

A treatise on cutaneous medicine and diseases of the skin / by H.S. Purdon.

Contributors

Purdon, Henry Samuel.

Publication/Creation

London : Bailliere, Tindall & Cox, 1875 (Belfast : James Hutchinson.)

Persistent URL

<https://wellcomecollection.org/works/q6az4zn5>

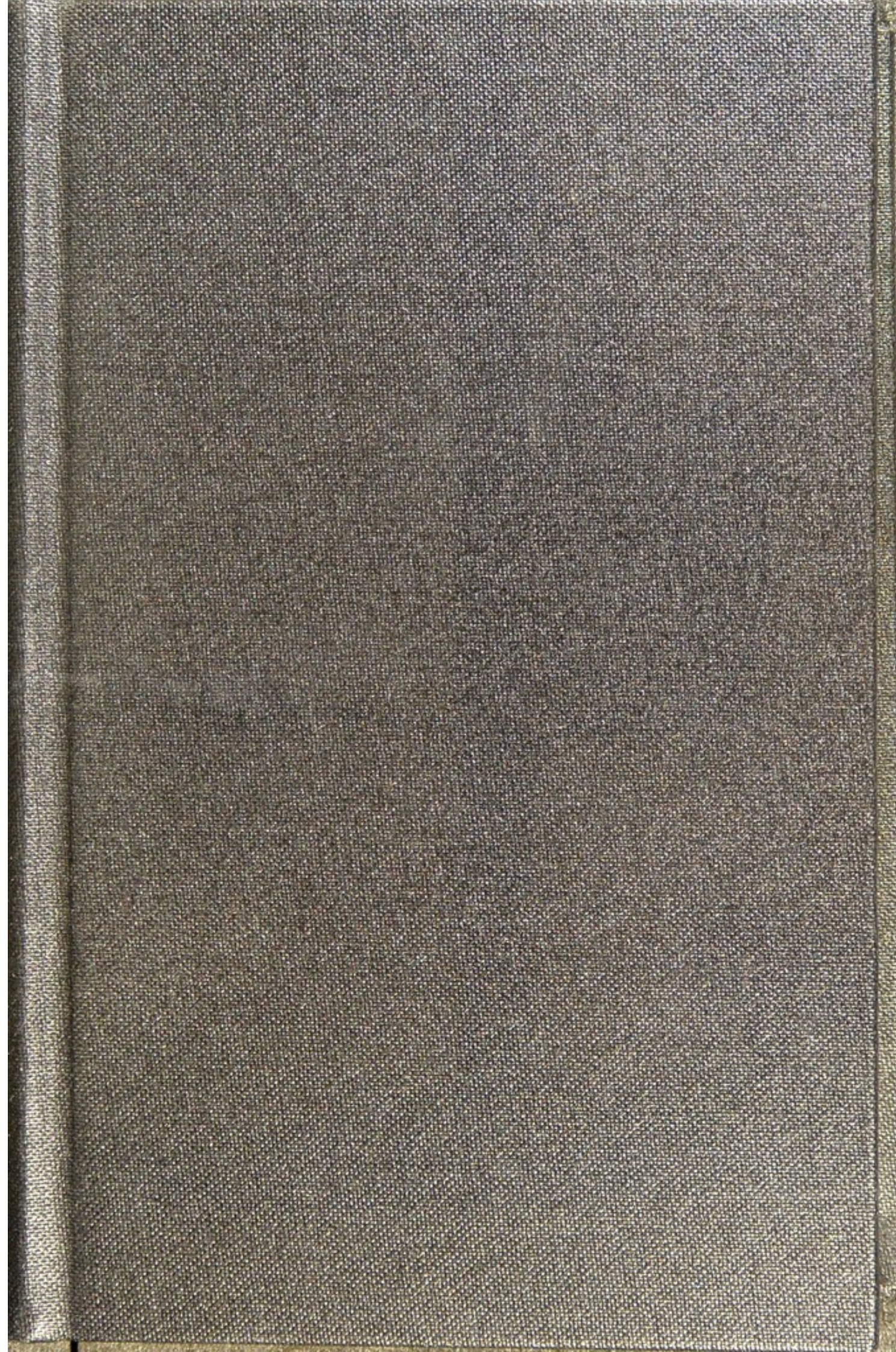
License and attribution

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





22101776271



Digitized by the Internet Archive
in 2015

<https://archive.org/details/b20387751>



W J Spott Esq
with the best regards of the author

54800

13/76

A TREATISE

ON

CUTANEOUS MEDICINE

AND

DISEASES OF THE SKIN.

BY

H. S. PURDON, M.D.,

PHYSICIAN TO THE BELFAST GENERAL HOSPITAL, PHYSICIAN TO THE HOSPITAL FOR
SKIN DISEASES, CORRESPONDING MEMBER OF THE NEW YORK DERMATOLOGICAL
SOCIETY, VICE-PRESIDENT ULSTER MEDICAL SOCIETY, LATE EDITOR OF
"THE JOURNAL OF CUTANEOUS MEDICINE," ETC., ETC.

LONDON:

BAILLIÈRE, TINDALL, & COX,
KING WILLIAM STREET, STRAND.

BELFAST: M'CRACKEN & MOGEY.

1875.

16783

14259015

BELFAST :
PRINTED BY JAMES HUTCHINSON.

M20007

WELLCOME INSTITUTE LIBRARY	
Coll.	welMOmec
Call	
No.	WR100
	1875
	P98t

PREFACE.

THE various chapters composing this little Work were given chiefly as Lectures in the Summer at the Belfast General Hospital, or appeared as Essays and Papers in the Medical Journals. Whether wisely or not, I have collected all into one Volume, adding such extracts from well-known Authors as will, I hope, prove interesting and valuable additions to the matter treated of. I may, however, be permitted to say that, in compiling and arranging the Lectures from which the materials for this Work were obtained, use has been made of many standard treatises on Cutaneous Diseases, especially those by my former teacher, Dr. M'Call Anderson, now Professor of Clinical Medicine in Glasgow University, and my friends, Professor Erasmus Wilson, F.R.S., Dr. Tilbury Fox, and Mr. Milton, of London; Dr. Damon, of Boston, United States; also Dr. Pullar's translation of Neumann's Work. The pages of the

Journal of Cutaneous Medicine have likewise furnished valuable information. It is hoped that this treatise may be found serviceable. My own remarks on treatment are derived from nine years' experience at the Belfast Skin Hospital, an institution commenced in an humble way in 1865. During 1869 a small hospital with six beds was erected, and now, through the liberality of the late Edward Benn, Esq., there is in course of erection an Hospital for Skin Diseases, containing thirty beds and a suite of baths of every description.

5 COLLEGE SQUARE EAST, BELFAST,
January, 1875.

CONTENTS.

CHAPTER I.

PAGE.

HISTORICAL SKETCH OF DERMATOLOGY.—Classifications of Skin Diseases by various authors—Trophic Disorders—Functions of the Skin—Inflammation—The Hair—Sudden Blanching of the Hair—The Colour of the the Skin—Albinos—Race Characteristics—"Porcupine Disease"—Darwin's views.

I

CHAPTER II.

ERYTHEMA.—Dr. Brown - Séquard—Varieties of Erythema—Turkish Soldiers liable to Erythema papulatum—Hebra's views—E. Nodosum—Passage of blood Corpuscles through vessels—Ranvier's views on Œdema—Treatment—Per Oxide of Hydrogen—Strychine—Chilblains—Acrodynia—Pellagra—Pancreatic Emulsion.

20

CHAPTER III.

ECZEMA AND ITS VARIETIES.—Microscopic examination—Views of different authors, viz: Wilson, Buchannan, M'Call Anderson, Milton—Acne Rosacea—Abuse of alcohol—Hydrargyri—"Dartrous Diathesis"—Views of French and American Dermatologists—Vaso-motor paralysis—Diagnosis—Anæmia—Hypo-phosphites—Sulphur—Cod liver oil—Iron—Local Treatment—Styptic colloid—"Eczema of Tea-tasters"—Tar—"Black Wash"—Tar Acne—India-rubber gloves

36

CHAPTER IV.

PSORIASIS.—Definition of Scales and Crusts—Alphos—Leprai—Pathology—Neuroses of Sensibility—"Gin Drinkers' Skin"—Analysis of Scales—Causes of Diseases—Diagnosis—Bazin's views—Psoriasis of nails and Tongue—Chief mineral waters used in Skin Diseases—Dr. Cleland on Arsenic—Carbolic Acid—Cod liver oil—Syrup Lacto—Phosphate of Lime—"Wet Pack"—"Blanket Bath"—Neligan's Solution—Copaiba—"Ozokerit"—Meat Diet—Phosphorous ..

58

CHAPTER V.

SEBORRHŒA.—Symptoms — Pityriasis Capitis—Appearance of the Scalp—Defluvium Capillorum—Views of Pincus—Soaps—Treatment—Hair in its Medico-Legal Aspects ..	PAGE. 78
---	-------------

CHAPTER VI.

DISEASE OF THE NAILS.—Onychia—Common in Belfast—Unknown in Leeds and Dundee—In-growing Toe-Nail—Nitrate of Lead—Onychia Parasitica—Atrophy and Hypertrophy of Nails—Vanzetti and Ozanam's views—Dr. Fagge on affections of the Nails	86
--	----

CHAPTER VII.

ECTHYMA.—Cohnheim's observations—Acohol—Dr. Beale on Germinal matter—Action of Quinine—Button Scurvy .	92
--	----

CHAPTER VIII.

HERPES.—Formation of a Vesicle—Neuralgia of Herpes—Sympathetic System the Seat of Disease—Tic-Douloureux—Caffeine in Neuralgia—Views of Bärensprung—Varieties of Herpes—Nerves implicated—Views of Heberden, Hebra, Parrot, Damon, and Hutchinson—Post mortem appearances found in roots of Nerves—Fayrer's case of Impetigo—Gerhardt's case of Herpes—Hybord's cases of affection of the Eye—Varieties of Zoster—Herpes and Stricture—H. Bullosus—Herpes of Tongue—Treatment by Ergot—Bromide of Potassium—Morphia and Chloral—Iron—Local Treatment—Collodion—Hydrite of Amyl, &c.	68
---	----

CHAPTER IX.

PEMPHIGUS.—Elementary Lesion—Cerebro-Spinal Meningitis in Dublin, 1866-67—Experiments on Division of Sympathetic Nerves—Dr. Russell's Case—Pemphigus in Barge and Lighter Men—Alcoholism—Formation of a Blister—Scabies—Neligan's Division of Pemphigus—Ricord on Syphilitic Pemphigus—Gastralgia a Cause—P. Foliaceous and Grangraenosus Treatment	121
---	-----

CHAPTER X.

URTICARIA.—Pathology—Purpura Urticans—Symptoms—Intermittent Urticaria—Action of Quinine—Varieties of the Diseases—Treatment—Colchicum—Oil of Yellow Sandal Wood—Ballynahinch Spa	132
--	-----

CHAPTER XI.

	PAGE.
PRURIGO AND PRURITUS.—Definition—P. Senilis—Dr. Derby's views—State of the Urine—Local varieties—Diabetis—Hippuric Acid—Treatment by the Bromides, Nux Vomica, Cod Liver Oil, and Electricity—Local Treatment—Pruritus Ani and Fissures—"Turkish Bath"—Iodoform,	141

CHAPTER XII.

VEGETABLE PARASITIC DISEASES.—Elementary parts of a Fungus—Varieties of Fungi—Huxley's views—Muscardine—Conditions necessary to Growth of Fungi—"Ringworm"—Cattle attacked by Tineæ—Fungoid Diseases of Plants—Views of different authors on Parasitic Diseases—Sycosis—Dr. Olavide's Address at Academy of Medicine, Madrid—Favus—Rain-fall—Treatment—Chromic Acid—Professor Cantoni's plan,	156
---	-----

CHAPTER XIII.

EPHIDROSIS.—The Sudoriparous System—Dr. Willis on the Action of the Skin—Venous Absorption—Perspiration—Sweat—Parrot's case—Hebra's and Wilson's cases—Nostalgia—Arsenic—Belladonna—Aconine and Quinine—Local Treatment,.. ..	178
---	-----

CHAPTER XIV.

SCROFULODERMA.—Mr. Milton's views on—Lupus Verrucosus—Statistics—Shakespeare on "King's Evil"—Enlarged Lymphatic Glands—Composition of the Blood in Scrofula—Dr. Steel's views—Appearance of Scrofulous People—Views of French Physicians—Division of Scrofulides—Ulcers—Treatment of Suppurating Glands—Walnut Leaves—Jordan's plan—Heberden on Empirical Treatment—Mr. Milton on Calomel—Neligan's Solution—Sea coast—Plan of Treatment pursued at the Deaf and Dumb Institution—Milk of stall-fed Cattle—Vaccination—Petershausen on Scrofula,	185
---	-----

CHAPTER XV.

ADDISON'S DISEASE.—Pathology—Imperfect oxidation—Anæmia—M. Jeanin on Lentigo—Bronzing of Skin—Affections of the Supra-renal Capsules—Splanchnic Nerves—Frank Smith on Pigmentation—"Grave's Disease"—Dr. Beigel on Causes of Abnormal Pigmentation—Varieties—Negroes—Captain Burton's case,	198
---	-----

CHAPTER XVI.

DERMATALGIA.—Definition—Spinal Irritation—Chlorosis—Hy-	PAGE.
steria—Sir B. Brodie's views—Rheumatism—Myelitis—	
Treatment—Iron—Chloral—Indian Hemp—Morphia, ..	207

CHAPTER XVII.

ANÆSTHESIA.—Trousseau and Althaus on—Sciatica—Affections	
of Fifth Nerve—Local causes of Anæsthesia—Constitutional	
causes—Jaksch on most common period of life—Diseases	
in which Anæsthesia exists—Treatment—Galvanism, ..	213

CHAPTER XVIII.

ELEPHANTIASIS ARABUM.—Pathology—Ligature of Femoral	
Artery—the “Rose”—Phlegmasia Dolens—Statistics of	
Disease in Cochin—Angeioleucitis—Cruveilhier on Patho-	
logy—Meigs do.—Paludial Poison—Leprosy—Von Lair's	
Researches—Fisher on Ligaturing Arteries,	222

CHAPTER XIX.

LUPUS.—Virchow's Classification—Beale on Germinal Matter—	
Different forms of Lupus—Sycosis—Treatment—Volkman's	
cases—Lupus Erythematosus—Erasmus Wilson's opinion—	
Cases—Treatment—“Restoration of a Lost Nose,” ..	230

CHAPTER XX.

HÆMORRHAGES.—Ephidrosis Cruenta—Purpura—Complications	
—Exanthematous Rash—Plumbe on Purpura—Treatment—	
Oil of Turpentine—Ergot—Lime Juice,	243

CHAPTER XXI.

ANIMAL PARASITIC DISEASES.—Scabies—Dracunculus—Steato-	
zoon Folliculorum—Phtheirasis—Treatment,	247

CHAPTER XXII.

DERMATITIS.—Pathology—Hebra's Arrangement—Erysipelas—	
“Burns”—Treatment of Erysipelas in Australia—Fram-	
bœsia—Diseases of Samoa—Furunculi—Anthrax—Mr.	
Startin on Carbuncle—Treatment,	257

CHAPTER XXIII.

ACNE.—Definition—Varieties—“Couperose”—Various plans of	
Treatment—Lipoma—Acne-form Eruption of Mill-workers, ..	265



CHAPTER I.

BRIEF HISTORICAL SKETCH OF DERMATOLOGY—CLASSIFICATION OF SKIN DISEASES—ON THE HAIR, BEARD, AND COLOUR OF THE SKIN.

It is my business on the present occasion to offer a few preliminary* remarks relating more especially to the study of cutaneous diseases. I might be very diffuse in my treatment of this subject, but, considering the knowledge which you must have already attained in the prosecution of your professional studies, I think it better to bring the matter before you in the spirit of Sterne's precept, "That the truest respect which you can pay to the hearers' understanding is to halve the matter amicably, and leave him something to imagine in his turn as well as yourself;" and in the meantime I bid you "*Ceade mille failthe.*"

Nature has been divided into the Animal, Vegetable, and Mineral Kingdoms. It is with the first two of these divisions that the student of pathology has to deal. Here

* This chapter was originally delivered as an introductory lecture to my course on Skin Diseases, in the Belfast General Hospital, and is printed verbatim.

do we meet with those phenomena of suspended or perverted action characterised by the common name of disease. The chemical and mechanical changes of the mineral kingdom do not directly fall under our notice. We may have to study them, it is true, but it is only as they are subservient or related to the maladies and affections of organic structures. Dr. Wilks* has truly said "that there are some physiologists and pathologists who see in chemical action all that is sufficient for the production of disease and change in the tissues, whilst there are others who are content to speak of cell-growth altogether influenced by nervous forces, and they enforce their statements by illustrations from the growth of plants and animals, to say nothing of the growth of the human embryo itself. Admitting, they say, that nerve force may regulate or control nutrition, the latter must necessarily be independent of it in its actual operations. Those, on the other hand, who see a direct influence which almost amounts to a vital one propagated by a nerve, would illustrate the fact by cases where a nerve has been severed and atrophy of the parts below has resulted." Such affections are called Trophic Disorders. Dr. Fisher reports (*Berliner Klinische Wochenschrift*, Nov. 13th, 1871) some observations thereon. For instance, he states that if the injury has occurred to a nerve of one of the extremities, there appears in the course of three or four days an œdematous swelling, which is more marked on the back of the hand or foot, fingers or toes, than upon the palmar or plantar surfaces. After two or

* *Medical Times and Gazette*, October 10th, 1868.

three weeks a rosy redness supervenes, which extends (Paget's "Glossy Fingers"), and is accompanied by a burning pain, only relieved by cold compresses. Upon incising such a glossy hand, the skin and its cellular tissue are found peculiarly puffy and shining. The out-flowing serum contains many white blood corpuscles, and under the microscope is found a delicate minute-celled infiltration, as described by Volkman in erysipelas. Trophic changes appear in the nails; they either cease growing or fall off, and are either not replaced at all, or are misshapen, and thickened, and rough. The hair increases often at first rapidly, and then falls out. At subsequent periods exanthematous eruptions show themselves, chiefly eczematous, especially upon the palms of the hands, and small ulcers are formed, difficult to heal. After a diffuse eruption of eczema, the burning pains cease. Herpes, which Charot at first described, is rare. On the other hand, ecthyma and large blisters on the fingers and toes are common.

But to return: Hippocrates divided cutaneous diseases into local and constitutional. Galen classified them according to their situation—viz., into those affecting the head and those affecting the body. Many forms of skin disease were described by the Greek and Arabian physicians, and some of the terms still in use are those that have been adopted by Hippocrates, Celsus, and the celebrated Arabian physician, Avicenna. During the early part of the 17th century Hafenreffer published a rude classification, which was followed by another from the pen of Jerome Mercurialis, an Italian physician.

Turner was the next writer, and in 1736 published "A Treatise on Diseases Incident to the Skin." This writer's classification was grounded on diseases produced by internal and external causes. Lorry modified this arrangement, and was followed, about 1790, by Retz. The next author was Plenck, who classified skin diseases according to their external appearances, the groundwork of Willan's subsequent arrangement. In 1804 Derier divided these diseases into essential and symptomatic; but we must give to Willan the credit of arranging Plenck's artificial system to a tangible form. Now, Willan's classification, which is based on the primitive forms of cutaneous eruptions, is extremely simple, although naturally imperfect; diseases having no connexion whatever, except in external appearance, are frequently grouped together, as, for example, we have *scabies* in the same order as *variola*. Again the eruption may change its nature and character in development, as when a vesicle by augmentation of inflammation becomes thickened and hard at its base, beginning to be white and opaque, instead of containing a clear fluid, thus being transformed into a pustule. About the year 1819 Bateman adopted Willan's arrangement, and edited his published work. Mr. Plumbe, in 1824, made a step in the right direction, and classified skin diseases according to the morbid anatomy of the affected parts.

Dermatology found, however, in (M. le Baron) Alibert one capable of elevating it to a proper station. This dermatologist arranged cutaneous diseases into natural families, of which he founded twelve—as, *eczémateuses*,

exanthématéuses, *teigneuses*, *dartréuses*, *cancéreuses*, *lépreuses*, *veroléuses*, *struménuses*, *scabiéuses*, *hæmatéuses*, *dyschromatéuses*, and *hétéromorphes*. In this classification Alibert copied Linnæus and other botanists in their arrangement of natural history. In the family of *eczemateuses* all diseases related to eczema are contained. Rayer's classification was based on that of Willan's. He made, however, several improvements in the arrangement of the genera, but included affections such as neuralgia, cyanosis, &c.

