed local irritation, and followed by increased augmentation of the tumefaction of the inflamed part. The duration of this stage is very uncertain; the general symptoms afterwards diminish both in number and intensity. After each attack, the heat and pain dissipate more rapidly, while the swelling increases from day to day, making considerable progress in the first two or three months which follow the invasion of the disease. The cellular tissue, at first, appears to be the seat of acute

* Alard, *De l'Inflammation des Vaisseaux Lymphatiques, Dermoïdes, et sous Cutanées, (Eléphantiasis des Arabes, Maladie Glandulaire de Barbade, &c.)* 8vo. Paris, 1824.

dropsy; but, in its progress, the tumour becomes very hard, and no longer yields to the pressure of the finger. The lymphathic glands either suppurate, ulcerate, or remain in a state of chronic induration. Arrived at this second stage, the disease usually exists without any farther inconvenience than what arises in the functions of the part affected. After remaining stationary for several months, the malady seems to revive, and it not unfrequently occurs that fresh inflammatory paroxysms are developed, followed by renewed increase in the size of the limb; the number of these atacks can neither be foreseen, nor calculated upon.

§ 906. These symptoms are not always met with in all diseases designated, for want of some other term, *elephantiasis of the Arabs;* they were not all observed in a case, reported by M. Bouillaud,* of a woman, whose inferior limbs, enormously swollen and as hard as stone, resembled, so to speak, those of *an elephant.* In this case, the engorgement was consecutive to the obliteration of the crural veins, and that of the vena cava, and not to inflammation of the lymphatic vessels. This abnormal development of one of the lower extremities coincided, in one patient, with varices of the veins of the thigh.

§ 907. Elephantiasis of the Arabs presents some remarkable peculiarities, according to the region on which it is developed. No part is exempt from the attack; but it most commonly affects one of the *lower extremities:* in the latter case, it is known in England as the *Barbadoes leg.* M. Alibert has thought proper to view this morbid condition as a species of lepra, which he calls *tuberculous elephantine lepra.* The joints, near the inflamed part, at first become stiff and contracted; the limbs afterwards assume such fantastic shapes, and acquire dimensions so disproportionate to other parts of the body, that it is impossible to give a general idea of it to those who have not seen the disease, or at least drawings from it. Sometimes it forms, as it were, in steps, so that each of these appears like a distinct tumour; at other times, the tumour is plain and smooth, like a well-filled sack or bottle. After the first attacks, the skin is usually smooth, and without discoloration; varicose vessels sometimes ramify under this membrane, giving it a brown colour; by degrees the integuments become harsh; covered by nipple-like processes, small warts, yellow, disgusting crusts, and most frequently, by a

* *Archives Générales de Médecine,* tom. vi. p. 567.

new thick epidermic production, analogous to that of ichthyosis. Lastly, fissures and crevices form in the limb, which becomes enormous, and extraordinarily deformed. In some patients, during the course of the disease, or after it, the articulations of the limbs become the seat of very obstinate chronic inflammation.

§ 908. When developed on the parietes of the *abdomen*, and occupying a large surface, elephantiasis is often attended, at its outset, by all the symptoms of very violent gastric irritation; an abundant serous exhalation takes place in the subcutaneous cellular tissue of the lower belly, and often, also, in that of the *labiæ, scrotum,* and margin of the *anus*.

If the *scrotum* is the primary seat of elephantiasis, the affection may extend to the penis, the common effect of which is a morbid exhalation, which gives to these parts a monstrous size. This alteration has been improperly designated as *Egyptian sarcocele,* or *endemic hydrocele of Malabar*. M. Dumeril recently saw a case, in a man, on whom all the resources of art had been tried in vain. More recently still, M. Dupuytren had a woman of the town in his wards, in whom this disease was developed in the labiæ, which were of enormous size.

§ 909. The parietes of the *chest, neck,* and *head,* are also liable to this disease. It gives to the breasts so much bulk, that they require to be supported by bandages. Besides the chronic induration which follows the attack, if neglected, ulcerations form in the mammary regions, which are very difficult to heal. Lastly, when the *face* is the seat of elephantiasis, delirium often occurs in the early stage; and in the second, permanent tumefaction of the cheeks, nose, and lips is observed, affecting occasionally one half of the face, presenting a hideous aspect.