Willan, as you know, arranged diseases of the skin into eight orders, as:—1st, *Maculæ*; 2nd, *Pustulæ*; 3rd, *Vesiculæ*; 4th, *Bullæ*; 5th, *Papulæ*; 6th, *Tuberculæ*; 7th, *Squamæ*; and 8th, *Exanthemata*. Hardy, of St. Louis Hospital, has given us a classification, in which he divides skin diseases into—1st, *Macules and deformities*; 2nd, *Inflammations*; 3rd, *Parasitic diseases*; 4th, *Eruptive fevers*; 5th, *Symptomatic eruptions*; 6th, *Dartres*, or *Tetters*; 7th, *Scrofulides*; 8th, *Cancers*; 9th, *Syphilides*. 10th, *Exotic diseases*. This last includes those affections which do not occur in France, as Leprosy, Frambœsia, Dehli Biol, &c., &c., whilst the *dartres* contains eczema, psoriasis, lichen, &c. Hebra's arrangement is founded on the pathological phenomena exhibited. The following are the most important groups, viz.:—*Hyperæmias*, *anæmias*, *hypertrophies*, *atrophies*, &c. Baumes, in 1842, published a classification, in which he repudiates pathological facts altogether. Mr. Erasmus Wilson's clinical classification is also excellent and well known to you. Bazin divides skin diseases into two

grand divisions—diseases in the course of evolution, and those arrested in evolution. The late Dr. Buchanan, of Glasgow, divided these diseases as follows :—

- | | | |
|---------------------|---|------------------|
| I. Inflammations. | { | 1. Erythematous. |
| | | 2. Eczematous. |
| | | 3. Phlegmonous. |
| II. New Formations. | { | 1. Epidermic. |
| A. Homologous. | | 2. Dermic. |
| | | 3. Pigmentary. |
| B. Herterologous. | { | 1. Pseudoplasms. |
| | | 2. Neoplasms. |
- III. Hæmorrhages.
- IV. Disease of Accessory Organs.
- V. Disease defined by Uniform Causes.
- A. Parasitic Diseases.
- B. Syphilitic Eruptions.
- C. Febrile Eruptions.

Much aid toward diagnosis and valuable information has been gained by the use of the microscope—for instance, the discovery of a cryptogamic plant in certain skin diseases. Many cutaneous diseases cause very little constitutional derangement; and as long as an individual remains unaffected with any acute inflammatory affection, the existence of an ordinary skin disease will not in any respect diminish the average chances of longevity. This fact is of importance in examining patients for insurance companies. The cutaneous covering of our bodies performs various functions important to health, and which are treated of in works on Physiology. It differs in the animal creation, being in the armadillo and shark, for

instance, strong, thick, and answering to a coat of mail. In the horse and animals of a similar kind, it is of a firm texture, and called the hide. Breschét was one of the first to investigate the minute structure of the skin in a scientific manner. We find it varies in thickness and consistence in different regions, and is freely supplied by blood vessels, nerves, and lymphatics, together with sebaceous and sudoriparous glands. The rete-mucosum is situated between the true skin and cuticle ; deeper still we have layer of sub-cutaneous cellular tissue. The pathology of this is very interesting, for in various diseases an exudation takes place into this structure—as, for instance, in eczema—moreover, it may be the seat of furunculi and various kinds of tumours. This sub-cutaneous infiltration may be due to nerve irritation, arising from either local or constitutional causes, said to be owing to direct transudation from the capillary vessels ; for, according to Bernard, the cerebro-spinal nerves cause dilatation of the capillaries ; the sympathetic, on the other hand, have an opposite influence ; and if these two functions are not equally balanced transudation occurs. Cell growth likewise depends in a great measure upon the nature and intensity of the exciting cause, and in eczema there is capillary congestion, with cell proliferation. We observe, then, that if the healthy functions of an animal are disturbed from various causes there ensues a train of symptoms described as follows :—Congestion, increased temperature in the affected part, escape of fluid from the vessels, giving rise to various elementary lesions, as vesicles, or when the exudation is

plastic papules. These lesions generally appear at the orifices of hair follicles, gland ducts, or other vascular points; or, following the distribution of particular nerves, vesicles may arise. Herpes and pemphigus form the connecting link between erythema on the one hand and urticaria on the other. These states are due in a great measure to derangement of the vaso-motor nerves, which control the flow of blood, and the vital actions of the different parts; redness of the skin being due to arrested or embarrassed circulation, the capillary layer of the cutis being involved. That this is the case is proved by many facts. The continued contraction of the blood-vessels, owing to vaso-motor nerve spasm, being occasionally the cause of a gangrenous condition of the skin, which is often referred to a blood disorder. The pathological state called inflammation is attended with hyperæmia, which cannot co-exist with healthy nutrition of the tissues—as, for example, the skin. The blood must also be in proper quality and quantity, the chief relations of the capillaries to textural growth being merely ministerial. Again, what has been termed functional reaction of the tissue cells may eventually lead to hypertrophy and hyperplasia, or, when excessive, to degeneration, and even death of the part affected. The new current of opinion, as stated by a recent writer, has brought us only a doctrine of suppuration, and forced upon us the following alternative:—We must either return to the old views, allowing the inflammatory process to have terminated with the action of the vessels, and cease to talk any more of an inflammation of non-vascular tissues; or we must not do

this, but place the clinical idea—according to which suppuration is a consequence of inflammation—upside down, and derive inflammation from suppuration.

Much attention has been bestowed of late years upon the marks and characters which distinguish the various races of man. The general form of the skeleton, especially the figure of the human skull, has been one of the most important indications of race, and one of the most generally employed means of classification. There are other distinctive features, however, which, when they can be discovered, furnish a very good criterion of race. I mean the character and the colour of the hair, beard, and skin; and, as the consideration of these is important to the correct understanding of dermatology, we will for a short time enter somewhat into detail.

The hair, as is well known, is an appendage of the skin, and consists of a shaft, and two extremities—the point and root, or bulb. The shaft is cylindrical in figure, but varies in size in different hairs. According to Leuwenhoeck, in a New Zealand chief the finest of fifty hairs measured 1-450th of an inch. But variety of thickness is not, however, confined to the different hairs of one head; it is met with even in a single hair, flaxen hair being the finest, and black the coarsest. Wilson states* that a single hair of a boy, eight years old, supported a weight of 7,812 grains; one of a man, aged twenty-two years, 14,285 grains; and it has been proved by experiment that a human hair, 57 times thicker than a silk-worm's thread, will support a weight of over 2,000 grains.

* On Diseases of the Skin.

The different colours of the human hair depend on various chemical substances: black hair containing a greenish black oil, phosphate of lime, iron, sulphur, &c.; red hair contains a reddish oil, and a large proportion of sulphur; white hair has phosphate of magnesia. Dr. Prichard, taking the colour of the hair as a leading feature, divided mankind into three principal varieties—the Melanic, the Xanthous, and the Leucos—the first-mentioned possessing very black or dark hair; the second known by light, brown, yellow, or red hair, fair skin, and blue or light-coloured eyes, which are the prevailing colours of the Teutonic race now inhabiting the great portion of Northern Europe. In the third class we have included the Albino. I may note, in passing, the permanence, to a certain extent, of the colour of the hair as a distinction of race. By it we can, in some degree, see the influence of conquest or colonization in many countries. Dr. Beddoe* adduces, in this respect, the light-haired people of Cork and Youghal, distinguished as they are from the darker inhabitants of the interior and western portions of the island, as a proof of the existence of Danish and Saxon colonies having been established at those places; and it is thus evident that during many ages certain physical peculiarities have continued permanent, and made themselves prominent, even after great admixture with other races. The woolly, crisp, and black hair of the Negro is the same to-day that it was a thousand years ago, separating this people from the European by its peculiar character alone. Some Europeans may have, however,

* Transactions of Anthropological Society.

occasionally black woolly hair, and even among the different tribes of Africa variations in the character of the hair are to be met with—even red hair has been mentioned as occurring in the Negroes of Congo, a fact related by Blumenbach. Loss of colour, or greyness of the hair, is one of the results of old age ; at earlier periods of life it may occur from mental anxiety. That grief is a cause of this condition is proved by many instances—for example, the case of Marie Antoinette, whose hair became silver grey in one night. Sir Thomas More and Mary Queen of Scots, are other reported instances. King Henry of Navarre is said to have had part of his moustache turned white in a few hours, from anger at the passing of the Edict of Nemours. A more recent example of sudden whitening of the hair from fright occurred in the person of a Sepoy, who, having been tried by courtmartial during the Indian mutiny, was ordered to be blown from a gun, and, after having been fastened to the mouth of the cannon, the bystanders actually saw the hair of the head turn perfectly white. This story appeared in all the newspapers a few years ago, and was well authenticated. Pere Lefevre's account of the change in his hair, brought about in a single night, is as follows :—" I was in Spain when I heard the news of the death of my father. In the night I dreamt that I saw him killed before my eyes, and my emotion was so great that when I awoke my hair had turned quite white." This is a notable example of the influence exerted by the mind or nervous system on the health of the body. I met with a somewhat similar example from emotion. Whitening of the

hair of the beard is often observed in the present day, especially in those individuals who have abolished the use of the razor late in life. The hair of the beard grows about one line and a half in one week, which, according to Wilson, would amount to nearly six inches and a half yearly. So, if the hair continued to grow at that rate for fifty years, the old man of seventy must have retrenched his beard upwards of twenty-seven feet. That it has reached a great length is evident from Holy Scripture, which speaks of the precious ointment running down Aaron's beard, "even to the skirts of his clothing."

The beard in the reign of Queen Mary throve abundantly, as may be seen in the portraits of that age. The lawyers alone had a regulation imposed upon them concerning this fashion. An old historian thus remarks on the beards of his age :—"Some are shaven from the chin like those of the Turks; not a few are short like the beard of Marquis Otto; some make round like a scrubbing brush; others with a *pique devan*; others being suffered to grow long. Therefore, if a man have a lean face, a Marquis of Otto's cut will make it broad, if it be platter, like a long slender beard, will make it seem narrower." Some races, as the Fejee Islanders, have the hair on the head in great quantity; in fact what would be considered as a curiosity with us is a natural character with them. Rayer mentions that he once saw a Piedmontese, aged twenty-eight, strongly built, who had little beard, but his head was covered with a most extraordinary crop of hair, frizzled on purpose, four feet ten inches in circumference. The hair was exceeding fine, and dark brown in colour.

Again, an old author, by name Turner, relates "that upon the confines of Pisa, at a place called Holy Rock, a girl was born all over hairy," attributed to her mother looking upon the picture of St. John the Baptist drawn in his hairy vesture. In man the skin is of use in conferring symmetry on the body, preventing too rapid evaporation, and defending the subjacent parts from injury. Moreover, it is the seat of colour, which is looked on as a race characteristic. As a rule, the English have a fair skin, light eyes and hair, this type of race being called the Tuetonic, in whom the skull is of an oval shape. The colour of the skin varies in degree of intensity both in the dark and fair skinned races, and we may observe every shade of graduation from the jet black of the Senegal Negro to the olive of the Northern Hindoo and dark complexion of the swarthy Spaniard. The colour of the skin depends on what is called pigment deposited in the cell of that part of the skin termed in the anatomical language, the "rete mucosum," this layer being black in the Negro. Pigment contains iron, phosphate of lime, and animal matter. As to the conflicting opinions regarding the different colours observed in the human skin in health, and as to what this colouring is due, the following remarks of Mr. E. Wilson are important. He says:—"By alteration of the solar influence the pigment may be increased in those of fair complexions. On the other hand it may be diminished in the dark to a very considerable extent. But we require not to proceed further than our own hearths for an illustration of the fact that the blonde complexion may be rendered darker

by the stimulation of light during the summer months, and the quantity of pigment will be again reduced during the winter season. To state the fact in physiological language, the activity of the function of the skin is increased during the summer and under the stimulus of the sun, while in winter it is diminished to its minimum." One of the functions of the skin is the formation of pigment, and under the influence of light and heat and of the sun's rays this function is greatly augmented, and the skin consequently assumes a darker tint. Darkness of complexion has been, as we have just seen, attributed to the sun's power. Now, in tropical countries, the inhabitants require a dark skin for the simple reason that any black substance absorbs the rays of light rapidly, whilst in those of a fair skin intense heat blisters. Mrs. Somerville* remarks, however, that other causes besides the sun must have combined to occasion all the varieties we now see, otherwise every nation beneath the tropics would be of the same hue. The complexion of man varies also with the height above the sea, and the latitude of the region he lives in. Even supposing that diversity of colour is owing to the sun's rays alone, it is scarcely possible to attribute the thick lips, the woolly hair, and the difference of form extending even to the bones of the skull, to anything but a concurrence of circumstances which pervade every part of the earth. The nervous system, especially that part of it called the ganglionic, plays a very important part in the production of pigment. In some diseases of this system we have excess of colouring matter deposited

* Physical Geography.

in the skin as what is known as bronzing of the skin, freckles, &c. However it is right to mention that after producing inflammation in a part, the pigment cells accumulate and even penetrate through the walls of the vessels. Mr. W. R. Jefferies, M.B., publishes an interesting case of albinismus (*Lancet*, August 31st) which he met in Glamorganshire. The patient was aged one year, his parents were of a somewhat dark complexion. The peculiarity in the child was attributed by the mother to her having met and been much impressed with an Albino during her months of pregnancy. The child when born was completely covered with hair, or down, of a light colour, which, as the child grew, fell off. At four months his hair was four inches long, and of silvery white. He carefully avoided opening his eyes during the day, but looked out without discomfort during the evening or by candle-light. The infant was backward in cutting his teeth, although at the age of nine months he had cut his upper central incisors. Dr. Begiel, who has published a work on Albinismus, in a paper contributed to Virchow's Archives, believes that at least partial Albinismus, and its counter part, Nigrismus, are dependent upon deranged nervous action. Both can occur as a consequence of an influence within the organism—typhus, Addison's disease, pressure, temperature, &c. Hence they often appear as an accompaniment to other diseases, and either disappear with same or remain behind after the existing cause is removed. Why the same exciting cause at one time produces increase of pigment, at another want of pigment, cannot be explained.

(For an interesting article on this subject, see *Lancet*, May 28th, 1870.) In other instances, absence of the pigment, owing to the same cause, is observed. A curious disease, called *carate*, endemic in New Granada, is characterized, according to Dr. Tilbury Fox, by patches of various colours on the body, from dull white and crimson to black and blue. Dr. Swayne has mentioned a case in which there was "a peculiar discolouration about the face, arms, and legs," these regions being spotted like a leopard. In addition to the above remarks on excess of pigment, it may not be uninteresting to say a few words on the want or absence of colouring matter in the cutaneous covering, which is either congenital or accidental; the former condition giving rise to those singular individuals known by the name of Albinoes, who are to be met with amongst all races of men. Even animals are occasionally subject to this freak of nature. The skin of an Albino is of a milk white colour, the hair very fine and fair; the eyes are red, although in India the iris is blue and the hair silvery white. Owing to the intolerance of light exhibited by these individuals, the pupil is small and the head generally bent towards the ground. In twilight, however, the Albino sees very well, even, it is said, better than ordinary persons. This affection has been attributed to irregular nervous activity, and is generally hereditary. In the Negro the complaint under notice is very striking, and several instances of "pied" Negroes have been recorded; their hair is white and woolly, and the iris without pigment. Pallas, as mentioned by Pickering, saw

a white Negress, born in London. She was small in stature, and had a fair complexion, with ruddy lips and cheeks. The girl had Negro features strongly marked. Another example is mentioned by the same author, The individual was a Kaffir. Her skin was pinkish white; the hair, although of a woolly nature, was of flaxen appearance. Dr. Ogle, in his paper on Anosmia, "or loss of smell," relates the case of a Negro, who, in his twelfth year, began to lose colour, which was accompanied by loss of smell, due to destruction of pigment of the olfactory region. The accidental disappearance of the colouring of the skin, in spots and patches, and the extreme blanching of this membrane, are occasionally met with. A remarkable case is mentioned by Dr. Good.* The patient was a North American Indian, ninety years of age, who during the last thirty years of his life had been gradually becoming white. According to Dr. Damon,† rapid blanching of the skin in Negroes after severe fevers, is occasionally known to occur. Every shade of colour is found among the Jews,—from the jet black of the Jewish colony on the Malabar coast, to the olive of the Hindoo and ruddy white of the Saxon. The Jews, like the Arabs, have usually black hair; but many possess light hair and bushy beards, especially in some parts of Germany. Admixture of race by marriage might produce some of these effects, and it is interesting to note, on the authority of Dr. Hall, that on the Orange River there exists a tribe of half Dutch and Hottentots, pos-

* Study of Medicine.

† Structural Lesions of the Skin.

sessing many features of each. But, as a rule, unless the stock from which both parents have sprung be very healthy these hybrids die out, being frequently of a delicate constitution—a fact noted by Dr. Paul Broca* as occasionally observed among Mulattoes. Mr. Bollaert,† in a paper on the “Anthropology of the New World,” informs us that the mixture of the Europeans with the Indian, giving rise to the Mestizzo; the European with the Negress, forming the Mulatto; and the mixture of the Negro and Indian, forming the Zambo; and their breeding in and in, the result does not appear to be of a prolific nature, or satisfactory either physically, mentally, or morally.” On the other hand, however, as, for example, in many parts of the Continent, where the Teutonic, Celtic, and Slavonian races are mixed, there has resulted a race conspicuous for energy and versatillity of mind. We find such a constant relation between climate and colour of the skin that it is impossible not to perceive the connection between them.

A curious complaint, illustrative of the intimate connection existing between the hair and skin, is sometimes met with—I refer to the so-called “Porcupine Disease,” which affection has given rise to the improbable stories of porcupine men and female mermaids. Being an uncommon disease, the examples observed have been faithfully recorded. Thus, in the “Philosophical Transactions for 1731,” there is described the case of a boy, aged fourteen years, whose skin was of a dusky

* The Phenomena of Hybridity in the Genus Homo.

† Transactions of the Anthropological Society, Vol. ii.

colour, thickened, and covered with bristles, resembling the quills of a hedgehog. Another instance is that of the Lambert family, who lived in the beginning of the last century. Of this family, John and Richard, two brothers, became notorious from the affection under which they suffered, and travelled through various parts of Europe, exhibiting themselves as "Porcupine Men." This affection is often hereditary, and some of Mr. Darwin's followers speak of hereditary affections and malformations, as though they possessed, to use Mr. Milton's words, "Such an irrepressible tendency to perpetuate themselves, that in course of time they must constitute species or varieties of the human race." This is not the case; for the families in which these malformations occur usually die out very rapidly, and although nature sometimes indulges in strange vagaries, as if she loved to perplex the scientific investigator, and to furnish food for laughter for the masses, she now and then astonishes us with Siamese Twins, Two-headed Nightingales, Lamberts, pied Negroes, and six-fingered people—extravagances, as it were, which puzzle the learned—but of this we may rest assured, in the words of Dr. Hall, that the colour of the skin, texture of the hair, shape of the skull, and form of the pelvis, have alike failed to supply, either singly or collectively, the slightest grounds for maintaining any valid specific distinctions. Thus the various races of man, while differing from each other in their physical conformation, constitute, nevertheless, one species.



CHAPTER II.

ERYTHEMA.

ACCORDING to Dr. Brown-Séquard, if the nervous supply of a part be injured, the blood-vessels become dilated, and the temperature of the affected part is increased; in fact, symptoms usually present at the commencement of inflammation. Thus, when a nerve is wounded, there are nearly the same set of phenomena as in purely idiopathic cases; the origin, although different, produces through the same nervous agency similar symptoms in each. The American army surgeons, during the late war in the United States, remarked that injury to a nerve-trunk, by a gun-shot wound or otherwise, was followed by changes in the skin supplied by the affected nerve, which took on either an erythematous, papular, or vesicular character; the hair also disappeared. Of course, the extent of redness varied according to the severity of the injury. Dr. Tilbury Fox,* treating of local and general erythemata, states that the redness varies, being punctated when the follicular plexuses are involved; uniform, if it be the horizontal vascular surface of the derma; diffused and general, if the blood

* "Manual of Skin Diseases," page 12.

be disordered as a whole ; or circular, if the vessels under the governance of one or more nerves are alone the seat of disturbance. The colour varies also, according to the activity of the circulation and the state of the general health. The swelling attending it is due to the greater volume of blood present, and to the escape of fluid from the vessels into the tissues. When any part is irritated, there is, as is well known, more blood sent to it, and inflammation may occur in the papillæ, in which there are no blood-vessels, as well as in those which have them ; moreover, the cells in the immediate neighbourhood of the vessels, from irritation to the nervous functions of the part, become increased in size and activity, and take up more nutriment from the blood than they require for the nourishment of the tissues ; and, bursting or exuding their contents, add to the already existing effusion which has escaped from the vessels. Dr. Brown-Séquard* has remarked that there is no doubt also that the same morbid processes not only can be, but very frequently are, produced by nervous agency. The heart, moreover, is stimulated to more energetic action by increased pressure of blood in any of the larger vessels, and thus the vaso-motor nerves act both directly and indirectly in accelerating the circulation of the blood. The redness of erythema, when pressed on by the finger, disappears for a second or two, but rapidly reappears. The constitutional symptoms are usually slight, except in one or two varieties, as erythema nodosum. The patient has a quick pulse, is feverish, complains of headache and loss of appetite.

* Functional Nervous Affections.

Some authors describe, under the name Erythema Simplex, the varieties—*E. fugax*, *E. intertrigo*, *E. læve*, and *E. marginatum*—which are all slight affections. Taking this view of the various forms which the disease presents, we have usually an undefined patch or patches of reddened skin, varying in size, very slightly raised, having their origin in several causes, internal and local. Amongst the latter the application of a mustard poultice, or excessive heat, occasions redness of the skin. Erythema fugax has a tendency to cause puffiness of the part affected; but this variety is of a very fleeting nature, appearing and disappearing suddenly. Erythema intertrigo is met with usually in fat people and infants, especially in the groin, neck, &c., and is merely a galling of the skin, from perspiration, acrid discharges, or friction of the clothes. When the cause of this variety is not removed, the discharge from the affected part may irritate the neighbouring skin, and lead to the establishment of an eczema. In the affection called Erythema læve we have here merely the red colour of the skin observed over dropsical parts. Sometimes the skin is bright red, and smooth in appearance. When extensive, and the skin greatly stretched, as over the front of the legs in dropsy, vesicles make their appearance, which frequently end in ulceration. Erythema paratrimma is caused by constant lying for any length of time, and is merely the redness of skin observed before the occurrence of bed-sores. According to Tilbury Fox, there are certain local forms of passive erythema produced by mechanical obstruction to the passage of the blood through the veins, by tumours,

ligatures, gravitation, inaction of the heart, varicose veins, &c. In these cases the colour of the erythema is bluish, or dark, which can be removed by pressure of the finger, but tardily returns. The part is often sensibly cold and swollen. Erythema papulatum is met with more frequently in young people from twelve to fifteen years of age than in adults, although the Turkish soldiers are said to be very subject to it. This variety appears as small spots, characterised by an erythematous colour on the hands, neck, and face. After a few days they become elevated, varying in size from the head of a pin to that of a pea. These elevations are due to plastic material deposited by the vessels in the papillæ, which consequently become hypertrophied. At the commencement of the attack feverish symptoms are complained of, which pass away in a few days, the erythema disappearing in two or three weeks, or passing into E. tuberculatum, which latter has been observed to accompany pneumonia, thus resembling, to a slight extent, H. zoster, which is occasionally observed under the same circumstances. The papules of erythema papulatum, when cut, are found to be caused by hæmorrhagic exudation, and it is common at the same time of the year as herpes and erysipelas.† Erythema urticans is described by Hebra as occurring between the intervals of the wheals (which are well known to be a pruriginous cutaneous neuroses), and is divided, according to its colour, into *rubra* and *alba*. In the former there is hyperæmia; in the latter the hyperæmia is limited to the edges of the wheals, the centre being white, owing

† Hebra, on "Diseases of the Skin," vol. i., p. 287.

to the spasm of the muscular structure of the skin. Erythema tuberculatum only differs from E. papulatum in the elevations being larger and tuberculated. Erythema herpetiforme is the name given to that red colour of the skin upon which vesicles subsequently become developed, as is observed in herpes zoster. Dr. Durkee* has described a variety as erythema tuberculatum, et œdematosum, the tubercular elevations turning into vesicles at their apices, then flattening, the skin showing a shrivelled or collapsed condition of the cuticle; but I confess I have never observed this variety. Erythema marginatum has an elevated margin, the colour of the rash being of a deeper hue than in other forms. Erythema circinatum means when the erythema is of a circular character, and is unimportant.

Erythema Nodosum is a disease that is common amongst young females who are employed in warehouses and factories. I have had frequent opportunities of observing this complaint at the Belfast Hospital for Diseases of the Skin, and there are two points to which I think attention may be directed:—1st, as regards its forming one of the varieties of erythema; and 2nd, as regards its treatment. Mr. Hutchinson, a no mean authority on dermatological matters, looks on erythema nodosum as an “abortive exanthem;” but I, for my part, believe that its classification with hæmorrhages would be more correct. Now, hæmorrhagic affections of the skin are peculiar to the cutis, for although the blood be effused amongst the epidermic cells, still hæmorrhages cannot—originally, at

* *Boston Medical and Surgical Journal*, April, 1856.

least—constitute an epidermic affection; whilst erythema is a superficial inflammation of the skin, not affecting the subcutaneous tissue, except in that variety which is the commencement of one of the forms of *eczema*. In *erythema nodosum*, which is ushered in by febrile symptoms, neuralgic pains in the limbs, &c., the protuberances most frequently seen parallel to the tibia are due to hæmorrhage, the centre of each oval node-like patch being filled with blood. Dr. Bohn regards *erythema nodosum* as the same affection as *peliosis rheumatica*, each protuberance representing an inflammatory infiltration arising from embolism of the cutaneous capillaries. Moreover, there is in the first instance œdema of a cluster of capillary loops. The subsequent extravasation of blood may occur in either of two ways—viz., either from rupture of the vessels, or from escape of blood corpuscles, without rupture. The latter is the most recent theory regarding certain forms of extravasation of blood into the tissue of the cutis, as held by German observers. The peculiar shades of colour seen in the patch of erythema, from faint red at first to yellow and green, are due to this effused blood; and Neumann thinks that the transformation of the hæmatosine of the extravasated blood, which either remains in the blood corpuscles as minute aggregations producing reddish-brown maculæ on the skin, or hæmatoidin crystals are formed, which produces varied pigmentation. Thus, “of all the inflammatory diseases of the skin, *erythema nodosum* produces the most remarkable hæmorrhage, each wheal-like elevation, characteristic of this disease, having in its centre a hollow filled with

blood."* This escape of blood from the vessels may occur without their being ruptured; and in an interesting article on the "Passage of Blood Corpuscles through the Walls of the Vessels," we are informed that when congestion of the capillary vessels in the web of a frog's foot was produced by the application of a ligature to the femoral vein, it was observed that there ensued:—1st. Retardation of the stream. 2nd. The occurrence of oscillation. 3rd. Stasis. This last phenomenon was followed by massing together of the blood corpuscles to the walls of the vessels, which at these places became pouched. On relieving the congestion, by removing the ligature, the conglomerates of corpuscles broke down, allowing the current of blood to recommence; but those corpuscles which were observed to have become adherent to the walls of the vessels were seen to pass through them, and to appear in the surrounding tissues. They were followed by others; and soon the spaces between the capillary network was filled with blood globules. The phenomenon described is considered by Dr. Cohnheim† to be owing to natural apertures in the vascular parietes existing between the cells of the lining membrane of the smallest vessels; in which view, we are further informed, he is supported by the fact that openings have been proved to exist in the smaller branches of the lymphatic system, apparently in connexion with the stomata-like orifices in the epithelium of the serous membranes.

* Hebra on "Diseases of the Skin," vol. ii., page 407.

† *Medical Times and Gazette*, May, 1868.

The lower extremities are not always the seat of erythema nodosum; the arms, for instance, are occasionally attacked. Probably vaso-motor nerve derangement is an important factor in causing this disease, which usually appears in delicate, pale, thin, and anæmic young girls, often accompanied by chlorosis. Now, all causes of debility tend to perverted innervation. Moreover, the disease under notice (erythema nodosum) has been observed associated with chorea. In addition to the hæmorrhage already mentioned, Neumann (Pullar's translation of his work) believes that in erythema nodosum there is—first, œdema of the superficial layers of the cutis, the eruption being then colourless. The disease is sometimes chronic; and, according to the same author, in cases where the œdema occurs on the extensor surface of the knee-joint, it may be confounded with serous effusion into that joint, especially where the œdema fills up the hollows on either side of the patella. To occasion œdema, M. Ranvier states that the vaso-motor nerves of the part must be paralysed. He also found that the mere ligaturing was not sufficient in a dog to give rise to œdema; but it was caused by sections of the vaso-motor nerves. To come to the treatment, Dr. Spender, of Bath, in an interesting article on cutaneous diseases of the lower limbs ("Journal of Cutaneous Medicine," Vol. iv.), remarks that, although erythema nodosum comes to an end spontaneously, and leaves behind no ill effects, still the constitutional affinities of the disease indicate what may and ought to be done. He prescribes sulphate of magnesia, with sulphate of iron

and dilute sulphuric acid, and recommends sea-bathing or shampooing of the legs with soap and hot water, as also a flannel bandage, as nearly all erythematous legs are below the normal temperature. Pure neurotic remedies, Dr. Spender thinks, like quinine and strychnine, do little good by themselves; but they may assist the hæmatic power of iron, and arsenic may favourably influence the vaso-motor nerves. In addition to the above excellent remarks, I have merely to add that, as a rule, I find no difficulty in curing erythema nodosum by prescribing the compound iron mixture with decoction of aloes, and adding—in cases where the catamenia are suppressed or scanty—to the mixture borax; whilst locally, if pain is much complained of, a lotion of acetate of lead and opium, or iodoform ointment (one drachm of iodoform to an ounce of lard, a few drops of rectified spirit being used to dissolve the iodoform), which is a good anæsthetic; a flannel bandage being applied every morning and worn during the day; however, especially in people more advanced in years than those to which my remarks refer, and in whom this disease is not only rare, but also very obstinate, a teaspoonful of the per-oxide of hydrogen, and 15 drops of the tincture of the perchloride of iron, in a wineglassfull of water, thrice daily, will be found useful. Dr. Brown-Séquard has recorded the fact that oxygen and strychnine contained in the blood have the power of acting on the excitability of nerve-fibre, in the nervous centres, or in nerve trunks, or filaments, and thus the per-oxide, I should say in erythema nodosum, tends materially toward restoring a

healthy tone in the part affected. I have said nothing regarding the premonitory symptoms of fever with which the eruption is ushered in. If they should be at all severe, rest in bed, and an effervescing saline aperient is all, I believe, that is necessary. There is one complication of erythema nodosum which is very rare, and that is denied by nearly all dermatologists — Hebra amongst them — namely, ulceration. I have recorded in the editorial commentary of the "Journal of Cutaneous Medicine," when under my management, a case of a female millworker, in whom there was no trace of syphilis, and in which several of the protuberances suppurated, leaving painful ulcers. The only author, I believe, who agrees with me is Hardy, of St. Louis Hospital, Paris, who states that if the patient is of a scrofulous constitution, the erythematous protuberances may ulcerate, producing sores like syphilitic ones.

Erythema gangrænosum is met with in those individuals labouring under some constitutional debility. Ordinary erythema may degenerate into this variety, as the vital actions for the repair of disease are not properly performed, a slough occurs, which ends in gangrene. In erythema scarlatini forme, so called by Hardy, the skin is punctated, and of a bright red colour—the same as in scarlatina, but without the sore throat—and the rash goes off by the toes, so to speak, in a few days. Pernio, or chilblains, is an erythema arising in languid or strumours constitutions, chiefly from exposure to cold; the latter acting by paralysing the nervous supply of the part, and thus causing congestion in the affected locality—a dermatitis

congelationis, as Hebra calls it. The inflammation may extend to the deeper structures of the corium, frequently to the cellular tissues beneath, but is primarily cutaneous. In chilblains, as in other forms of erythema, infiltration may take place. The attack is ushered in by a feeling of heat, and itching, or tingling, combined with redness, and swelling of the affected part. In some cases vesicles make their appearance, accompanied by a weeping of serum, being a typical eczema of Willan; in other instances, by fissures, when it takes on the character of eczema rimosum. When the disease passes this state, suppuration usually takes place, eventually ending in ulceration. Chilblains are most commonly observed on the fingers, toes, and ears; sometimes bullæ form, the affected part first assuming a dark red colour.

Acrodynia.—This disease was very prevalent in Paris during the years 1828-29. It was ushered in by pains, loss of appetite, blood-shot, conjunctivæ, and development of erythematous patches on the legs and arms, which gradually became of a dark hue; desquamation of the cuticle took place, crops of boils and bullæ appearing. Dr. Tilbury Fox* describes a species of erythema which occurs about the back and sides of the hands and fingers in those out of health. The skin becomes red in little circular spots, from which the epidermis peels off by a centrifugal death, as it were, leaving behind a red dry surface, marked by circular ridges of what appear to be normal papillæ. He says it looks like the death of the epidermis, beneath which is

* Manual of Skin Diseases.

seen the reddened derma, marked by circular ridges of prominent papillæ. It is not erythema circinatum; it is more like a superficial acrodynia.

Pellagra also exhibits a dusky erythema, said to be sometimes caused by exposure to the rays of the sun in southern countries. Bad, or insufficient food, hard work, and exposure, are the causes to which the occurrence of these two last diseases have been attributed. Ergoted rye, when this is the exclusive article of diet, may occasion these affections, by producing contraction of the blood-vessels of the spinal cord and its membranes, leading to a diminution of nutrition. In Pellagra, there is numbness and formication complained of in the skin. M. Roussell* has described this disease in his work. The brain and its membranes are found congested, and, according to Landouzy, the white substance of the spinal cord in the lumbar region is softened. In the *Gazzetta Medica Italiana*, for August, 1871, there is a long article by Dr. Augusto Tebaldi, of the University of Padua, on the use of alcohol in the cure of pellagra. After examining all that has been written lately on this disease, he comes to the following negative conclusion on its etiology:—1st, that there is no proof that alcoholism has a great etiological value in pellagra; 2nd, that the mixed forms of alcoholism and pellagra are very rare, and that their symptoms, when they co-exist, run parallel; 3rd, that alcoholism, occurring in a pellagrous individual, merely modifies the symptoms of pellagra; 4th, that chronic

* *Thaite de la Pellagre et des Pseudo-Pellagres*, 1866.

alcoholism runs into pellagra only in individuals who have then become intemperate. With regard to the curative influence of alcohol in this disease, Dr. Tebaldi speaks most warmly. The dose was from thirty to thirty-five grammes per day. The utility of the alcohol he thinks unquestionable. It is never, he says, contraindicated, no matter how the disease may have arisen, and is always useful.

Erythema frequently passes into eczema, as described by Dr. M'Call Anderson,* who thinks that the diseased process (the erythema), not being arrested at that stage, infiltration of the affected part gradually supervenes, when the disease may be considered as on the confines of a typical eczema. The skin is red, scaly, and infiltrated; and, if the inflammatory action increases still further, serous exudation takes place.

Treatment may be divided into local and constitutional. In the first variety, E. simplex, little medicine beyond an aperient is required; and protection of the affected part from exposure to cold or heat. The following may be applied:—Take of glycerine, by weight, five parts; yolk of egg, four parts; mix. This application, will be found useful in many simple cutaneous affections, is of a very soothing nature, and is easily washed off with water. The application of linimentum calcis, or one composed of olive oil, oxide of zinc, and lard, may be tried instead. The variety of erythema, called læve, which depends upon dropsy of the part, of course can only be treated by remedies calculated to remove the constitutional affec-

* "On Eczema," page 10.

tion on which it depends. *E. intertrigo* is usually a simple variety. An absorbent dusting powder, or astringent wash, and separation of the two cutaneous surfaces, when in contact, is necessary. A powder, consisting of oxide of zinc, and powdered starch, to which a little camphor and alum can be added, answers very well; or the application of a weak solution, five grains of nitrate of silver to the ounce, or glycerole of tannin can be tried. In the commencing erythema of bedsores, bathing the part with brandy, so as to harden the skin, and removing pressure, is necessary, as also the greatest cleanliness. Sometimes the white of an egg, or collodion, especially if the skin is at all broken, is better; or an ointment containing tannate of lead, extract of belladonna, and glycerole of starch. From the presence of varicose veins an erythematous state of the skin often occurs, owing to stagnation of the contained blood, and congestion of the affected part. Here the application of a properly applied bandage is of service, and some gently stimulating ointment, as one containing oil of cade, or white precipitate of mercury. In the treatment of the varieties already described, as well as in *Erythema papulatum*, *E. tuberculatum*, *E. fugax*, and *E. marginatum*, aperients are necessary; or an alternative powder containing hydrargyrum, *C. creta*, *soda exsiccata*, and *pulv. rhei*, which improves the secretions, may be prescribed. If acidity is present, the *liquor calcis saccharatus*, in drachm doses, or bismuth, are indicated. Sometimes an arterial sedative is required to lower inflammatory action, and in the *veratrum viride* we have a superior substitute for

tartarised antimony; the tincture is the preparation generally prescribed. If a mucous diarrhœa exists, chlorate of potash, followed by the syrup of the iodide of iron, is necessary, as also cod-liver oil; or the pancreatic emulsion of fat, introduced by Dr. Dobell. Strict attention must be paid to diet; spirits, beer, &c., being forbidden, except in very exceptional cases. If a rheumatic or gouty tendency is present—in the former, bicarbonate of potash, and tincture of *actea racemosa*; in the latter, colchicum, or carbonate of lithia, are indicated; in some cases dilute hydrochloric acid agrees best; subsequently tonics, as quinine, are to be prescribed. We may conclude the erythemata, with a few brief remarks on the treatment of *pernio*. Towards the prevention of chilblains in those who are subject to them, bathing the hands and feet, as the case may be, in cold water, to which some vinegar has been added, and the employment afterwards of brisk friction to the parts liable to be affected, tends considerably towards their prevention. My favourite prescription for chilblains is that of Marjolin, which is composed of half a drachm of balsam of Peru, one ounce and a half of rectified spirit, dissolved together; then add half a drachm of hydrochloric acid, with half an ounce of compound tincture of benzoin. A little of this liniment is to be occasionally rubbed into the affected part; or, if preferred by the patient, a small piece of linen can be moistened with it, and applied. It causes a sensation of smarting for a few seconds. When the chilblains are “broken,” I find calamine ointment (Turner’s cerate) a very good dressing; and, if thought

desirable to stimulate the part, we may add a little balsam of Peru. If ulceration has taken place, the nitrate of silver should be freely applied. The only other variety of erythema to be mentioned is that met with on the cheeks of middle-aged people, which are reddened, due to streaks of distended blood vessels, which give rise to a peculiar mottled appearance, that has been described by the late Dr. Brinton, who in such cases recommends a careful examination of the urine, as the kidneys are often diseased.





CHAPTER III.

ECZEMA AND ITS VARIETIES.

To arrive at a correct knowledge of the various causes, and, consequently, successful treatment, of cutaneous diseases, is a subject fraught with difficulties. No class of diseases are surrounded by more contending or conflicting opinions than affections of the skin. To give a brief *resumé* of the various views regarding the disease called Eczema will be the object of this chapter. Eczema is defined by Mr. Erasmus Wilson, as a "chronic inflammation of the skin, attended with desquamation and pruritus." It is impossible for this condition to co-exist with the healthy nutrition of the affected part. For example, in eczema impetiginodes, the presence of pus is looked on by some writers as due to inflammatory overproductiveness. On the other hand, Cohnheim's theory is, that pus originates in the passage of the enlarged white cells through natural openings in the walls of the dilated blood vessels; and we are further informed that inflammation cannot occur without the presence of blood vessels; the dilatation of which (probably due to vasomotor paresis) their injection and hyperæmia form the first stage of inflammation. In inflammation, according to Stricker, we have local disturbance of circulation,

increased exudation of the fluid and formed constituents of blood, disturbance of nutrition, and consequent growth of cellular elements. The irritation of an injury Stricker considers as transmitted not from cell to cell, as Virchow supposed, but as acting on the vessels, disturbing circulation, and so the nutrition. The anatomical seat of eczema is the Malpighian layer. In eczema, artificially produced in animals, one of the first changes observed was rhythmical contraction of the vessels, followed by permanent stasis, the part that was before transparent becoming opaque, subsequently exhibiting numerous vesicles. Microscopic examination showed serous infiltration and cell proliferation. Now, what has been termed "functional reaction" of the tissue cells, may lead to hypertrophy and hyperplasia; thus, in the words of Syme,* by diseased nutrition we understand "an action of the capillary vessels, which, instead of preserving the tissue concerned in a natural condition, increase its size, and alter its texture." In chronic infiltrated eczema, especially of the lower extremity, the skin attacked becomes hard, thickened, and somewhat tubercular, occasionally described by the name of "elephantoid papillary hypertrophy." In acute eczema, the follicles, papillary and superficial layers of the corium are swollen. In chronic cases, the skin is thickened, the lines and furrows become deepened, and the papillæ enlarged. According to Wilson,† "Eczema is undoubtedly local in those instances in which it proceeds from disturbed

* "The Practitioner," No. 14.