§ 910. The extent and intensity of the alterations of the lymphatic vessels and glands, and of the subcutaneous cellular tissue, the region on which this affection is developed; the number of attacks; the greater or less interval between them; the idiosyncrasy of the patient; treatment adopted, &c. all influence the local disease, and the sympathetic and concomitant lesions. An exact idea of the variable and numerous forms presented by these morbid phenomena, can only be attained by study of the cases of *Barbadoes leg* which have been published.

§ 911. (A. R.) Patients seldom succumb to the first stage of elephantiasis of the Arabs. Anatomical researches have

been made only in individuals who have been the subjects of it for months, or even years. In the latter case, Hendy found the lymphatic glands indurated, or suppurating, and larger than in the normal state; the absorbents were dilated, and their coats weakened, so as not to be capable of resisting the lightest injection. The subcutaneous cellular tissue presented a remarkable alteration: a thick, viscous, tenaceous humour, sometimes of the consistence of jelly, often mixed with a sort of serosity, filling and distending its areolæ; the quantity of this humour was proportional to the general size of the tumour, or to that of its different parts. In some patients, the subcutaneous and intermuscular cellular tissue has been found very abundantly developed, and indurated, (bearing some resemblance to submucous cellular tissue become scirrhous,) and more and more dense as it approached the dermis. The adipose tissue has also been observed to acquire a very marked development. The smaller arteries of the diseased parts have much larger dimensions than in the healthy state; the muscles become softened and pallid; the bones and nerves do not, usually, undergo any change in structure or conformation.

The distended skin may preserve its natural appearance; but it may also present various alterations. Sometimes, increased in thickness, so as to resemble hog's skin; it presents, in other cases, fissures and ulcerations, particularly in the neighbourhood of the joints. It occasionally assumes a state analogous to ichthyosis. The epidermis is then, usually, very thick and adherent to the chorion. Beneath the epidermis, Mr. Thomas Chevalier* found the papillæ of the skin excessively enlarged, elongated, and prominent on the surface of the dermis; at the points where the papillæ were smallest the epidermis was thinnest. The chorion was so much hypertrophied, that in some parts it was half an inch in thickness, and presented the granulated aspect observed in the larger quadrupeds. It adhered by its under surface to the indurated cellular tissue, with which it became insensibly confounded; it was neither injected, nor altered in colour. This abnormal development of the papillæ has been observed also by M. Andral,† who distinguished the three layers which Gaultier and M. Dutrochet assert to exist between the dermis and epidermis, and which, till then, had never been demonstrated,

* *Medico-chirurg. Transact.*, vol. xi. p. 63.
† *Archives Générales de Médecine.* Mar. 1827.

except in the skin of negroes, and that of animals. A woman had an old ulcer on the right leg: this had cicatrized thirteen years, but the limb acquired an unusual development, and great hardness; the skin had become rugous, and of a deep brown colour, analogous to that of the cubital edge of the hand in negroes; at some points the limb was black. On dissection, M. Andral found the subcutaneous and intermuscular cellular tissue remarkably developed and indurated, resembling submucous cellular tissue in a scirrhous state. The dermis was greatly increased in thickness, and at several points could not be separated from the former; the two seeming almost one homogeneous organization; it was neither injected nor discoloured. Above the dermis was the *papillary* body, strongly marked at several points, evidently distinct from the dermis, and bearing the same relation to this as the villous coat to the intestinal mucous membrane. Above this papillary body, and between it and the *epidermis*, were three distinct layers: the innermost, under the form of a white line, dipping into the interstices between the papillæ, not receiving any vessels, and consisting of a cellulo-fibrous tissue, was what Gaultier has designated *the deep white layer;* Dutrochet, the *epidermic layer*. A second, external to this, composed of blackish, very delicate filaments, interlacing in all directions, constituted a network quite analogous to the coloured layer in negroes. Lastly, a third, immediately subjacent to the epidermis, and which, at some points, was only a white line, like the epidermic layer of the papillæ, thicker and harder than the others, and as if formed of a series of super-posited scales: this was the *superficial white layer*, of Gaultier; the *horny coat*, of Dutrochet. I observed analogous facts, in the examination of the great hypertrophied integuments of a man who had laboured under very remarkable general obesity.