† "Principles of Surgery," page 64.

innervation, or circulation of the part; as, for example, from varicose veins, a wound, or injury to a limb, or the presence of debility, or from irritant causes. In the majority of cases it is a manifestation of a nerve irritability, which has its origin in constitutional debility. In one series of cases nutritive debility from deficiency, or improper food, is evidently the predisposing cause, as in the case of infants which have been deprived of their natural food. Allied with cases such as these are the examples of nervous and elderly persons, in whom nutritive waste is more active than nutritive supply; while in a third series of cases, and these, perhaps, are the most numerous, the cause is referrible to mal-assimilation of the digestive organs." Eczema has been called a selective inflammation, owing to the manner in which the elementary lesions prefer the orifices of gland ducts, hair follicles, &c., as the most vascular points. The late Dr. A. B. Buchanan* stated that the lesion of eczema is at the commencement a localised macule, *eczema erythematodes*, the macule passes into a papule *eczema papulatum*, the papule into a vesicle, *eczema vesiculosum*, the vesicle on giving way into an excoriation, *eczema rubrum*, or into a pustule, *eczema impetiginodes*. If the skin becomes infiltrated while the secretion, if there has been any, dries up, lichen proper is, we are informed, produced, and the whole process ends in desquamation, or *eczema squamosum*. Most of these processes may be assumed from the beginning, or they may follow one another with a regularity more or less complete. They represent ideal

* *Edinburgh Medical Journal*, 1863.

stages, but at any of these stages the disease may be arrested, and may persist, so as to come to express not stages only, but varieties. The first two are dry eruptions, *eczema siccum*; the next four are moist, *eczema humidum*; the last two are again dry, with the exception of lichen agrius, which is a hybrid, or transitional form. Buchanan, in his first variety, includes the disease called erythema chronicum, an affection usually circumscribed, beginning at a point, and slowly extending peripherically, accompanied with symptoms of redness, itching, and slight desquamation. In his *eczema papulatum*, or lichen simplex, we have a chronic, dry, papular eruption, more or less diffuse; when *eczema* passes this stage into the moist form, it is called *eczema vesiculosum*; and on rupture of the vesicles, *eczema rubrum*, or *madidans*; being then a purely serous weeping eruption. The lesion in the one case is a vesicle, formed in connexion with some local peculiarity in the anatomy of the cutis; in the other it is an excoriation. Finally, in *eczema humidum*, the epidermis is scarcely less liable to become infiltrated than in *eczema siccum*; in which case the epidermis frequently becomes fissured, exuding an eczematous secretion—the *eczema féndille* of Devergie, the *eczema fissum* of Wilson, *eczema rimosum* of M'Call Anderson. This condition may pass into lichen exudativus, which is an advanced stage of lichen simplex. Finally, an *eczema squamosum* is the last stage of an *eczema*, whatever its form may have been, and is a desquamation on the surface of an epidermis, more or less thickened by infiltration. This last stage—viz., sub-

cutaneous infiltration—is probably due, in a great measure at least, to nerve irritation; for, according to Bernard, the cerebro-spinal nerves cause dilatation of the capillaries; the sympathetic, on the other hand, have an opposite influence, and if these two functions are not equally balanced, transudation may take place. The cells, which in health only imbibe what is necessary for the nourishment of the tissues, also partly elaborate this exudation. Mr. Erasmus Wilson acknowledges six varieties of eczema, which are as follows:—*Ec. erythematousus*, *Ec. papulatum*, *Ec. vesiculosum*, *Ec. ichorosum*, *Ec. pustulosum*, and *Ec. squamosum*. These varieties are founded on the predominance in the eruption of simple hyperæmia, of exudation, or of desquamation. Mr. Milton* thinks that the different appearances of eczema are due to the stage of the disease, health, and constitution of the patient. “I consider,” he says, “the essence of eczema, the test of its existence, to be a weeping surface, and I consider a true weeping surface is never produced from an eruption of vesicles or pustules. The latter, however, may complicate it; they do not necessarily form any part of the process.” I also agree with Mr. Milton that we should include under the name of ulcerated eczema “an obstinate affection attacking the leg and running into ulceration: a complaint generally seen in persons of middle age and advanced life.” The ulcer sometimes occurs in the centre of a patch of eczema; if on the lower extremity, there is usually a varicose condition of the superficial veins. Acne is like eczema, but

* On Diseases of the Skin.

only so in its selective nature. Mr. Wilson believes that acne rosacea is an eczematous inflammation; and Hebra states that accumulated sebaceous matter often sets up an inflammation of the follicles, which would naturally be called folliculitis, but is generally termed acne. This disease, like eczema, is generally due to debility, usually assimilative, the nose being the common seat of the complaint, which, in chronic cases, is greatly enlarged, owing to the growth of new tissue. It is frequently observed in the case of inveterate drunkards. In these persons dyspepsia is a common complaint; due, it is said, to obliteration, to a great extent, of the follicles of the mucous membrane of the stomach, owing to a species of sub-acute inflammation, which gives rise to an abnormal growth of connective tissue in the coats of that organ. On this point Dr. Lee states that, "by the prolonged use of alcoholic drinks, the stomach becomes, after a variable time, very seriously damaged from the chronic catarrh which is excited. The mucous membrane is coated with a tenacious mucus that excites unhealthy fermentation in the food, and the structure of this membrane is also considerably altered; for there occurs a great increase of the connective tissue, which, by its contraction, obstructs and destroys the secreting follicles and their lining cells. In consequence of these serious changes, very little gastric juice is poured out in response to the demand made by the food, while in this, by the mucus coating on the stomach, unhealthy fermentation is excited, and hence there is produced much gas, with various acids, such as butyric, acetic, &c. When an eczema is tending "towards

cure," furunculi frequently appear, especially around the diseased part. Now, bearing in mind the selective nature of eczema in attacking gland ducts, and other very vascular spots, M. Dénucé's theory comes in here appropriately, who looks on furuncle as a gangrenous inflammation, the so-called "core" being a dead gland. This gentleman thinks that whenever there is imperfect nutrition furunculoid disease may arise. Trousseau* has left it on record that old people who are asthmatic exhibit in their youth eruptions of an eczematous nature. "Indeed," he says, "nothing is more common than to find herpetic, rheumatic, gouty, and hæmorrhoidal affections transform themselves into asthma. Thus, eczematous eruptions, rheumatism, and gout are complaints which may be replaced by asthma, and replace it in turn." By some dermatologists prurigo is considered to be a variety of eczema. Dr. M'Call Anderson† informs us that "prurigo is merely a variety of lichen, and, consequently, of eczema; the papules being identical with those of lichen, the black crusts being produced by scratching." No doubt, an eczema is frequently called forth due to irritation, especially in prurigo senilis, or phthiriasis; but most writers are now agreed that true prurigo is a neurosis, which fact I shall endeavour to prove in another chapter. In such cases as the above the urine should always be tested, as it often furnishes a valuable hint as regards treatment. It may be necessary to say a few words on eczema mercuriale, a disease, I may say, now extinct.

* "Clinical Medicine," page 645.

† "On Eczema," page 20.

This form of eczema differs in some particulars from the variety called *rubrum*. Dr. Alley called it *Hydrargyri*, describing three species, as *mitis*, *febrilis*, and *maligna*. The affection under notice was due to the excessive use of mercury, administered for the cure of syphilis. Dr. Moriarty assigns to opium the cause of the eruption, which drug is usually given with the various preparations of mercury. A case has been recorded in which this form of eczema was produced by "one grain of opium." On this point (as recently mentioned by Dr. Frank Smith*), Trousseau thinks that the exanthem following the use of opium is due to that drug being eliminated by the sweat glands; and in this process it acts as an irritant, producing an eruption on the skin. According to French dermatologists, the two manifestations of the "Dartrous diathesis" are eczema and psoriasis. The last-mentioned is looked on as a primitive lesion of the epithelial tegumentary tissue, with a secondary and slight effect on the connective tissue. The glandular, vascular, and nervous apparatus escape almost completely from this lesion, whilst impetigo, lichen, pityriasis, both *alba* and *rubra*, are nothing more than varieties of eczema, which is an inflammation of the skin most frequently serous, and a primitive lesion of the connective tissue, with a secondary effect on the epithelial. The vessels are attacked in eczema; hence its diffusive character. Psoriasis very rarely touches them, whence its limitation. Eczema also attacks the glands; therefore the perspiration is diminished and a reaction on the entire organism possible. Psoriasis

* "Journal of Cutaneous Medicine," Vol. III.

can be cured by the administration of arsenic, because this stimulates the epithelial tissue, from which it is thrown out of the system; but this remedy has little effect on eczema, as a rule, because it does not affect the connective tissue. Hebra has remarked that females subject to repeated attacks of eczema usually die from cancer.

Dr. Foster Swift, of New York, correctly remarks, in the *American Journal of Dermatology*, as follows:—"In fact, properly speaking, eczema is a dermatitis or inflammation of the skin of a mild type, and according to the degree of skin inflammation, or the thickness of the epidermic covering, we may have the same morbid entity expressed on the surface of the body by either an erythematous blush, a papule, a vesicle, a pustule, or a scale. The vascular supply of the skin penetrates the derma, breaking up into capillary loops, which are projected into the papillary form, and surround the orifices of the glands and hair follicles. From this free, roughened surface of the derma a fluid is constantly exuded, which resembles serum closely, which is apparently homogenous, and presents no organised form under microscopic examination at first, but soon free nuclei can be discovered, changing quickly into ovoid cells, which are applied to each other in their longest diameter, as the cells of columnar epithelium are in mucous membranes; these cells rapidly increase in size, and as they are subjected to mutual pressure on their sides, and to a constant pressure from the new cells forming below, they become more and more flattened from this pressure and from the

drying up of their fluid contents, till they acquire a polyhedral shape, and are so exfoliated or thrown off from the free surface of the skin. So that in the cutaneous envelope we have an incessant growth, new cells developed from the fluid exuded from the rough surface of the derma, altering in shape as they develop in size, and scaling off from above. This process is constant, and the structure wherein these changes are going on—the cell—changes not in quality or kind, but in shape and development is called the epidermis, and is, in fact, nothing but accumulated and dried secretion of the living derma; the division into different layers—mucous and Malpighian—referring, in fact, to the comparative youth of the cells, if I may use that expression. It is, however, more with the vascular supply of the skin than with any other element of its structure that we have to do. Of course, we have a right to expect that this element should be particularly rich to permit of such a constant cell growth as we have indicated in the epidermis, as well as to supply the glandular and nervous functions of the skin with the requisite amount of blood. The arterial branches, as they reach the deepest portion of the derma, subdivide and ultimately break up into a net-work of capillaries, from which loops are thrown up into the papillæ, and surround the orifices of the glands and hair follicles, as we have already said. It is in these capillary loops that the marked changes characteristic of eczema occur. These capillaries, as described by Leydig, consist of a homogeneous transparent membrane, presenting at regular intervals round or oval nuclei, and so translucent and

colourless as in some cases to defy definition. That these translucent homogeneous tubes are capable of contraction and dilatation, the phenomena of blushing and pallor from mental emotion afford clear proof, and if their calibre is susceptible of such changes, a more permanent distension can take place there. In vesicular eczema the spindle-shaped cells are present in still greater quantity, and lying in their long diameter and dipping deep into the structure of the papillæ, they serve as sap channels, as it were, and the fluid traverses through them to such an extent that finally the epidermic covering yields and the vesicle bursts. The fluid that leaks out through these channels does not differ from ordinary serum, presenting no organised forms under microscopic examination, and drying when exposed to the air into crusts of various colours. If the eczema is chronic the same process is continued, but the skin becomes thicker, the lines and furrows deeper, the papillæ so much more prominent as to be visible to the naked eye; in fact, what is called chronic infiltration of the skin results, a condition characterising all protracted eruptions, but more marked in eczema, and doubtless is due to the genesis and proliferation of the spindle-shaped cells above alluded to. Thus we see that the principal change observed in all cases of eczema has to do with the capillary loops primarily, and that although a new growth of these spindle-shaped cells occurs when the disease has existed a long time, this new development of cell growth succeeds a protracted condition of hyperæmia, or, in other words, a distended state of the capillaries."

Vaso-motor paralysis often takes place in eczema, especially of the legs, and to which the redness of eczema rubrum is said by some authors to be due. When associated with varicose veins, there is usually œdema of the sub-cutaneous structures. The discharge from the inflamed part prevents any scabbing.

To recapitulate, then, a few of the leading points :—Willan's definition of eczema being a vesicular disease does not hold good ; the elementary lesion may be a vesicle, a pustule, a macule, or papule. The sub-cutaneous infiltration is due to exudation from the vessels, accompanied by rapid cell-growth, and the causes of the complaint are usually due to some form of debility. In addition to those already named, a strumous diathesis frequently gives rise to this disease ; as also a full habit of body, often connected with gout, and in which condition the use of saline aperients with colchicum are useful. Again, mental anxiety and hereditary tendency are important facts to be remembered. Excessive exposure to heat calls forth an eczema—hence the eczema solare of Willan ; prolonged heat, with moisture, as from the application of a linseed-meal poultice, is another cause ; occasionally local nerve debility, as from injury, gives rise to an eczematous eruption. Particular occupations favour the development of this complaint, as the terms “grocers' and bakers' itch” indicate. Again, many other skin diseases, by the irritation they produce, call out an eczema, as, for instance, scabies ; frequently, however, the disease arises without our being able to discover any apparent cause, occurring, no doubt, from some peculiar

idiosyncrasy, or, as the French call it, the "dartrous diathesis." After vaccination, an eruption of an eczematous character occasionally occurs, usually attributed by the mother to impure lymph. These infants are generally of a strumous stock, or possess a delicate and easily irritated skin; but, indeed, any disorder occurring after vaccination is apt to be attributed to the operation. In young females irregularity of the catamenia is another cause, which, if combined with chlorosis, produces anæmia of the skin, a condition described by Hebra in the following words:—"All diseased states of the human organism in which the due relation is not preserved between the renewal of the blood and its consumption, so that more of the vital fluid is expended than is during the same period reproduced, give rise at last to a condition which, besides other appearances, manifests itself in a pale, dingy, earthy or yellowish look of the skin. At the same time, the skin may generally be noticed to have a greasy feel." And lastly, in persons possessed of a delicate fine and sensitive skin the discharge from an eczema may excite a similar disease. This we sometimes observe in the case of infants and mothers.

An interesting case of eczema erythematodes was sent to me by Dr. Trimble, of Castlebellingham. The patient was a clergyman, aged forty, and always had the best of health. The disease commenced three years previously, without any cause, on the arms. On examination, patches of eczema erythematodes were visible on arms and chest, whilst slight pigment staining could be observed at intervals, showing the existence of the disease in those places

formerly. The disease gave no pain or annoyance. He had been in the habit of wearing coloured flannel shirts, and which, probably containing aniline dye, produced in the first instance a "dermatitis toxica."

The diseases most liable to be mistaken for eczema are scabies, some forms of syphilitic eruption, and herpes. The diagnosis of eczema, from a recent case of scabies, is usually easy; but it is not so with a long standing one, for besides the primary affection a secondary eczema is generally present. In scabies we can usually trace the commencement of the disease to contagion, and the patient frequently remembers one of his friends having had a similar eruption, with whom he may have slept. Again, we can in most cases discover the Acarian furrow, or canals, formed by the parasite—the *Acarus Scabiei* usually best marked on the wrist and inside of the fingers, these furrows being shaped in the form of an S, and with the aid of the microscope discover the little insect. Various syphilitic eruptions put on the appearances of eczema, but then we have generally a grouping together of many distinct lesions, called polymorphism, as papules, pustules, scales, and ulcers, enlargement of post cervical glands, sub-sternal tenderness, falling out of hair, pains in the bones at night, sore throat, and coppery or salmon colour of the eruption to aid us. However, if there is still a doubt, it is better to treat the eruption at first as syphilitic, when, if due to that disease, by proper remedies it will quickly disappear. A few forms of herpes are occasionally liable to be mistaken for eczema, especially when the vesicles have burst and left crusts; however, as

a rule, there is no difficulty in the diagnosis, the vesicles of herpes being much larger and globular in shape.

Children are often attacked by eczema, usually due to assimilative debility. In such a case we have first to get the digestive organs into a proper state by a mild mercurial purge, followed by the administration of the hypo-phosphites of lime, soda, and potash, given in glycerine and water. In adults, especially when flatulence is complained of, the hypo-phosphite of soda, gr. 80 to 240, tincture of sumbul two ounces, and spirits of ether one ounce, the dose of which is a teaspoonful in a large wine-glassful of water. Iron-wine, either by itself, or, if the disease be very chronic or obstinate, combined with Fowler's solution, as recommended by Erasmus Wilson, is useful. The yolk of a light boiled egg and plenty of good sweet milk and cream are requisite in the case of children. As a rule, no wine or malt liquors are to be allowed. The medicinal remedies I most rely on are dilute nitric acid in infusion of cinchona, sulphate of iron and sulphate of magnesia, with or without quinine, syrup of the iodide of iron, and cod liver oil. To prevent constipation, some medical men recommend the use of sulphur, and which, provided that there are no acute inflammatory symptoms present, may be allowed, given in the usual form of confection. It is well known that the public look on sulphur as the universal remedy for cutaneous diseases, and use it liberally, both inwardly and outwardly. Now, when used externally, it is decidedly, in the majority of cases, hurtful; but as an internal remedy, so to speak, it exerts a curative influence to a slight extent. Sulphur "cools the

blood," as the saying is, and acts as a gentle laxative. It is also eliminated by the skin in the form of sulphuretted hydrogen, and thus in the most natural manner comes in contact with the diseased part. In persons of a full habit the neutral salts, combined with colchicum, are useful, given in some bitter infusion, as that of quasia. Eczema is frequently benefitted by cod liver oil, but in many cases the patient's stomach will not bear it. For such people small doses of strychnine, given with dilute phosphoric acid, tincture of hops, and infusion of cloves, allows the patient to retain the oil. When great infiltration and thickening of the sub-cutaneous tissue exists, as is observed in eczema of the hands, small doses of the bichloride of mercury is indicated. I believe it to be a matter of indifference what preparation of arsenic you order. I do not refer to Donovan's solution, which in my hands has proved useless—an opinion held of it by most dermatologists. Fowler's solution of the arseniate of potash is often liable to occasion derangement of the stomach, more so than either Pearson's solution of the arseniate of soda, or the solution of the chloride of arsenic. Some members of the profession think that the compound spirit of lavender in Fowler's solution is the offender, and consequently omit it. You must not give any preparation of arsenic as long as any inflammatory symptoms of an acute nature are present; if you do the disease spreads and is made much worse. During an arsenical course, if the patient be evidently strong and robust, it is a good plan to give a weekly dose of sulphate of magnesia; if the opposite, quinine; finally, the arsenic

is to be given at the end of a meal, or immediately after. If the medicine begins to produce griping pains in the stomach, diarrhœa, tenderness of the eyes, and loss of appetite, you must either discontinue the arsenic for a day or two, or lower the dose. Sometimes it is necessary to stop it for a much longer interval, and, owing to the irritation of stomach it has caused, administer calcined magnesia and rice diet for some days. I should mention that persons taking arsenic are very liable to catch cold on the least exposure. During an arsenical course, you will frequently find, a few days after commencing it, that the skin disease becomes worse, new spots appearing, and which the patient correctly attributes to the medicine that he is taking. Don't stop your arsenic, but persevere, and you will finally be rewarded with success by removal of the disease. Sometimes, when the course is protracted, a mealy desquamation takes place of the skin of the chest and hands, which, in parts covered with the clothes, is of a darker colour; and, moreover, some people cannot take any preparation of arsenic, even when guarded with opium, owing to its causing salivation, accompanied by swelling of the tongue.

In females, when the catamenia is scanty, or even suppressed, the sulphate of iron and aloetic pill is useful, or compound iron mixture, with decoction of aloes and borax, the latter being a good emmenagogue in ten grain doses.

The local treatment of eczema is all important. In the acute stage, when the eruption is extensive, weeping, and hot, avoid soap and water. Absolutely forbid their

use to the affected parts. Let your patient constantly protect the inflamed surface with zinc ointment, to which either a few drops of carbolic acid or a little spirit of camphor has been added, which allays itching. In the case of children, a weak spirit lotion answers very well, first protecting the part with zinc ointment.

Styptic colloid, for promoting the healing of wounds by the first intention, or for treating fœtid wounds, and for arresting hæmorrhage, is well known to the profession. Mr. Browne ("Liverpool Hospital Reports," vol. iii.) recommends us to paint a patch of eczema, complicated with varicose veins, freely with Richardson's styptic colloid, allowed to evaporate to half its bulk before being used; the film left by the colloid dries and contracts; it is then to be covered with a sheet of thin vulcanized Indiarubber, and bandaged. Thus pressure is applied, and the atmosphere excluded. Occasionally, when there is much discharge, chalk ointment, or bismuth ointment, does better. When the disease has existed for any length of time, mild stimulating applications are needed, and hasten the cure, as calomel, one drachm to the ounce of zinc ointment, or white precipitate of mercury ointment. If much itching be complained of, a weak bicarbonate of soda lotion, to which some hydrocyanic acid has been added, can be tried. In eczema of parts covered by hair, as, for instance, the head, citrine ointment, diluted with carron oil, a few drops of essential oil of bitter almonds being added, is more applicable, and does not gather into crusts, as zinc ointment does when applied to a hairy part. Eczema of the scrotum and inside of the

thigh, extending in the male frequently to the penis, is often very troublesome. It is usually of the pustular or papular form. I met with two very inveterate cases in "Tea-tasters." Sponging with oil of cade when the acute stage is passed, and then applying zinc ointment, is, I think, the best local treatment. The occasional pencilling with nitrate of silver, dissolved in sweet spirits of nitre, is of service.

Dr. L. Duncan Bulkley, of New York, has improved on Hebra's tincture of tar and black soap. Dr. Bulkley calls his preparation the "*Liquor Picis Alkalinus*," and it is made as follows:—Liquid tar, two drachms; caustic potash, one drachm; distilled water, five drachms; mix. This is used by adding two teaspoonfuls to a teacup of water, increasing the strength, if necessary, and is useful for relieving itching. He finds the "liquor" serviceable in Eczema of the Scrotum, where the penis and surrounding parts are often involved. After wiping the diseased parts with a linen rag, moistened in the liquor, he directs them to be covered with the diachylon ointment of the Germans, spread on lint.

Dr. J. K. Spender thinks that, in treating acute eczema, there are two main points which require attention: first, the application of a curative and soothing preparation; second, that the latter should not be imperviously covered. Astringent powders and preparations of glycerine are usually inert. Ointments are hurtful. Black wash, combined with a-tenth of its quantity of glycerine, is very efficacious. Its mode of application should be by strips of lint, saturated in the wash, and applied in an imbricated

manner upon the diseased surface—the whole to be retained by a thin calico bandage, care being used not to cover with gutta-percha cloth, sheet Indiarubber, or any impermeable fabric. Dr. S. thinks that, although these impervious dressings preserve the moisture of the linen, the secretions become decomposed by this means, and the cure is retarded.

Dr. M'Call Anderson* considers that soothing lotions sometimes are very useful to relieve uneasiness, as in eczema impetiginodes of the face, either applied to the parts frequently by sponging, or kept on continuously by pieces of rag saturated. Preparations of lead and soda are probably the best.

In chronic eczema various preparations of tar are used, and that with the best results. Oil of cade is a good preparation. The old unguentum picis, Hebra's tincture of tar, and black soap, dissolved by heat in spirits, can be recommended. The last is useful in the chronic and declining stage of eczema. It is to be rubbed firmly into the affected part with a piece of flannel, and washed off with soft soap before being reapplied. Tarry applications, Dr. Anderson holds, allay very much the itching of chronic eruptions. They are:—1st, wood tar, *pix liquida*, of which Guyot's solution is very eligible for its solubility and its modified odour, and the fact that it does not discolour the skin; 2nd, coal tar, *pix mineralis*, of which the *liquor carbonis detergens* of Wright & Co. is a very useful application, which, combined with water, forms a creamy emulsion; 3rd, oil of cade (*oleum cadini*), the

* *The Lancet*.

product, by dry distillation, of *juniperus oxycedrus*; 4th, the *oleum rusci*, of the bark of *betula alba*, or white birch. The last two are preferable to the other tarry preparations, from the fact of their odour being more pleasant and less pungent. As they are expensive, their use is inadmissible in dispensary practice. There are, he states, exceptional cases in which the tarry preparations are not beneficial, as they excite dermatitis. When their use is very much prolonged, they produce in all persons an inflammation at the orifices of the hair follicles, in the shape of papules and pustules. In the centre of each is a black plug of tar. This has been called by Hebra *tar-acne*, and, of course, when produced, necessitates a change of treatment. Tarry products may be used either alone or in combination. They should be rubbed firmly into the affected part twice a day, but not to the point of causing pain. The following is recommended by Dr. McCall Anderson:—Guyot's solution of tar, soft soap, and rectified spirits, of each one ounce; spirits of rosemary, one drachm; mix.

When the eruption has existed for several years, it is, of course, more tedious to cure, and has become a purely local disease, not under the influence of internal means; hence we must by more powerful remedies endeavour to stimulate the capillaries to remove infiltration, without which the cure cannot be said to have taken place. For this purpose blistering fluid is to be painted over the affected part, if of a limited extent. The irritation of the blistering fluid occasions a fresh afflux of blood to the part, accompanied by copious serous effusion. Some surgeons

prefer the liniment of iodine to accomplish this object. When the disease proves obstinate, Hebra uses a solution of potassa fusa, the strength of which varies according to the nature of the affected part. The solution, usually ten to twenty grains to the ounce of water, is painted over the eczematous surface, and an eruption of minute vesicles generally occurs—in fact, a typical eczema. Moreover, the “bloated” cells of the cutis are made to exude their contents. The action of the potash can be stopped, when necessary, by cold water, and which is to be the subsequent dressing. In some forms of eczema papulosum or lichen, alkaline baths, to which size or starch has been added, are useful.

For eczema rimosum of the hands, blistering, as recommended by Dr. M'Call Anderson, has been found most successful. If there is much infiltration of the subcutaneous tissue, small doses of the bichloride of mercury are useful. The patient for some time is constantly to wear gloves, especially those made of India-rubber. I have never observed this variety in those who work amongst greasy substances, as butchers, for example. In lichen of the hands, which occasionally occurs as a sequel to an attack of eczema rimosum, Hebra's litharge ointment is a very good application; whilst for lichen of the face, occurring in young people, and which may be mistaken for acne, our chief reliance is to be placed in salines, especially in purgative doses.



CHAPTER IV.

PSORIASIS.

SCALES are defined by Neumann as masses of dead epidermis detached from their bed. The more superficial the inflammatory process, the thinner are also the detached epidermic scales. Constituting in this case merely an *exfoliation*, the deeper the inflammation and the longer its duration, the more considerable is the mass of scales. The separation of these masses takes place in the form of branny scales, as in pityriasis, in larger lamellæ, as in psoriasis, or in a membranous form, as in scarlatina.

Crusts are yellow or brown masses on the surface of the skin, which result from the drying up of the purulent exudation or extravasated blood. Thus, for instance, crusts are caused by the drying up of the contents of the vesicles of herpes, or by desiccation of the free exuded fluid, as in eczema.

Psoriasis includes the *alphos* of Wilson, and the *lepra vulgaris* of Willan. The primary lesion of psoriasis is a papule; numerous scales accumulate on the cutaneous surface, accompanied by more or less congestive inflammation. Several papules form, which become joined, and

in their progress exhibit various characters, to which different names have been applied, but are all merely stages of same complaint, as *P. punctata*, little *puncta*, or spots. Psoriasis *guttata*, when the eruption is like drops of mortar. *P. gyrata*, a declining stage, and so called when the eruption is like a band of ribbon; *P. nummularis*, if resembling a coin; *P. circinata*, if circular in shape; *P. inveterata*, *P. confluens*, &c. Bateman has remarked that, occasionally in Willan's three species of lichen, the papular form is lost, and that they "pass into psoriasis." The following observation is taken from the "Journal of Cutaneous Medicine," No. 6:—"In psoriasis, when commencing, the vessels of the papillæ take on the appearance of being bent or twisted on their way to the top of the papillæ, and also enlarged. If we take one of the larger vessels of the corium, and trace it to the branches going to the papillæ, we find, besides the cell growth, which gathers around the walls of the vessel, the little twigs which run into the papillæ in a graduated line spread themselves along the whole papillæ. A transverse cut through the papillæ gives a clear view of the cell growth, which almost fills out the stroma, forming a very visible ring. It is, therefore, concluded that psoriasis is an inflammatory process of the upper layers of the corium, and the papillary bodies with exuberance of cell growth and enlarged papillæ. The excessive formation of epidermic scales is only to be regarded as a hyperplasia of the cells of the Malphigian tissue." Consequently, we place psoriasis in the inflammatory group. However, psoriasis is a disease

peculiar to itself, so to speak, often hereditary, relapses being common. The eruption usually appears upon the knees and elbows, in the form of shining silvery scales, this peculiar colour being due, it is said, to the presence of air in the epidermic scales. The eruption spreads by new papules forming near the diseased part. In the chronic stage white laminated scales are present. The sudoriparous glands are obstructed, perspiration being prevented. Often the disease disappears; the part lately affected presents then a darker colour than natural, owing to a deposition of pigment. The hands and feet are sometimes involved, especially in syphilitic subjects, as also the scalp, the disease extending backwards amongst the hair for a very considerable distance. Romberg places under the head of *neuroses of sensibility* the psoriasis of washerwomen, who "frequently complain of an annoying sensation of numbness in both hands and forearms. The motility is unimpaired, and this cutaneous anæsthesia is to be attributed to their occupation, arising from the effects of the ley, which acts on the nutritive system, giving rise to the disease called psoriasis lavatricum." Dr. George Ross states that a gin-drinker's skin is usually pallid, dry, and harsh; and that the worst forms of psoriasis he has ever seen were in such individuals. The scales and urine from patients suffering from psoriasis have been analysed. The former contains sulphate and phosphate of lime; and, according to Dr. Beale,* the separation of so much organic matter, in the form of cuticle, causes a diminution in the organic con-

* "Archives of Medicine," vol. i.

stituents of the urine. Patients suffering from psoriasis are very prone to catarrhal attacks. The causes of psoriasis are debility, syphilis, alcoholism, and, lastly, hereditary tendency. You will find that this disease, like gout, with which it is often associated, runs in families; hence I regard a "Dartrous diathesis," as the French have it, as much of an established fact as a rheumatic or gouty diathesis, expressing a state of the constitution which results from a special cause; which is definite, not merely hypothetical, and can always be ascertained by a careful examination into the previous history of the patient.

Psoriasis and lepra are easily recognised from other skin maladies by the silvery white papery scales. The only affections with which it can be confounded are pityriasis capitis, eczema siccum, squamous syphilis, and tinea circinata. In pityriasis capitis the scales are fine, and only slightly adherent to the skin. In eczema siccum, or squamosa, there are crusts, *not scales*, and great sub-cutaneous infiltration, with itching; the latter being seldom present in psoriasis, except at its very commencement. In syphilis we have the coppery appearance of the eruption and other constitutional symptoms to guide us; whilst in tinea circinata, or common ringworm, by the aid of the microscope we can usually detect the fungus, the *Trichophyton Tonsurans* luxuriating amongst the epithelial scales.

Bazin professes to distinguish psoriasis, lichen, and prurigo into arthritic and herpetic varieties, but the line is not very well defined. He observes that old herpetic

affections are always symmetrical; the arthritic almost always irregular, and not extending in large confluent patches. Certain horse-shoe and circular forms of psoriasis, with a shining coppery hue to the skin, instead of the "raw ham look" of the non-specific variety, belong to the cutaneous manifestations of syphilis. The diagnosis is of the utmost importance. When patches of psoriasis first appear, the affected skin is slightly raised above the level of the surrounding skin. If, however, the eruption has existed for any length of time, the elevation is more marked, and the colour changes to a dusky red. At first the elevation of the eruption is due entirely to epidermic accumulations. As the disease progresses towards cure, the elevation becomes less marked, as also the excessive formation of epidermic scales; the colour of the part becomes lighter, and the disease now resembles, to a great extent, squamous eczema. After the eruption has finally disappeared, it not unfrequently happens that dark stains are left on the site of previous patches, being due to pigment staining, and best marked when a long course of arsenic has been taken, which has caused an increased determination of blood to the part attacked. Throughout its whole course psoriasis is a dry eruption. Moreover, it is never, we may say, accompanied by febrile disturbance. Psoriasis often attacks the nails, when the disease is called *psoriasis unguium* and the nails may be affected without any eruption on the body; usually several are attacked. The nail loses its natural polish, becomes opaque, thickened, and very brittle, marked by transverse grooves; and, lastly, the

nail falls off, being replaced by another, which may become diseased in turn. Temporary deafness results, when the ear and auditory canal is involved. Psoriasis of the tongue has been described. The tongue exhibits one or more whitish patches, which are quite smooth. When due to syphilis, fissures and little ulcers exist likewise.

One peculiar fact is present in psoriasis, as pointed out by Dr. M'Call Anderson, viz. :—That psoriasis very rarely attacks scrofulous persons, but, whilst the constitution of the patient may appear sound, debility is often present. Lactation and pregnancy are apt to call forth an attack of psoriasis, as well as anxiety. Psoriasis, it is said, is much worse in winter, often fading away in summer. Local irritation, a fruitful source of many other skin diseases, never produces psoriasis. The prognosis is favourable as regards life, but unsatisfactory as regards permanent cure of the disease. Various remedies have been proposed for the treatment of psoriasis, but there is only one specific, so to speak, known—that is, arsenic; the best preparation of which is the liquor soda arseniatis in doses, of five to ten drops three times daily, after food. Sending the patient to a spa is often of great service, as not only the drinking of the waters, but change of scene and rest from business does much towards curing the patient. The mineral waters most useful in skin complaints are either the sulphurous or iodo-bromated. Of the former, the waters have the odour of rotten eggs, owing to their impregnation with sulphuretted hydrogen. The chief sulphurous thermals are those of Aix-la-Chapelle; Baden, near Vienna; Aix-

les-Bains, Baréges, Bagnères de Luchon, St. Sauveur, Cauterets, Eaux-Bonnes, and Eaux-Chaudes. Amongst the cold sulphurous springs may be mentioned Harrogate, Bocklet, and Ballynahinch and Lisdoonvarna, in Ireland. Sulphurous waters are recommended in cutaneous, hepatic, uterine, rheumatic, gouty, and old constitutional syphilitic diseases. In chronic poisoning by mercury, lead, or copper, they help to eliminate the injurious mineral. Of the second class the springs at Kreuznach are the most celebrated, while in England there is the Woodhall Spa, in Lincolnshire, and Purton, in Wiltshire. The waters are used in all forms of scrofula, in many chronic skin diseases, in uterine tumours, and in old-standing constitutional syphilis and in lupus. Drinking these waters occasionally causes an erythematous or papular eruption similar to the rash termed *la poussée* at the Continental spas, from the use of baths of similar water. It is regarded as beneficial, and does not indicate that the waters should be discontinued. Dr. M'Call Anderson recommends the baths at Leuk, on the Rhone, in psoriasis.

Dr. Cleland ("Journal of Cutaneous Medicine," vol. iv.) states that arsenic in medicinal doses arrests the processes of decomposition, as evinced by the experiments of M. Lolliot on animals, causing diminished secretion of urea and reduction of temperature; secondly, increased nutrition of epithelial surfaces. The physiological symptoms are shown by three usual effects of medicinal doses: the silvery tongue, plumpness of the face, and irritation of the conjunctiva. Of these, the silvery tongue described by Begbie is generally the first to appear. Those

cutaneous diseases in which arsenic does good are the same in which tarry and such like applications are of use. Tar in psoriasis, although applied to the surface, certainly must exert its influence, not on the superficial, but on the young strata of epithelial cells; for it is only by a change in the young strata that the diseased superficial strata of epithelium can be replaced by healthy, and it is quite possible that the influence which it exerts on the young epithelium may consist in prevention of a too easy oxidation; in fact, Dr. Cleland thinks it is of an antiseptic character.

Dr. John M'Nab,* regarding psoriasis as the local manifestations of a depraved condition of the system generally associated with the gouty diathesis, thinks that it requires local and constitutional treatment. As a local application, he has used carbolic acid very successfully. He thinks that its *modus operandi* is by a coagulation of the albuminous secretion from the corium, which compresses the parts, and thus prevents further exudation. He also thinks that the peculiar chemical composition of carbolic acid tends to neutralise the ill effects of the atmosphere upon the local processes. He recommends an ointment containing one part by weight of carbolic acid melted, with four parts of lard. This is to be applied every night, and covered with gutta-percha tissue, to prevent evaporation. When the scales fall, and the integument begins to resume its normal appearance, oxide of zinc ointment may be substituted. He thinks that the disease is more amenable to this local treatment,

* *The Lancet*, March 19th, 1870.

combined with an indicated constitutional course, than to any other.

Dr. Liveing, of the Middlesex Hospital, concurs in the main with the opinions of Dr. M'Nab, and suggests that the acid should be used internally in those cases of psoriasis in which arsenic is either inadmissible or in which it has proved unsuccessful. Or we may give carbolic acid, say eight grains; glycerine, half an ounce; tincture of opium and camphor, two ounces and a half; and distilled water, one ounce and a half; of which the dose is one teaspoonful in water, which I have found useful in some cases of the disease under notice. The dose of the acid can be gradually increased.

When there is little hyperæmia, carbolic acid internally will often cure the disease. It will show favourable results in from two to three weeks, if it is to do any good. Dulcamara and "robin run the hedge," have been all tried, and found useless. Guaiacum had a run, as well as sarsaparilla, for a time. In all scaly complaints cod-liver oil is valuable, or plenty of fat food, and an exclusive animal diet, is to be recommended. Some surgeons place faith in rum and sweet milk, and consider it superior to cod-liver oil.

Dr. Spender states ("Journal of Cutaneous Medicine," vol. iv.) that "there are certain examples of psoriasis, dignified by the defiant title of *P. Inveterata*, which baffle the outward and inward means now described; and it is for this class of cases that he wishes to establish the trustworthy efficacy of cod-liver oil. There is an obvious physiological reasonableness in the administration of fatty

substances (hydrocarbons), whether dietetic or medicinal; the skin-structures are composed largely of fat, and to uphold their nutrition is a sure way to prevent their degradation to disease. The remedy must be continued for many months, and not necessarily in large doses."

One of the best ways of administering cod-liver oil, especially if the patient be strumous, tuberculous, or rickety, is as follows:—Take of gum Arabic two ounces and a half; water, two ounces; syrup of the lacto-phosphate of lime, six ounces; cod-liver oil, eight ounces; essential oil of bitter almonds, six drops. Rub the gum, water, and syrup together until a smooth mucilage is made; then add the oil gradually, with constant stirring; and, lastly, the oil of bitter almonds. Thus made, each tablespoonful of cod-liver oil and lacto-phosphate of lime contains four grains of lacto-phosphate of lime and 50 per cent. of cod-liver oil. Some authors recommend large doses of acetate of potash in this disease.

The external treatment is in the acute congestive stage, covering the affected part with oxide of zinc, lard, and oil. If the eruption is extensive, cold water packing is useful. You wet, say a sheet or handkerchief, in cold water; wrap it round the part, and cover with gutta-percha tissue and a blanket. Give the patient a warm drink; leave him for an hour: after which he has a cold or tepid bath. This plan produces a soothing effect, and is in some cases useful.

Dr. Tanner recommends the patient to be closely enveloped in a sheet which has been dipped in cold or tepid water, and well wrung out. He is then carefully

wrapped in a blanket, covered with three or more blankets, and a down coverlet is tucked over all. He should remain thus for thirty, forty-five, or sixty minutes, lying on his side, or in a semi-recumbent position; the duration being timed by the sedative effect produced. The sweating is not generally excessive. But the water, urea, and chloride of sodium of the urine are slightly increased; this increase being considerable when the sheet is continued for four hours. At the conclusion, the shallow bath may be used for two or three minutes, as a tonic.

A *blanket-bath* affords an easy means of inducing sweating. A blanket is wrung out of hot water, and wrapped round the patient. He is to be packed in three or four dry blankets, and allowed to repose for thirty minutes. The surface of the body should then be well rubbed with warm towels, and the patient made comfortable in bed.

Tarry preparations, as either common tar or oil of cade, are useful, rubbed firmly into the affected part. Any preparation of tar is apt, however, when used for any length of time, to produce an eruption of tar acne. For private cases, a carbolic acid lotion, ten grains to the ounce of water, and a little glycerine added; or creosote ointment (half a drachm to one ounce of lard) are much cleaner applications. In very chronic cases, the Turkish bath has been found serviceable, or Indiarubber dressings, which, being air-tight, produce copious sweating, which macerates the hardened epidermis. For psoriasis of the head, citrine ointment is used; and for psoriasis of the nails, painting them with gutta-percha, dissolved in chlo-

roform, can be tried. When the disease is very limited, painting with glacial acetic acid over the eruption often rapidly removes the disease. It acts as a blister. If a syphilitic taint be suspected, Neligan's solution of arsenic, iodine, and iodide of potash can be tried, or alternative doses of the green iodide of mercury. Quite recently lemon-juice has been used locally in obstinate cases of palmar psoriasis. The part should be rubbed with a piece of freshly cut lemon several times a day. When the disease is syphilitic, the bichloride of mercury is indicated, the best preparation of which is, I think, the liquor hydrargyri bichloridi, of the London Pharmacopœia. Professor Gamberini, of Bologne, recommends in psoriasis the use of an alcoholic tincture of corrupted maize.