§ 912. The state of the stomach, and the other viscera which may be affected in this disease, has not been carefully studied. Farther observation will shew, whether inflammation of the stomach may not tend to produce the morbid phenomena sometimes observed at the commencement of this singular affection. The comparative study of the symptoms during life, and the alterations observed after death, seem to lead to the conclusion that elephantiasis of the Arabs is a peculiar inflammation, the primary seat of which is in the lymphatic glands and vessels, and which afterwards rapidly extends to the subcutaneous cellular tissue, frequently to the

skin, and sometimes to other organs adjacent to the seat of the disease. These tissues, at last, undergoing different alterations, consecutive to chronic inflammation, present a most remarkable state of hypertrophy.

§ 913. This affection is neither hereditary nor contagious; it attacks all ages, rich as well as poor; those who live well, and those who are poorly nourished. It seems that the sudden impression of cold, and the penetrating coolness of the nights, aided by the currents of air which are established in the houses of Barbadoes, are the most usual causes of this disease, which is comparatively rare in Europe. It is said to become endemic, if, as in the torrid zone, and some parts of meridional Europe, these causes act continually in consequence of prevailing winds; and that it may become epidemic, when the changes of the seasons produce a certain succession of circumstances favourable to its development: so Hilary remarked.

§ 914. (D.) Elephantiasis of the Arabs presents two different appearances. At first, it is, in most cases, an acute phlegmasia of the lymphatic glands and vessels, and of the subcutaneous cellular tissue, attended by febrile symptoms; it afterwards becomes a chronic affection, which may simulate certain tumours, according to the seat it occupies. In its first stage, elephantiasis may be confounded with common inflammation of the lymphatic vessels and glands, or that produced by the absorption of a virus; with induration of the cellular tissue, with the œdema* observed in *puerperal women*, and other phlegmasiæ of the cellular tissue of the different regions of the body. History tells us also, that the voluminous tumours observed in the second stage of the Barbadoes glandular disease, have been taken for varicose swellings, for elephantiasis of the Greeks, spina ventosa, hydrocele, sarcocele, hernia, encysted dropsy, &c. according to the region on which they have been developed; but at this time, no well-informed practitioner is liable to make these errors. It is of the greatest importance to determine whether the tumefaction of the affected parts is not caused by the indurated cellular tissue, impregnated with serosity and hypertrophied, by the abnormal development of the adipose tissue, or the skin, muscles, or other tissues entering into the organization of the limbs; whether it is not produced by the enlargement or engorgement of the lymphatic glands and

* Rayer, *art.* Œdème, (Dict. de Med.)

vessels, dependent on obstruction to the course of the blood, caused by dilatation, narrowing, or obliteration of one or more of the large veins.

§ 915. (P.) The first stage of this disease is never fatal, unless the stomach, intestines, or brain, become sympathetically affected; the existence of any of these lesions will render the prognosis more unfavourable. They are less to be feared when elephantiasis affects a lower extremity, than when it occupies the parietes of the abdomen or thorax, or the neck or face. They are not observed when the disease is consecutive to an alteration of the veins.

§ 916. (T.) Dr. Hendy reports some cases which tend to prove that, in some rare instances, elephantiasis of the Arabs terminates spontaneously, after a month's duration. He recognises the utility of local bleeding in the first stage of the disease. Having no leeches, in the island of Barbadoes, he advises scarification, as a substitute. Although objections have been raised against bloodletting, it seems to me preferable to the application of leeches; it mitigates at the same time, the local symptoms, and the vomiting and other sympathetic morbid phenomena, when they exist. I have employed it largely, but in the chronic stage; when it has always given, at least, temporary relief. The affected limb should be placed in the horizontal position, protected from external impressions, and enveloped in flannel soaked in emollient narcotic decoctions.