Recently balsam of copaiba has been recommended for internal use in psoriasis by Hardy. The way it was found to possess special virtues for curing psoriasis may be reported as follows:—A patient was admitted into hospital suffering from gonorrhœa and psoriasis. As it was necessary to have the former complaint well before commencing treatment for the latter, he was ordered copaiba; the result being that not only the gonorrhœa, but also the psoriasis, rapidly disappeared. Copaiba is an oleo-resin, acting medicinally as a powerful stimulant to mucous membranes, exciting readily a new action in those structures, when diseased, probably not only by both actual contact, as in the blood or urine, but also through the means of the nervous system; hence copaiba is occasionally prescribed in some forms of bronchitis, affections of the bladder, urethra, and rectum. We know

that erythema and urticaria are frequently caused by the administration of copaiba; the last mentioned disease being now recognised as a "cutaneous neurosis." Hardy has described a case of pemphigus occurring during the administration of copaiba, and Hebra has described a case of urticaria in which several of the pomphi passed into bullæ.

We, moreover, know that nerve irritation can induce rapid cell-formation and metamorphosis. If debility be likewise present, there is, no doubt, diminished control over the tissues; consequently, the nature and intensity of the exciting cause must be allowed to exert more or less influence upon cell growth, and the well-known silvery-looking scales, characteristic of psoriasis, situated upon a red and infiltrated corium, are caused by increased desquamation of the epidermis; hence, in treating the chronic stage, various local stimulating applications are used—as, for instance, tar, oil of cade, creosote, carbolic acid, preparations of potash, &c.; likewise, we give internally "stimulants," which is only another word for a division of tonics—as arsenic, a pure nerve tonic, quinine, &c. I may be permitted to say that the treatment of psoriasis, when no acute symptoms were present, by large doses of balsam of copaiba, given with a little liquor potassa, mucilage, and water, has been highly gratifying, especially in cases where it has produced extensive urticaria; indeed, the dose should be increased till the latter is established. I have also been able to discharge the patients sooner by means of the balsam treatment than by any other, nor have any of them as yet had a relapse,

which in psoriasis is generally the rule ; but, of course, the time is too short to speak definitely on this point. Can any satisfactory reasons be given for the success of this plan of treatment ? I am inclined to think that it acts somewhat as follows :—We know that urticaria is a cutaneous affection, generally due to irritation of the mucous membranes, either of the stomach or of the uterus ; in the former instance presided over by the solar plexus ; in the latter by the uterine nerves, the cutaneous manifestations being merely symptomatic, as, indeed, nearly all skin diseases in the first instance are, afterwards becoming local affections, accompanied to a certain extent by alteration of structure in the part attacked. Now, if psoriasis is an inflammatory disease of the skin, we have, by prescribing copaiba, either as balsam or as oil, the power in most instances of producing erythema, often associated with urticaria ; a condition of things analogous to an acute inflammation of the skin from a definite or specific cause ; and, indeed, the erythema may be regarded as inflammatory—at any rate, it is often the first stage of inflammation. Now, according to John Hunter, two inflammations cannot exist ; the most recent usually destroys the other, as is observed in what has been called the abortive treatment of gonorrhœa, by a strong injection of nitrate of silver. Again, the wheals produced on the skin by copaiba are nearly bloodless ; hence absorption can and does more readily take place, the activity of absorption being unusually in an inverse ratio to that of the circulation. The serous engorgement must also be got rid of ; this

condition just described being favourable to the removal of the hypertrophied papillæ and infiltrated state of the corium, due to a "bloated" condition of their cell elements, as existing in psoriasis. I am the more inclined to this view by the fact of one variety of urticaria being occasionally exhibited, called *liehen urticatus*, generally occurring during the course of acute febrile diseases, and we have a good deal of febrile disturbance of the system when the stomach is "upset" by copaiba. The primary lesion of psoriasis is of a more or less papular character, if I may so express myself; hence the psoriasis punctata and guttata are acknowledged by dermatologists to be the commencing varieties of that disease. Bateman was aware of this when he tells us that Willan's three first species of lichen often lose the papular form, and "occasionally pass into psoriasis."

Urticaria, both acute and chronic, seems to be a morbid condition, depending on reflex sensation, often due to uterine or ovarian irritation.* Balsam of copaiba, then, by causing derangement of the stomach of a mere temporary character, inducing irritation that is conveyed to the solar plexus, the great centre of the sympathetic system presiding over organic life, and, consequently, irritation by this means exerts, most probably, what I may call a reflex influence upon the nutrition of the skin. The nerves presiding over the part or parts attacked, are awakened to a state of intense excitement, as may be proved by the formation of wheals, due to vaso-motor

* See Paper on Chronic Urticaria, by Dr. Fox, of Bristol, "Journal of Cutaneous Medicine," December, 1870.

nerve spasm, in the first instance, and the influence exercised by such local disturbance on the cutaneous nerves causes the normal processes of textural life to be improperly performed.

The following note of one of my cases is interesting :—
The patient, a girl aged fifteen, who never had rheumatism, employed at a sewing-machine; catamenia regular; no family history of chorea; and enjoyed good health till about ten months since, when psoriasis appeared—first on knees and elbows. Three months ago she came under treatment. I commenced the copaiba in half-drachm doses thrice daily, and in three weeks the eruption (although no urticaria or erythema was produced) began to fade. About a week after this date symptoms of chorea exhibited themselves, the facial muscles first attracting attention; and in another fortnight the disease was fully developed, accompanied by a dynamic cardiac murmur at left apex. The copaiba was discontinued on the first symptom of chorea becoming manifested, and wine of iron, with Fowler's solution, substituted. Was this a case of what Trousseau, in writing regarding the influence of skin diseases on the development of chorea, called "the mutual transformation of diathesis?" Or was it due to debility, so common a cause of not only of psoriasis, but also of chorea. The only author that I know of who mentions the combination of psoriasis with chorea is Dr. Handfield Jones.

Ozokerit is a vegetable wax, so to speak, or, if you like to apply a more sensational term, "a burning earth." It is a hydro-carbon found in Moldavia, Wallachia, the Caucasus,

and near the Caspian Sea. From the latter place it is obtained in great quantities, being largely used there for its illuminating properties. It was discovered some years since by a Russian military officer, who communicated the fact to M. Gustave Siemens. The latter gentleman, it is asserted, introduced it into England. In the crude state it is of a dirty greenish colour, and of a light specific gravity, and somewhat fibrous in structure. When rubbed in the hand for a few seconds, it feels like ordinary wax; it readily melts, and a rude candle can be easily made of the "raw material" and a cotton wick. A London firm—viz., Messrs. J. C. & J. Field—noticing its brilliant light when burned, decided to experiment with it for the purpose of making candles. To all appearance, this was a most unpromising task. However, they have succeeded in converting the dirty, greenish black substance into the handsome, snow-white refined ozokerit. "This," we are informed, "is accomplished by sundry processes of distillation and purification. The beautiful hard, white, waxy substance is as handsome as spermaceti, but not so transparent as paraffin, possessing, however, a brilliant gloss, and melting at a temperature of 140 deg. Fahr. This high melting point (paraffin being about 125 F., and stearine 130 deg.) allows of the employment of a larger wick, and this, combined with the natural brilliant light of the ozokerit itself, makes the candle burn with brightness." However, I may as well remark that the crude ozokerit and the yellow oil are the best for medicinal purposes. The Messrs. Field inform me, referring to the oil, that "in distillation a liquid oil is produced," and

which they have refined to a pale yellow. The coarse oil has a smell similar to paraffin, but not so unpleasant or strong. It is also a slight deodorizer; for I agree with Mr. Condyl* that disinfectants are of two classes:—First, those which, by fixing the organic matter in a form unfavourable to oxidation, thus reduce to the utmost its tendency to undergo chemical change, and which are more properly called antiseptic; secondly, those which more or less rapidly break up the organic matter by promoting oxidation and conversion into unputrifiable products, and which are alone properly designated true disinfectants. When cases requiring disinfecting measures are characterised by offensive smells, the materials employed against them are often spoken of as “deodorizers.” With the latter the ozokerit oil may be classed. The action of ozokerit appears to be similar to that of tar; it is not, however, so dirty. The crude is the best; but for private practice the refined may be employed, mixed with glycerine. At the hospital, we merely mix the dark ozokerit by heat, with equal quantities of linseed oil, which, although not a very nice-looking compound, and rather lumpy, still, when rubbed well in with the hand, soon melts. I think this slowness in melting an advantage, especially in such affections as psoriasis. The oil can be used combined with lard, but is inferior to the crude material. Their action appears to be that of stimulant to the skin. I may briefly say that the ozokerit, compared with tar, Hebra’s tincture, carbolic acid, and oil of cade, holds its own. It is only suitable for chronic

* “Disinfection and Prevention of Disease,” by Henry B. Condyl, p. 3.

affections, or eczema of long standing, and, unaccompanied by much infiltration of the sub-cutaneous cellular tissues, and psoriasis.

Dr. Passavant,* in a letter to Professor Hebra, recommends, as a specific remedy for psoriasis, the employment of an exclusively animal diet. Dr. Passavant's first experiment was upon himself, as he had suffered for twenty-five years from this disease affecting the entire surface. This led him to experiment with an exclusively animal diet, during which he improved, and was well in a few weeks. Dr. P. has likewise seen another case treated similarly, in which the scales disappeared in six weeks, and was followed by a relapse upon the resumption of ordinary diet. Dr. Caspari, speaking of this mode of cure, states he has not had the opportunity to try it, but that he is an example of the curative effects of a precisely different mode of treatment. He likewise has been a victim of general psoriasis, has tried every remedial agent, and, some years ago, in consequence of a gastric trouble, he was unable to eat more than milk, bread, soup, rice, and porridge, under which diet he lost weight, and his physical powers were much reduced; but his psoriasis disappeared.

Mr. Hardy,† having once used phosphorus in psoriasis, and discarded it, has again tried it upon five patients—three females and two males. One female took a teaspoonful of the following compound:—Oil, 150 grammes; phosphorus, 10 centigrammes; and she was rubbed every

* *Deutsche Klinik*, December 18, 1869.

† *Lancet*, February 19th, 1870.

night with a pomade of hog's lard and phosphorus. She was benefited. The other two females were treated by frictions of a pomade of phosphorus, with obvious amendment. The men were treated by phosphorus, internally and externally, and were benefited.





CHAPTER V.

SEBORRHŒA.

THE increased secretion of fatty matter from the sebaceous glands, or seborrhœa, is common in some diseases of the skin, as, for instance, Elephantiasis-Arabum. Some persons have naturally a greasy skin, especially those of a strumous constitution. Seborrhœa usually occurs on the face, especially the nose, and shows itself either by the formation of little yellow thin crusts, or by an excessive oily state of the cuticle. Fox* states that the epithelial cells are loaded with fat, mixed with free granules and cholesterine. The skin beneath is reddened, more or less thickened, and the sebaceous glands are hypertrophied. It may give rise on the scalp to pityriasis, or seborrhœa sicca. The scalp, however, is not greasy, but dry, and there is usually itching. The secretion may be oily, and represent seborrhœa oleosa, which occasionally forms crusts, that become hardened. The *Boston Medical Journal* for June 8th, 1871, contains an interesting translation of an article, from Dr. Kohn, on Alopecia-Furfuracea, a disease described by some as pityriasis-capitis, but now known as seborrhœa sicca, and which is

* "Manual of Skin Diseases," p. 390.

generally acknowledged to be a common cause of baldness. The appearance of the first stage is thus described:—The scalp, especially the crown, is covered with an abundant quantity of thin, white, shining scales, which are constantly undergoing separation and regeneration, and the hairs are covered with a fine, meal-like dust. Although falling spontaneously, the scales are detached in greater quantity by brushing or combing. A great quantity of them always remain, however, partially attached to the scalp. By washing with soap, or with yolk of egg, these last scales are also removed, and the skin then appears white and smooth, never deprived of its epidermis, and moist, although sometimes red and shining. In a few hours' time the scales again appear, and this condition may last for not only months but years, accompanied by more or less itching. In females chlorosis is often present, as also cold and clammy perspiration, especially confined to the hands and feet. The disease is peculiar to middle life. The affection under notice rarely compels those attacked with it to seek advice, but there is often associated with pityriasis-capitis a more urgent symptom—viz., defluvium capillorum, ending finally in baldness. Patients, we are informed, first notice that the hair falls perceptibly whilst combing, and later that the hair falls during the day. The loss of hair is most abundant upon the lateral regions of the crown, about an inch posterior to the edge of the brow in front upon the forehead, so that in the beginning two thin places corresponding to these parts are observed which afterwards become bald. The hair upon the foremost

part of the forehead remains long intact, and forms the gradually lessening anterior border of the baldness, which, by confluence of the two originally distinct patches, spreads over the middle portion of the scalp. Sometimes the loss of hair begins at the same time upon the edge of the brow, so that finally the process stretches from the forehead backwards behind the vertex uninterruptedly, and is limited by the growth of hair on the sides and back of the head—a form corresponding to the ophiasis of the ancients. The uniformity of the growth of the hair—that is, in numbers and length—depends, therefore, upon the continuance of the normal relations which exist between the normal duration of life of single hairs and the natural after-growth. Any disturbance in these relations which shortens the typical period of existence of single hairs, produces also a disturbance in the natural process of succession; so that the growth of hair is in this way gradually lessened, and, with this diminution in its term of life, each hair is also shorter and thinner; the process from noticeable thinning to final baldness is thus plainly indicated. The translator of Dr. Kohn's article quotes Pincus to show that an accurate estimate of the amount and method of daily loss of hair in the first stage of alopecia—that is, seborrhœic—can be observed as follows: For instance, the hairs upon the head of men either show the marks of scissors or they do not; the latter are called pointed hairs. In the usual style of wearing the hair, in which its length is some two inches or more, the relation of the pointed hairs to the whole loss is a constant one. In women, however, the short hairs are analogous to the

pointed in men. These latter are nominally of shorter length, and have a shorter period of life, about four to nine months, than the others, which last from two to four years, and are mostly developed upon the borders of the scalp. In the normal condition, the minimum of the daily loss in the cases observed ranged from 13 to 70, and the maximum from 62 to 203 hairs. The "dandriff," observed on the heads of people affected with the disease under notice, consists of the excessive discharge of cells and secretions from the sebaceous glands; and there is likewise an abundant production, as well as some organic change, in the sebaceous cells, which may be called impregnation. The cells of the external root-sheath, our author thinks, correspond to the elements of the rete-mucosum, and are continued within the sebaceous glands, the walls of which are lined by them, analogous to the parenchymatous cells of other glands. He thinks, if the cells of the sebaceous glands are thrown off in excess, the same process eventually affects also the continuation of the cellular lining and of the root-sheath of the hair. The consequence of such a nutritive change and mechanical disturbance in the elements of the latter cause the loss of hair; and, when this process has lasted for any length of time, the papillæ and their vessels become atrophied and no longer able to produce new cells for the young hair-bulb. The baldness then becomes permanent. The cause of the disease we are considering—viz., Alopecia Furfuracea—are arranged under three heads, as chlorosis, anæmia, and cachexia. Regarding prognosis, it may be stated in general terms that the more hair follicles

destroyed in the course of the disease, the less chance there becomes of the reproduction of the hair; and the more favourable conditions are those cases in which the loss of hair has been occasioned rather by congestion or inflammation of the scalp.

There are two stages of the affection, the first of which is characterised by excessive scale-formation upon the head; the second by perceptible loss of hair. The former is, in Dr. Kohn's opinion, as in that of many older authors, a pityriasis; and he, therefore, calls the disease alopecia pityrodes. Hebra's title for this condition—seborrhœa sicca—he does not admit, although he himself says that the scales of pityriasis capitis, after they are extracted with ether, consist in great part—three-fifths of their weight—of the secretory products of the sebaceous glands, altered by disease. He does not agree with those who believe that later generations are more affected with early baldness than the races of the past centuries; but that alopecia praematura is a sufficiently frequent occurrence is a fact not to be overlooked. A glance over the heads of the audience at a theatre reveals a parterre of bald heads. Such an occasion shows, too, that men are much more frequently affected than women; and this observation is true, in spite of the supposition that the latter are better able to conceal their loss of hair by artificial means. But it is not only true that the affection is less frequent in women than in men, the baldness also seldom attains so great dimensions in the former. After variola, defluvium capillorum not unfrequently occurs, and in such cases the loss of hair takes place in two ways. Some-

times many of the hair follicles are destroyed during the process of the formation of the efflorescence, as in acne, pustular syphilides, and the like ; the walls of the follicles and the sheaths of the roots being destroyed by the suppuration of the pustules and the accompanying scar formation. When many of the follicles are destroyed in this way, there remains a corresponding degree of permanent baldness. At other times the eruption does not affect the tissues of the corium so deeply, and the follicles in great part escape uninjured. Then, too, after the occurrence of small-pox, an affection of the sebaceous glands sometimes comes on, which was originally described by Hebra.

We have borrowed largely from Dr. Kohn's article, and merely remark that benefit will be derived from the use of a pomade, containing dilute citrine ointment, a little glycerine, and spermaceti ointment, rubbed into the scalp every night; the hair being frequently cut, and the whole head washed once a week with some mild, unstimulating soap, such as Pear's transparent soap; or, if preferred, Riger's "*Savon D'Amendes Ameres San Angles.*" Yolk of egg and warm water cleanse the scalp very well. In cases where there is no inflammation, and in which the above means have been useless, we may have recourse to some stimulating application—as, for example, a lotion containing a small quantity of liquor ammonia, spirit of rosemary, glycerine, and water; to be used twice daily with a sponge, and some borax ointment applied at night. Or, if preferred, Dr. Frazer's formula can be tried, which

is as follows :—Aromatic vinegar, half an ounce ; tincture of cantharides, three drachms ; rum, three ounces ; and rose water, three ounces. The following is an excellent hair wash :—Ether, two drachms ; tannin, twelve grains ; spirits of lavender, one ounce ; glycerine, one ounce ; and rectified spirit, five ounces.

Dr. Hofman,* in an interesting article on the “Hair in its Medico-legal and Microscopical Aspects,” states that “the hair of the head is generally round, but when it is curly it is flattened ; the transverse section is then oval. The beard is generally triangular, on section, with one convex side. Hair from the genitals is generally oval ; sometimes, however, it is triangular, with one convex side. Hair which has been exposed to sweat is sometimes swollen in one part, and so changed in form. When the hair grows undisturbed, it ends in a fine point. All the hair of a young child is of this kind ; so, too, the hair which begins to grow at puberty. This may be a guide as to the age of a person. Hair which has been cut has at first a sharply-defined transverse section ; it afterwards becomes rounder and smaller, or frayed out. This may point to the time which has elapsed since the hair was cut. The beard, being less frequently cut, is more often split and frayed out. The hair of the female is also generally frayed at the ends. The shape taken by the ends of the hair depends upon the action of friction and sweat ; the former splitting and rubbing off the ends, the latter dissolving the connective substance. The sweat

* *The Lens.*

changes the colour of the hair, as in the axilla, on the scrotum, and labia. The hair of animals usually differs greatly from that of man, though preserving the same general structure. The cuticula has in most animals absolutely and relatively larger cells. The medullary substance differs greatly from that in human hair, the cellular structure being usually evident without any reagent.





CHAPTER VI.

DISEASE OF THE NAILS.

THE nails become peculiarly rounded in aneurism of the aorta, cyanosis, and phthisis. The nails are altered from certain parasitic affections, as *tinea circinata* and *favus*. They are also attacked by psoriasis and syphilis. Sometimes the matrix becomes inflamed, which appears to be of an erysipelatous character; the early symptoms of which are pain, heat, throbbing, and redness around the base of the nail. The pain becomes worse, the surface gets livid, the part beneath the nail inflames, and assumes a cloudy, swollen appearance. Often a sanious discharge exhibits itself, in consequence of effused blood; the nail then becomes loosened, sodden, and opaque, and from underneath there oozes out an offensive fluid. Finally the nail falls off, leaving a very tender-looking, raw surface behind, which readily bleeds. Moreover, the part may ulcerate, and the finger or toe, as the case may be, inflamed; the bone becomes diseased, and even phlegmonous inflammation attacks the arm, or an attempt at repair is made; a new, although imperfect, nail being produced.

Onychia is divided into *simplex* and *maligna*. The last is common amongst the mill-workers in Belfast, and usually arises from violence received in the first instance; the action of the hot, and alleged poisonous, water on the floor of the spinning-room in which the workers stand being the predisposing cause. This disease is unknown in Leeds or Dundee, as at these places the workers wear clogs, whilst here they go bare-footed. In-growing toenail occasionally gives rise to a foul ulcer, and corns may grow underneath it. The treatment of in-growing nail consists in three methods:—1st. Evulsion of the nail, which, however, only affords temporary relief, until a new nail is produced. 2nd. Removal with a scapel of the matrix and the bent nail. 3rd. Removal of the overlapping integument, in which the side or sides of the nail are buried. The latter is the least severe method, and recovery is not protracted. The integument having been cut away freely from the side of the toe, there is no longer any material left into which the nail can be pressed; and so the disease is cured, and cannot be repeated. In some cases a lotion containing Fowler's solution is useful, and hastens the cure.