§ 917. When the inflammatory symptoms have been subdued, a *compressive* bandage has always appeared to favour the absorption of the humour contained in the areolæ of the cellular tissue; sedative and repercussive topical applications, such as the liq. plumbi acet. are useful in assisting the salutary effects of compression. If the abdominal limbs are affected, the patient, submitted to this treatment, should keep in bed for some weeks, so that the diseased parts may be constantly in the horizontal position. *Champooing*, aided by compression and purgatives, completely cured a patient treated by Bayle and M. Alard. A strong man came every morning to press the leg of the patient in all directions, and continued this manœuvre for three-quarters of an hour; after this, the bandage was rolled from the toes up to the knee. We succeeded, says M. Alard, by this proceeding, to the utmost expectations of our patient, viz. in reducing the leg to its natural size, and removing all deformity; but then, we had recourse to the repeated use of drastic purgatives, and the

patient was completely cured of an infirmity which had afflicted him for twelve years without remission. If no sign of intestinal irritation is present, advantage should be taken of this circumstance to administer laxatives. If the tumefaction of the limb does not completely disappear, or if the abnormal development of the second stage has existed for several years, the chances of cure are few; yet M. Lisfranc has obtained truly remarkable success under these circumstances, by the ably combined employment of *scarifications*, *compression*, and local bloodletting. This method is particularly applicable to elephantiasis, constituted by hypertrophy of the infiltrated subcutaneous cellular tissue: like all other modes of treatment, it is unsuccessful when the tumefaction results from the abnormal development of the adipose tissue. It has the advantage, even when inefficacious, of teaching us to appreciate more exactly the state of the skin and subcutaneous cellular tissue.

The scarifications ought to be made far apart, so that the inflammatory circles which afterwards surround them may not unite. The inflammation commonly produced by twenty or thirty incisions of half an inch, or an inch in extent, is not considerable; if it acquires any intensity, it must be met with local and general bloodletting, and the application of emollients and narcotics. Before practising new scarifications, we should wait till the first are healed.

§ 918. Patients, distressed by the enormous weight of the diseased parts, have required amputation as a last resource against this incurable malady. It is asserted that those who have submitted to this operation have had a recurrence of the disease manifesting itself on other regions of the body, or have shortly afterwards fallen victims to one or more phlegmasiæ of the viscera, with which they became affected. Several physicians have recommended the application of blisters and cauteries to the parts affected, hoping that the issue of a certain serosity and purulent humour would contribute to diminish the volume of the diseased parts. *Mouchetures** have been advised, with the same view; but in this case, as in œdema, deep scarifications are far preferable.

§ 919. The antispasmodic effects of the sublimated oxyde of zinc have been much vaunted, to the dose of from six to

* *Mouchetures* are small and superficial incisions made in the skin, allowing not blood, but serum only to exude, and are distinguished by the French from scarifications, which are followed by the flow of blood.—T.

eight grains a day. Hendy affirms that it relieved the vomiting and præcordial anxiety experienced by the patient, during the periodical accessions or exacerbations of inflammation. Some practitioners in the Isle of Barbadoes, struck by the frequency of vomiting during the local irritation, have thought it proper to favour, or even provoke this process. Dr. Hendy wisely opposes this practice, which has been found by experience to be injurious. The pain in the epigastrium, nausea, and vomiting, are, in this case, produced by violent gastric irritation, and not by the plenitude of the humours, or the abundance of *saburræ*.

§ 920. Under the generic term of *elephantiasis of the Arabs*, I have, like authors who have preceded me, included several affections not identical, but which have a common character: that of being followed by hypertrophy of the adipose tissue, or induration of the subcutaneous cellular tissue. In many cases published by M. Alard, particularly that of the woman Bastien, the presence of inflammation of the subcutaneous lymphatics was incontestable; on the contrary, nothing authorises the same conclusion in the case of M. Bouillaud's patient, or that cited by M. Chevalier. A rigorous distinction should be made in these cases when they are collected in numbers.