M. de Mœrloose, of Ghent, recommends the nitrate of lead, applied in power to the irregular excrescences; the swelling soon subsides, and the secretion assumes a healthy character.

For Onychia parasitica, the fungus causes the nail to split, and removal of the nail is often necessary; or it may be scraped down, and then apply either a carbolic acid or hypo-sulphite of soda lotion, after which cover

the nail with a solution of gutta-percha, dissolved in chloroform. A weak solution of chromic acid succeeds better in some cases. Atrophy of the nails is usually incurable, and often due to syphilis. For hypertrophy of the nails, scraping the nails and using a solution of gutta-percha dissolved in chloroform, to which some carbonate of lead may be added, has given good results.

Dr. Stilwell thus writes regarding the treatment of "In-growing Toe-Nail:"—"The evulsion, or tearing out of the toe-nail, appears, both logically and practically, bad, because, by a very painful operation the sound nail is removed only to allow the unsound protuberance of flesh to recover itself. We must bear in mind that it is not the nail growing into the flesh, but the soft and sensitive surrounding structure growing over the nail. How much better, then, by a comparatively painless operation, to remove the offending cause, and leave the nail to perform its natural use of supporting and protecting! Our operation consists in removing, with the knife, by a single stroke, all the diseased parts, together with quite a large piece of the sound flesh, skin deep, from the side of the toe; sometimes making an open wound of, say, nearly an inch long by half or three-fourths of an inch wide. No portion of the nail need be removed; but if, in order to fully secure all the diseased flesh, overlapping and undergrowing, a segment of the nail is involved in the cut, no harm comes of it. The result is quite as good; perhaps better."

Professor Vanzetti has, within the past half-year, published in Venice a folio of 120 pages on this disease,

advocating the application of the nitrate of lead. My old pupil, and now colleague, Dr. Johnston Scott, has tried the nitrate successfully, and his results will be published by Professor Vanzetti in the next edition of his work. The application of nitrate of lead is suitable for the fungous, ichorous, unhealthy ulcer, occurring especially in children at the root of the nails, which fall away, leaving a sore, with swelled, jagged edges, causing a deformation of the finger or toe, and occasionally requiring amputation. He has tried quicklime upon two patients who presented themselves at the hospital with onychia of the feet. In one the disease had developed spontaneously; in the other as the result of an injury. In one of the patients the lime was left in contact with the affected part without renewal; in the other it was frequently renewed. Both did well, with perfect reproduction of the nail.

Dr. Ozanam* regards the surgical operation at present commonly resorted to for the relief of this affection as needlessly cruel. The tearing out of the nail, or portions of it, leaves the toe in a tender condition for a long time, sometimes permanently. The plan which Dr. Ozanam suggests as a substitute is as follows:—A nick is made in the centre of the edge of the nail, extending in to its attachment. Then the upper surface of the nail is scraped along the middle line until it is thinned nearly down to the quick. A small piece of sheet-rubber is afterwards inserted on either side of the nail, with the aid of a spatula, so as to form a sort of gutter around the edge, and to separate it from the adjoining flesh. Dr. Ozanam lays great stress upon this part of the treatment, and in par-

**L'Abeille Med.*, July 6.

ticular upon the employment of the rubber. Lead, he remarks, is too hard, charpie too soft and yielding; while the elasticity of the rubber, on the one hand, and its comparative softness on the other, serve to keep up a constant, but gentle, pressure on the inflamed tissues without giving undue pain. Thus, with the elastic pressing up the outer edges of the nail, and the thinness of its centre allowing a certain amount of yielding, it gradually becomes flatter, and its edges cease pressing upon the adjoining flesh. Should fungous granulations exist about the ingrowing edges of the nail, it will be proper to apply some alterant, and the best for this purpose is powdered nitrate of lead, which reduces the fungosites and rapidly arrests suppuration. After the condition of the nail is once remedied, it is necessary to keep the central portion scraped thin for some months, until it becomes flatter and assumes a more normal form.

Dr. C. F. Fagge* has published a paper on some affections of the nails, from which the following is taken:—"The growth of a vegetable parasite in the substance of the nail appears to occur under two distinct conditions, which have, however, been confounded together by some writers, including Neumann. 1. The first of these conditions occurs in patients suffering from some parasitic disease of the scalp or body generally, in whom one or more of the nails becomes secondarily affected. This is most frequently observed in cases of favus, as has been described by Bazin, Anderson, and others. In the 'Transactions of the Clinical Society' I have given accounts of three such cases. One of these

* "Guy's Hospital Reports."

occurred in a girl affected with favus ; two others were sisters, affected, the one with tinea tonsurans ; the other apparently with t. decalvans. The most important point which I endeavoured to establish in the paper above referred to is, that in favus of the nail the growth of the fungus takes place in a manner different from that described by Bazin, who has generally been followed in this matter by subsequent writers. According to Bazin, the favus fungus is developed on the under surface of the nail, and may at first be seen through its transparent substance. Gradually the nail becomes thinned by it, and is subsequently perforated, when the parasitic mass assumes more or less the character of an ordinary favus cup. In my case, on the other hand, the fungus lay within the nail substance, and was distinctly interstitial from an early period. It gave a uniform yellow colour to the part of the nail affected by it, and this gradually became more extensive, encroaching on the nail more and more towards its root. Models of these cases were made by Mr. Towne, and have been placed in our museum. 2. The second condition under which the nails become affected with a vegetable parasite was first described by Meissner, and secondly by Virchow. Meissner's case was that of a man over eighty years old, in whom all the nails (except that of one forefinger), were broad, thick, strongly convex, resembling claws, and striped of a yellowish white or brown colour. They were moveable on their beds, and could be split like wood. The affection was only noticed *post-mortem*. In Virchow's three cases, again, the disease was observed only in the dead body ; the nails affected were all toe-nails."



CHAPTER VII.

ECTHYMA.

ECTHYMA and IMPETIGO are diseases usually observed in debilitated constitutions. In the former affection there is exhibited primary redness of the skin, upon which pustules subsequently form; whilst in ecthyma we have presented to our view isolated phlyzacious pustules, situated upon a hard, vivid, or even livid red coloured base, due to debility and an impoverished condition of the blood. Cohnheim's observations have opened up a new field for investigation, and by which we are led to believe that the white blood corpuscles play an important part in suppurative inflammatory processes. To the consideration of those I desire to call attention for a few moments; and, firstly, it may be stated that, according to the width of the capillaries, one or two red corpuscles, or one red and one white corpuscle, can only be allowed to pass side by side in the blood current, which, however, is liable to become stagnated—probably from vaso-motor spasm. The white corpuscles proceed much slower than the red. When inflammation is becoming developed, widening of the smaller arteries occurs, and this dilatation increases with slight intermission; so that the vessels,

after a time, may have nearly increased to twice their original width. Moreover, the arterial vessels are lengthened, and become tortuous; the veins likewise become dilated. After this vascular dilatation has continued for one or two hours, there ensues a reduction in the rapidity of the blood current: the contours of the individual blood corpuscles can now be more distinctly recognised, the arterial pulsations become more evident, and in the arterioles the white corpuscles can be observed striving towards the walls of the vessels, in which Cohnheim believes he has discovered natural apertures by which the corpuscles may escape and appear in the surrounding tissues. Might this not be the reason that pustules usually appear at the orifices of gland ducts, hair follicles, &c., since we know that these situations are very vascular points, and readily become centres of exudation? The passage of white corpuscles out of the capillaries, and their identity with pus corpuscles, opens up an important field for histological investigation. The important observations of Cohnheim must have a practical bearing, at no distant day, on the subject of therapeutics. It is well known, for instance, that quinine is a valuable remedy in all forms of pustular eruptions, whilst, on the other hand, alcohol is injurious, as testified by Dr. Binz, who found that it produces dilatation of all the capillaries throughout the body. If there be a strong tendency to the formation of pus, it is increased by the administration of alcohol. How frequently do we observe pustular affections, as *Acne rosacea*, *Ecthyma*, and *Impetigo*, occurring on the persons of inveterate drinkers?

Whether these states are due, as remarked by Dr. Anstie,* referring to congestion of various organs, to degenerate changes, which result from prolonged alcoholic poisoning, or to the direct chemical influence of alcohol upon the nervous tissues, leading to degenerative changes and paralysis of the nerves which preside over nutrition, we cannot at present decide.

An interesting review of Dr. Waldenburg's work on "Tuberculosis" has appeared in the *Lancet* for April 2nd, 1870; and from which it seems that in producing tubercle from inoculation, there first ensues stasis of the blood in the capillaries, and a migration of white blood corpuscles through the vessels' walls; and with these the foreign corpuscular elements form a minute collection of cells, around which connective growth takes place: the whole ending in tuberculous granulations.

Quinine restores the healthy tone of the vessels, and, by increasing the weakened digestive functions, allows the food proper for the nutrition of the tissues, as remarked by Dr. Beale,† to become living germinal matter in the epithelium of the intestines and in the chyle corpuscles; the formed material of which, he says, becomes resolved into substances differing in composition and properties from the food, as albumen and other substances, which are dissolved in the fluid part of the blood. Within the lymphatic vessels are formed masses of germinal matter, which Dr. Beale asserts would appropriate any redundancy of nutrient material which the

* Reynolds' System of Medicine.

† Archives of Medicine, vol. ii.

neighbouring tissues could not take up. In the form of lymph corpuscles, this nutrient matter is returned to the blood, and these bodies (lymph corpuscles) at length assume the form of white blood corpuscles. It is not improbable, he says, that the "hæmato-crystalin of the red blood corpuscles is, by the action of oxygen, gradually resolved into two sets of compounds: the one which takes part in nourishing the tissues, as albumen and other substances; the latter, which is to be eliminated, as urea, extractives, carbonic acid," &c. Impetigo is usually a severe inflammation of the skin; the pustules generally grouped in clusters; in some cases resembling herpes by following the course and distribution of a particular nerve, as I have observed in several instances, especially on the lower extremities. According to Erasmus Wilson,* there prevails a decided tendency on the part of the pustules to spread by their circumference; sometimes the spreading periphery assumes a semi-pustular or vesicular character, and then we have represented to us a form of the eruption which is termed *impetigo phlytænodes*. As the disease proceeds, scabs and incrustations form; and, if the eruption is situated upon the face, swelling and enlargement of the neighbouring lymphatic glands usually ensue, said to be due to irritation. The pustules of impetigo differ from those of ecthyma. In the latter disease, the deeper structures are affected. Impetigo, Mr. Wilson says, is an eruption evincing a lower degree of power than either eczema or lichen, and is met with chiefly at the nutritive period in weakly children, among

* "Journal of Cutaneous Medicine," vol. iii.

the debilitated and cachetic in youth, and in the adult, and among the poorer classes.

From the preceding brief remarks, we see that the corpuscles can only pass out by previously-formed openings ; for they could not break through a solid, closed wall. The white corpuscles, as long as they proceed uninterruptedly, retain a spherical form, in which they are in their greatest possible state of contraction ; but, as soon as they come to rest, amóboïd motions take place in them. Dr. Allen (in his review of Cohnheim's observations, in "Half-Yearly Compendium of Medicine") states that the effect of the now commencing amóboïd motions must be a penetration of the walls of the vessels, as the prolongation now developed can only press forward at those situations where the least or no obstruction is met with, and these places are the stomata and canaliculi of the connective tissue. The red corpuscles have no spontaneous contractibility, or are capable of changing their form. Hence the exit of corpuscles from the capillaries is due, according to the authorities quoted, to increased pressure, dilatation, and diminished resistance of the arterial walls, the red corpuscles never passing out till after the white have prepared the way for their doing so.

We may conclude, then, that when quinine is given in these cases, it is rapidly absorbed ; and, according to Dr. Bartholow, "exerts an inhibitive influence upon the heart and arterioles," and is useful in congestions of the spleen and in orchitis ; the latter Dr. Bartholow has cured with a few full doses, "by virtue of its influence over the vaso-motor nerves : a fact derived from a study of its

physiological effects." Quinine, Dr. Handfield Jones* believes, tones and excites the vaso-motor nerves to such a degree that the minute arteries become contracted, and the parts they supply anæmic.

Button scurvy (*Ecphyma globulus* of Burgess) was the popular name given by the Irish peasantry to a cutaneous disease prevalent in the Southern, Middle, and Western Counties of Ireland during the famine years of 1847-8-9. In 1868 we met with a case bearing a great resemblance to this affection. The patient, aged 16, was pale, anæmic, and debilitated; had insufficient and poor food; lived in a dark and unhealthy lane in Belfast. The cutaneous disease was characterised by an eruption of isolated excrescences, best marked on the arms, presenting a convex surface somewhat resembling an ordinary button. These excrescences were about the size of a farthing.

* "Functional Nervous Disorders," p. 533.





CHAPTER VIII.

HERPES.

LIKE Erythema, Herpes and Pemphigus are diffuse eruptions, appearing over a considerable extent of surface at once. In herpes, neuralgic pains are usually complained of, especially when the disease appears on the thorax; after an interval of a few days, vesicles exhibit themselves, situated on an erythematous ground. The eruption of herpes consists of one or more clusters of globular vesicles, and runs a definite course of two or three weeks' duration. Zoster appears usually on the left side. Hebra* informs us that when the vessels that supply the sebaceous glands, or the papillæ of the hair, pour forth a drop of fluid into the interior of a follicle, the epidermic cells become infiltrated: the exudation being transmitted outwards to the cells immediately contiguous. This process is repeated till at last the drop of exuded matter reaches the horny layer of the cuticle. This resists the pressure and prevents its further progress; for these cells have less power of imbibition; hence it is pushed forward above

* "Diseases of the Skin," vol. i., p. 7.

the level of the surrounding skin, in the form of a papule. If more fluid is secreted, a vesicle results; and, if the congestion is associated with increased exudation into the cellular layer surrounding the glands by which these are brought into a state of turgescence, a wheal results.

Dr. Woakes* informs us that the neuralgia of herpes arises from implication of the sensory fibres. He says: "The question will suggest itself, how can this happen, if reflex involvement of the spinal nerve be excluded from the process? A moment's reflection will remind us that, besides the capillary circulation of the skin, there is another set of capillaries arising from the same artery as these, and which are intimately associated with the spinal nerves—we refer to the vaso-nervorum, the nutrient vessels of the sentient nerve itself. * * * Consequently, instead of a state of tone which allows nerve nutrition to go on, there will ensue synchronously with the corresponding skin affection a state of dilatation of the vessels, and exudation from them of watery elements between the fibrillæ of the nerve." This probably occasions the neuralgia. Exposure to draughts of cold air is a common cause of herpes. Catarrh occasions herpes of the lips.

According to Dr. Anstie,† herpes may probably attend neuralgia of any superficial nerve; and he mentions a case in which the neuralgia was "particularly severe: the herpetic vesicles were followed by ulcers, which left considerable scars on the forehead."

* "Journal of Cutaneous Medicine," vol. i., p. 289.

† Reynolds' "System of Medicine," vol. ii., p. 739.

Drs. Eulenberg and Guttman* have investigated the subject of neuralgia (tic-douloureux), and have arrived at the conclusion that the sympathetic system is the seat of the disease. The pain is often associated with vascular disturbances, flushing of the face, congestions, &c., often periodic in their nature. M. DuBois-Reymond, we are further informed, has observed that the neuralgia from which he suffers is probably produced by spasm of the vaso-motor nerves. When the pain is severe, the temporal artery feels hard and wiry, the face becomes pale, and the right eye small and congested. When the pain disappears, the vessels relax, and the right ear becomes red and hot. During the attack the right pupil is dilated. DuBois-Reymond thinks that the pain he experiences is owing to spasm of unstriated muscular tissue, analogous to cramp of the voluntary muscles; but, according to Eulenberg, it is due to diminution in the supply of blood, owing to contraction of the vessels, and which, when excessive or long continued, may act as a stimulus to the sensory nerves. The value of quinine and coffee, and its alkaloid Caffeine, in neuralgia is probably due to their giving tone to the arterial walls. An abstract of a case in which the great sympathetic and phrenic nerves were destroyed, in the removal of a tumour from the neck, by M. Trélat, at St. Louis, will be found in the *Medical Press and Circular* for January 27th, 1869. It was observed that, on the day following the operation, the patient's face was deeply congested, in well defined patches, especially on the right side, with right pupil strongly

* *The Lancet*, Dec. 19, 1868.

contracted, these symptoms being attributed to the injury of the sympathetic nerve.

The above interesting observations bear on the pathology of zoster. Thus, when any injurious influence is brought to bear upon a nervous twig—say, of a cutaneous nerve—paralysis of the sensory and vasal fibres ensues. When the vasal branch is acted upon, there results most frequently hyperæmia and vesicular eruption, which latter elementary lesions are defined by Hebra to be elevations of the horny layer of the epidermis by transparent or milky fluid. An essential character of the vesicle, he says, is its size; for only those elevations of the “epidermis which are in size between a lentil and millet-seed receive this appellation; all those larger are reckoned as bullæ.” And we are told, further, that the first-formed cluster of vesicles is always nearest the nervous centres, and that those which subsequently develop themselves lie more towards the peripheric distribution of the corresponding nerves. Eulenberg* differs from this view, and states that zoster has always a peripheric origin, consisting of a characteristic change in the skin, with an accompanying affection of the vaso-motor nerves, and not, as Von Bärensprung and others assert, of a primary affection of the spinal ganglia. In no case, we are informed, is it the rule that zoster follows the whole course of a spinal nerve, frequently following only a single twig and certain distributions of the plexus; for instance, the brachial, with the interruption of the motor power in the corresponding nervous branches complicated with paralysis of the individual muscles. He records the case

* *Edinburgh Medical Journal*, June, 1868.

of a shoemaker, in whom the symptoms were as follows : Neuralgia; then anæsthesia and cramp in those parts to which the ulnar nerve is distributed; diminution of sensibility; and, lastly, Herpes zoster, with distinct localization to the course, and distribution of a cutaneous branch. Primarily here we have an affection of the ulnar nerve, apparently rheumatic or perineuritic, from which arose diminution in the conducting power of the scissory and motor portion, and loss of function of the vaso-motor and sensory fibres, which supply the skin, and hence the zoster. As Dr. Von Bärensprung was one of the first to investigate the pathology of zoster, and as his views are contradicted, it may be as well briefly to state them. The following is his arrangement:—

Zoster^{facialis}, implicates branches of the fifth pair of nerves.

„ occipito collaris	„ occipitalis minor, auricularis magnus, and superficialis colli nerves.
„ cervico-subclavicularis	„ supra-sternal, supra-clavicular, and supra-acromial nerves.
„ cervico-brachialis	„ brachial plexus.
„ dorso-pectoralis	„ third to seventh dorsal nerves.
„ abdominalis	„ eighth dorsal to first lumbar nerves.
„ lumbo-inguinalis	„ branches of the upper lumbar nerves.
„ lumbo-femoralis	„ external cutaneous, genito-crural, anterior crural, and obturator branches of lumbar plexus.
„ sacro-ischiadicus	„ cutaneous branches of sacral plexus.

As before remarked, Von Bärensprung considers that zoster is occasioned by irritation of the spinal ganglia,

the posterior roots being implicated. Mr. Paget* believes that long continued paralysis of both motion and sensation, attended with rapid wasting and neuralgia, may ensue, in consequence of injury to the nerve-fibres, without rupture of their tissue; and that incapacity to perform their proper functions may be caused by injury occurring to the brain, or cord. But it is considered by various writers that the sympathetic and other filaments in the course of a nerve, and not the ganglia on its roots, are the source of Herpes zoster. Again, M. Parrot† states that the chief symptoms of the disease under notice are always a secondary or subordinate condition, due to neuralgia, rheumatism, or dyspepsia. Heberden, in his "Commentaries," records an interesting case of zoster in a woman more than fifty years old. He says—"The herpes appeared upon the right clavicle, together with fever and pain throughout the whole right arm. The eruption and fever continued some weeks, but the skin remained scaly for several weeks, and the whole arm gradually became weaker, till it lost all power of motion, and this state continued at least three years, and probably her whole life. The fingers were constantly in an involuntary tremor." In this case the nutrition of the skin was not properly performed; hence the scaly state mentioned. Hebra divides herpes into the following species, viz. :—

Herpes labialis, or Herpes facialis.

„ præputialis, or Herpes progenitalis.

„ zoster.

„ iris et circinatus.

* *Medical Times and Gazette*, March 26th, 1864.

† *Considérations Sur le Zona*, Paris, 1857.