§ 921. In the cases quoted,* the engorgement of the limbs was certainly the result of chronic inflammation of the subcutaneous and intermuscular cellular tissue, more or less analogous to that observed in the neighbourhood of old ulcers and inflamed bones. It should be remarked that the limbs, and other regions of the body, sometimes acquire an abnormal development, a *true hypertrophy*, which may interest separately, or together, the skin, the adipose and cellular tissues, the muscles and the veins. These affections should be distinguished from the phlegmasic alterations which have been designated under the name of *elephantiasis of the Arabs;* and the rather, as these complex hypertrophies of the skin, at times, present alterations analogous to those observed in the latter disease.

* Vol. ii. p. 438, et seq.

FINIS.

INDEX.

PAGE

Abolition of the sensibility of the skin 295
Acarus scabiei 380
Acne 321
Alopecia 363
Alterations of the appendages of the skin 346
——— of the colour of the skin 296
——— of the hair and its bulbs 358
——— of the nails and their matrices 346
Ampulla 53
Animate bodies on the skin, and in its substance 372
Anthrax 172
Artificial pustules 166
Bronzed tint produced by the use of arg. nit. 303
Bubo pestis 257
Bullous inflammations 49
Burns 260
Cancer 210
Canities 361
Chloasma 301
Chlorosis 298
Cicatrix 343
Clavus 341
Coloration of the skin 296
Cuperosa 134
Congestions and hæmorrhages .. 280
Cyanosis 282
Decoloration of the skin 296
Defects of conformation and texture of the hair 366
——— nails 353
——— skin 324
Diseases primarily foreign to, but causing alterations of, the skin 389
Ecchymosis 285
Ecthyma 129
Eczema 83
Elephantiasis Arab. 389
——— Græc. 214

PAGE

Ephelis 300
Ephidrosis 318
Erysipelas 38
Erythema 34
Exaltation of the sensibility of the skin 295
Exanthematous inflammations ... 7
Filaria 386
Fissures 246
Follicular tumours 322
Foreign bodies on the skin, and in its substance 370
Frostbite 265
Furuncle 171
Furunculous inflammations 168
Gangrenous inflammations 249
Hæmacelinosis 289
Herpes 70
——— circinnatus 73
——— iris 72
——— labialis 74
——— phlyctenodes 70
——— preputialis, &c. 75
Hordeolum 169
Horny appendages 338
Ichthyosis 334
Icterus 316
Impetigo 143
Inflammations of the skin 1
Inordinate growth of the nails 355
Lentigo 301
Lepra 223
Leucopathia 296
Lichen 182
Linear inflammations 246
Lupus 203
Malign pustule 251
Mamillated excrescences 333
Matting of the hair 369
Melanosis 305
Mentagra 139
Miliaria 95
Molloscum 329

	PAGE
Morbid secretions	318
Multiform inflammations	259
Nævus	310
Neuroses	294
Œstrus	384
Onyxis	346
Papulous inflammations	176
Pediculus capitis	374
——— corporis	375
——— pubis	378
Pemphigus	55
Petechia	287
Pityriasis	244
Plica	359
Prurigo	192
Psora	78
Psoriasis	234
Pulex irritans	379
—— penetrans	ib.
Pustulous inflammations	98
Roseola	18
Rubeola	10
Rupia	61
Scarlatina	21
Squamous inflammations	221
Strophulus	178
Subungueal ecchymosis	352
Syphiloid eruptions	267
Tinea	150
—— annulare	158
—— favosa	151
—— granulata	161
—— mucosa	163
Tuberculous inflammations	202
Urticaria	30
Vaccina	120
Vaccinella	127
Varicella	101
Variola	108
Vascular tumours	326
Vegetations	325
Verruca	331
Vesication	51
Vesiculous inflammations	68
Warts	331
Zona	63

UNIVERSITY OF BRISTOL. MEDICINE

J. AND C. ADLARD, PRINTERS, BARTHOLOMEW CLOSE.