And, divided according to their different seats, the varieties of zoster are as follows :—

- Zoster capillitii.*
- „ *faciei.*
- „ *nuchæ (H. collaris).*
- „ *brachialis.*
- „ *abdominalis.*
- „ *femoralis.*

He also criticises Bärensprung's division of herpes in a very concise manner, and informs us that the first three species are only one affection. The reason which Bärensprung gives for this opinion is, that they are all found in regions supplied by particular nerves—the vesicular eruption observed being due to a morbid condition of the nerve; and when the vesicles are found covering the whole extent of the skin supplied by the affected nerve, it is called a Herpes zoster. Bärensprung looks on Herpes labialis as an incomplete zoster facialis, answering to the infra-orbital and mental branches of the second and third divisions of the fifth nerve. A morbid condition of the inferior pudendal nerves, and also of the pudic, occasion Herpes proenitalis. But, in the words of Hebra, plausible as this view is, and supported by anatomical considerations, it nevertheless appears to him to be not altogether consistent with clinical observation. To the practical physician a diagnosis resting on an anatomical basis of a conjectural kind has no weight, if it is in any way opposed to the symptoms of the patient. And he informs us that we should not attach more importance to the anatomical characters of herpes than to observations at the bed-side concerning its seat and distribution, its

course and complications, particularly if these features are uniform at all times. He then proceeds to say:—“Indeed, in the case of zoster, it was the clinical physician who drew the attention of the anatomist to the fact that the disease is accompanied with a nervous affection; and surely we ought to listen to the opinions of the former, with regard to the relation between zoster and the *H. facialis* and *H. progenitalis*, before doing away with the separate existence of the last-mentioned species of herpes. Now, clinical observation furnishes us with many reasons for retaining the distinction hitherto admitted between these forms of herpes. Amongst these reasons are the following:—1st. In the *H. labialis* and the *H. præputialis* there is generally only one group, or but a very small number of groups of vesicles, whereas in zoster this is the case only in very exceptional instances, several clusters being developed in succession. 2nd. Zoster seldom returns; it generally appears only once in the life of an individual; whereas in *H. labialis* and *H. progenitalis* the re-appearance of the disease is the rule. 3rd. It is a well-known fact that Herpes labialis occurs in the train of febrile complaints; it has even received the name of ‘hydroa-febrilis.’ Hence this affection appears to be symptomatic, and due to some past or actually existing disease, attended or unattended with fever; whereas zoster is to be regarded as the result of a morbid condition more or less accurately confined to the tract supplied by a particular cerebro-spinal nerve. 4th. Neuralgic pains precede the eruption of zoster, accompany it, and often remain for a long time after its disappearance. This

symptom is never observed in *H. labialis* or *H. præputialis*. 5th. The *H. labialis* and *H. progenitalis* are not generally unilateral, but more often affect both sides, or appear in the middle line of the body. Von Barenprung, indeed, disputes the complete accuracy of this; but, as it appears to me, he is wrong in doing so."

On the other side of the question, we have a review of Hebra's objections, by Dr. Damon ("Neuroses of the Skin," page 60), an American Dermatologist, who states that Herpes labialis and Herpes præputialis can be explained by the limited distribution of the nerves in these cases. Thus:—"Whereas, in the event of a zoster upon the thorax, many nerve branches usually become the seat of the eruption. 2nd. That zoster seldom appears more than once in the life of an individual can be satisfactorily accounted for, when we consider the rarity of this affection upon the larger cutaneous nerves. But few dermatologists have seen many cases of zoster, however extensive their observation may have been. In proportion, therefore, to the rarity of this, as compared with other diseases which are occasionally known to return, we should be much less liable to see a repetition of zoster than we might at first suppose. The fact that zoster seldom occurs twice in the same individual is no proof at all that the person having it becomes thereby exempt from a second attack. The much greater frequency with which Herpes labialis and *H. præputialis* occur is one reason why they attack the same individual more than once. It is fair to suppose also that herpes, in these regions, is produced by greater variety of causes

than when it is distributed upon the filaments of the larger cutaneous nerves. 3rd. That Herpes labialis is a symptom of febrile diseases, whilst zoster is due to a morbid condition of a particular cerebro-spinal nerve, contains no evidence of dissimilarity in the nature of these affections. In many cases Herpes labialis is sympathetic in its origin; the same may be said of zoster. Cold gives rise to both these varieties of herpes; so also do affections of the internal organs. We have twice observed Herpes labialis and Herpes præputialis simultaneously upon the same person. 4th. That the neuralgic pains, which precede, accompany, and often remain after the disappearance of the eruption in zoster, are never observed in Herpes labialis and Herpes præputialis. This objection is, in part, contradicted by a subsequent statement in the description of Herpes facialis. Hebra describes the affection thus:—"The outbreak of a Herpes facialis is often preceded by a burning pain in the part; but this finally disappears when the vesicles have become fully developed. 5th. That H. labialis and H. progenitalis are not generally unilateral, but more often affect both sides, or appear in the middle line of the body. The accuracy of this statement is disputed by Bärensprung. We have observed many cases of Herpes labialis and H. præputialis in which there was a manifest unilateral distribution of the vesicular groups. No satisfactory explanation has yet been given why Herpes facialis should not always be unilateral. The cause of the eruption has probably much to do with the local manifestations in these cases." Dr. Damon further informs us

that the exceptional forms of development of zoster may be expressed as in the following statement:—1st. Papules, bullæ, or pustules, are formed instead of the normal vesicles of zoster. 2nd. The eruption of zoster is bi-lateral. 3rd. The neuralgia is intensely severe before, during, and after the eruption. 4th. Hæmorrhage takes place into the vesicles.

Mr. Hutchison,* in a paper on Herpes zoster, informs us that special conditions of the blood may irritate the roots of the sensory nerves, causing, at their periphery, herpetic inflammation:—"Thus we have a syphilitic Herpes zoster, in which the patches are located exactly as are those of common Herpes zoster, and clearly under the influence of nerve distribution." These syphilitic cases differ from the common form, in the fact that the eruption is usually on both sides of the trunk, and lasts much longer.

From an article in the *Berliner Klinische Wochenschrift*, it appears that various changes are found in connexion with the roots of nerves. For instance, a female patient, aged sixty-four, had an apoplectic fit, in which she became unconscious for a short time; this was followed by diminished power in the right arm. In April, 1869, she was attacked quite suddenly by severe dyspnœa and burning pain in the left shoulder. Sometime after which she noticed a considerable number of red blisters on that shoulder. The face and limbs presented more or less of a blue colour. On admission into hospital, there was found on auscultation of the lungs, at base on both sides,

* *Medical Times and Gazette* for Dec. 26, 1868.

mucous râles. The apex beat was observed to be in the sixth intercostal space, on a line with the anterior edge of the axilla; the heart's dulness reached to the same distance, and systolic murmur was also present. The left shoulder and arm exhibited an herpetic eruption, the vesicles being situated on a congested base, and contained clear yellow fluid. The pulse 80; respiration 36. The urine was 1,026, and contained neither blood nor albumen. During the patient's stay in hospital the eruption in part dried up, and in part left ulcerations, with considerable suppuration, which soon cicatrised. The difficulty of respiration diminished under the use of digitalis, but the cyanotic coloration remained. The veins in the neck, when the patient lay down, were swollen in a remarkable degree, and at each inspiration, when the already scanty flow of blood to the brain was yet more impeded, the pupils dilated. The extremities were constantly cold. The case terminated fatally in May; and, upon *post-mortem* examination, enormous congestion of the vertebral venous plexus, with dark fluid blood, was found. The spinal dura mater was stretched over the lumbar portion of the cord; its inner surface smooth and glistening. Spinal arachnoid everywhere thin, containing the normal amount of fluid. The cord was softened. The right pulmonary artery contained a thrombous adherent to its walls, which filled two-thirds of its calibre, and extended into the branches, some of which it entirely obstructed. The upper lobe of the right lung contained a little blood, and was comparatively dry; also, the lower lobe was relatively poor in blood, moderately filled with serum,

everywhere containing air. The pericardium contained fluid, and the right ventricle was greatly dilated; left ventricle somewhat enlarged. Upon microscopic examination of the spinal cord, between the seventh cervical and first thoracic nerves, the roots of the left seventh cervical, first and second thoracic nerves, the roots of the right first thoracic nerve, and the ganglia of all these nerves were examined. The search for fatty nerve fibres on the fresh specimen was entirely negative in its results. The roots of the seventh cervical, and of the second thoracic nerves on the left, and the roots of the first thoracic nerve on the right were normal. The sensitive root of the first thoracic nerve, at its passage through the dura mater, showed a small deposit of ellipsoidal bodies (1 m.m. long by 0.8 m.m. wide). This deposit was formed of spindle-shaped nucleated cells lying near each other, between which lay a number of round bodies (0.1 m.m. in diameter), formed of concentric layers, impregnated with carbonate and phosphate of lime. The primitive nerve-fibres showed altogether uninjured axis cylinders.

Dr. Fayrer* relates a case under the title of "Impetiginous Eruption of the Face, caused by peripheral irritation of the branches of the trigeminal nerve." The patient, a martyr to toothache for ten years, caught cold, which was followed by neuralgia and feverishness, and an unilateral eruption on the face on the next day. The eruption was confined to one side of the face, and extended from the ear forward to the upper and lower

* *Indian Medical Gazette*, July, 1870.

lip, and inside the cheek. The glands were swollen and engorged. On the sixth day of the eruption the carous teeth of the upper jaw were extracted, after which the eruption dried up.

Gerhardt reports a case of Herpes zoster occurring in in the region of the first branch of the trigeminus. He says :—"An aged woman, who had suffered many years from sciatica, had during some months a severe nervous toothache on the right side. Six months later, during a slight indisposition, felt pricking sensations in the head on the right side, between the vertex and the lambdoidal suture, especially at night, during four or five days. This sensation, after a pause of some minutes, returned regularly two or three times in rapid succession. Then the skin of the right side of the forehead became red and swollen over the space from the upper eyelid to one and a half centimetres in front of the lambdoidal suture. Upon the reddened surface, at first exactly limited to the middle line, there arose, even as low as the upper eyelid and the angle between the root of the nose and the superciliary arch, a large number of small blisters standing close together, confluent at their bases—a zoster in the region of the first branch of the trigeminal." At the same time, the lids of the right eye were swollen, secreted profusely; the eye became red, the iris faded and narrow. After the eruption of the blisters, the patient felt only burning on the affected spot, at no time headache. On the other hand, during the next few days appeared gastric symptoms, high fever, loss of sleep, restlessness, and active delirium, which first, on the

fourth day after the appearance of the zoster, yielded to returning health, with a gradual diminution in the frequency of the pulse (from 92 to 64). The copious confluent zoster blisters, whose common base had slowly passed somewhat beyond the middle line, became turbid. On the fifth day the eruption began to form crusts, while the swelling of the face disappeared.

I shall now very briefly describe the arrangement of the local varieties of zoster. Taking Hebra's division, we find zoster capillitii occurring on the forehead and scalp, in the course of the supra-orbital nerve. In some cases the conjunctiva is affected, the cornea injected, and the motility of the iris impaired, as in the H. ophthalmicus described by Mr. Hutchinson. In other cases this variety begins at the back of the head, and spreads in an arched manner over the parietal bones towards the coronal suture. Zoster faciei exhibits itself by numerous clusters of vesicles on the cheek and side of the nose.

The affections of the eye and appendages noted by Hutchinson are:—Conjunctivitis; thickening of the lids; nebula; ulcer of cornea; corneitis with ulcers; corneitis with iritis; iritis; fixed pupil and hazy cornea; atrophy of the optic nerve; diplopia.

This involvement of the structures of the eye is supposed to depend on inflammation of the ciliary nerves proceeding from the nasal nerve. This is the conclusion of Hybord, in his analysis of 98 cases; and he considers that the cutaneous eruption and ocular lesions do not depend upon paralysis of the motors and upon consecutive neuro-paralytic hyperæmia; they must be ascribed to a direct influence of the nervous system on nutrition.

This variety is sometimes bi-lateral. *Zoster nuchæ*, or the *zoster occipito-collaris* of Bärensprung, appears on the side of the neck, over the second and third cervical vertebræ, creeping upward towards the jaw and face, forward towards the larynx, and downward towards the sternum. *Zoster brachialis* commences at the fifth, sixth, and seventh cervical, and first dorsal vertebræ; the eruption passes down the arm, on both the anterior and posterior surfaces, to the elbow. Sometimes it extends along the forearm as far as the little finger. *Zoster pectorallis* occurs on the chest, corresponding to the direction of the ribs. At first the pain is frequently mistaken for *pluerodynia*. The first group of vesicles appear near the spinous processes, from which point the eruption extends forwards, occasionally passing first downwards for a short distance, then ascending, and terminating over the sternum. When the "breasts" are attacked, the pain is so severe as to interfere with the movements of respiration, occasioning *dyspnœa*. *Zoster abdominalis* corresponds to the distribution of the lower dorsal and lumbar nerves; the eruption passes forwards round the abdomen, terminating at the median line, a few vesicles occasionally appearing on the *mons-veneris*. *Zoster femoralis* may appear either on the anterior or posterior surface of the thigh; in the latter extending down the ham, sometimes to the calf of the leg, the first cluster of vesicles appearing on the buttock. I agree with Damon and others that all forms of the disease known as herpes are merely local varieties of the same affection. Any irritation may induce the eruption, either internal or local.

Passing a catheter has caused Herpes præputialis, as also sexual intercourse, seminal emissions, &c. A case occurred in the practice of my friend, Dr. Ferguson, of this town, in which vesicles were observed for some distance up the urethra. The patient had, before consulting him, been treated for a chronic gleet. Besides the genuine Herpes præputialis, we are informed by M. Doyon* that there are other affections of the prepuce due to the same cause, as morbid sensibility, with a tendency to fissure or erythema; intertrigo, or chronic balanitis; and, lastly, an urethrorrhœa, occasionally accompanying herpes, and lasting for several days.

The connexion between the occurrence of herpes on the prepuce and stricture of the urethra is generally admitted, and may be explained as follows:—In persons affected with stricture, the last drops of urine are retained for some time in the urethra; the shirt is thus constantly wet, and the prepuce is irritated by the acid moisture to which it is exposed. The serious error may be made by confounding the eruption and little ulcers left by herpes on the prepuce with chancre. Now, if seen on its first appearance, its vesicular character is diagnostic. The ulceration left by the bursting of the vesicles of herpes, however, is always superficial, never deep, and presents a smooth surface without raised edges, and not coated with a white, thinnish membrane, appearances peculiar to chancre. In very doubtful cases, the question may be decided by inoculating the patient on the thigh with some of the matter from the diseased surface.

* "De l'Herpes Récidivant des Parties Génitales." Paris, 1868,

Herpes of the lips and nose are frequently observed in connexion with "sore throat." That various cutaneous diseases are due to mental anxiety is well known. Herpes and pemphigus are quoted as examples by some authors. Dyspepsia is another example. Thus, mental emotions can disturb, to a very considerable degree, the functions of the digestive organs, upon the due performance of which a healthy state of the body mainly depends. If this abnormal condition exists for any length of time, derangement of the nutrition of the skin, as a secondary consequence, is sure to arise; innervation, so to speak, occurs, and herpes may become manifested. For example, the Herpes labialis, observed in children suffering from dietetic mismanagement, arises from this cause, and is not due to any active inflammatory state of the tissues themselves, they being in a passive condition, merely reddened by the increase of blood sent to them, producing Erythema herpetiforme. Of course, if the disease has a tendency to chronicity, irritative changes may be set up in the tissues, leading to inflammatory infiltration. According to Dr. Damon,* Zoster auricularis is only a form of Zoster cervicalis; and in Z. facialis a cluster of vesicles will frequently be seen at a little distance below the outer angle of the eye. This cluster, he informs us, is situated upon either the malar or inferior palpebral branches of the facial nerve." There is another cluster belonging to Zoster facialis, which is of more frequent occurrence, although it has not yet received special notice from writers on skin diseases. It is

* Neuroses of the Skin.

situated a few lines from the outer angle of the mouth, and a little above it (on the extensive anastomosis of the buccal nerves). It is circular, or obliquely elliptical, when extensive, the longer axis of the cluster being in the course of the nervous twigs, which supply the angle of the mouth and the integument of the chin. This partial variety of *Zoster facialis* is generally associated with *Zoster labialis* and *Zoster nasalis*; as a sub-variety, it may be properly called *Zoster buccalis*. * * *

Dr. Brown-Sequard has collected many instances of irritation or inflammation of the eye and amaurosis, due to neuralgia of the trigeminal nerve. He thinks that the most positive facts may be adduced from recent works on diseases of the eye to show that several kinds of affections of this organ may be the result of an injury to the frontal or other branches of the trigeminal."

Mr. Paget has recorded an interesting case of herpes of the parts supplied by the infra-orbital, the anterior dental, and the anterior palatine branches of the superior maxillary nerve. His patient, after exposure to cold, was on the third day attacked with the eruption of herpes on the cheek, nose, upper lip, palate, and cheek and buccal membrane. On the sixth day of the disease a bicuspid tooth was shed, another on the seventh, and later a canine and two incisors; the alveolus also partially necrosed.

Gerhardt observes (as Dr. T. Fox* quotes) that the group of diseases in which zoster of the face occurs is remarkable by the frequency of an initial rigour, followed by an increased temperature (going up as high as 32 deg.

* Manual of Skin Diseases, page 181.

Reaumur). This is accounted for by the branches of the fifth nerve running through long canals, which are extremely narrow and tortuous, in company with small arteries, which contract in the initial rigor, afterwards dilating and pressing on the twigs of the trigeminus and sympathetic, thus giving rise to pain. The occasional result is the occurrence of a vesicular eruption. Many observers, I believe, are now agreed that Herpes zoster occurs, in a great measure, from some affection of the sympathetic system of nerves. The neuralgic pains are accounted for in different ways by different authors. Some of their views have already been mentioned. Of this, at any rate, we are sure, that before the occurrence of the vesicular eruption there is vaso-motor nerve paresis, the vessels lose their tone, become dilated, and exudation through their walls takes place. For, according to Virchow,* the exudation which we meet with is essentially composed of that material which is generated by the altered condition of the part, and of the transuded fluid which escapes from the vessels. Of course, there must be first congestion of the capillaries, owing to vaso-motor nerve spasm. This gives way under the great pressure of fluid, and the increased antagonistic power of the dilating cerebro-spinal nerves, the skin becoming elevated in the form of vesicles, in the manner described at the commencement of this chapter. It may be as well to state, that sometimes the sensory fibres are bound up in the same sheath as the vasal, which may also account for the neuralgia.

* Cellular Pathology, page 356.

Neuralgia may give rise to not only herpes, but to pemphigus and urticaria. After an attack of Herpes zoster, the patient is often left in impaired health; indeed, cases of motor paralysis have been recorded as following an attack. Dr. Duncan* relates two cases in which partial hemiplegia preceded the eruption. Anæsthesia and falling out of the hair has been noted by Dr. Sichel as occurring after *Zoster capillitii*; whilst Singer records a case of zoster of the three divisions of the fifth nerve, in which the sense of taste and touch in the tongue were lost and regained together. Dr. M'Crea,† of Belfast, states that Herpes zoster is an organic disease of the affected nerves—a neuritis, in fact, that may be accompanied and followed by an herpetic eruption, as well as by other complaints, such as paralysis, chorea, and anæsthesia. Mr. Milton describes a rare form of herpes—viz., *H. gestationis*, or *bullosus*. The disease is intimately connected with pregnancy, and treatment is only palliative.

The following case of Herpes zoster of the face and tongue is reported by Dr. C. J. Ermerins, of Amsterdam, quoted in *Schmidt's Jahrbucher*, June, 1870, p. 277:—A woman, aged thirty-three years, suffered for two days from shooting pains in the right half of the face, at the end of which time there appeared on the right cheek red spots, which were soon succeeded by vesicles. At the same time the tongue swelled, deglutition became painful, and there was salivation. In two days the disease reached its acme; from the ascending ramus of the inferior maxilla

* *Journal of Cutaneous Medicine*, vol. i., p. 282.

† *British Medical Journal*, May 24, 1873.

to the ala nasi stretched a stripe of three fingers' breadth, upon which there were closely aggregated vesicles on a dusky red ground. They had become so confluent that the individual groups were no longer distinguishable; they contained a sero-purulent fluid, and were in part ruptured and in part encrusted. The right half of the tongue was swollen, red, and covered with discrete herpetic vesicles of the ordinary size. Upon the right half of the soft palate were three groups of five or six vesicles each. The mucus membrane of the right cheek also was studded with vesicles, partly discrete and partly arranged in groups. The right sublingual and submaxillary glands were swollen. The lips were free from eruption. Two days later, incrustation was complete on the outside of the face, and, after the falling off of the crusts one week subsequently, only red spots were to be seen. Within the month no crusts were formed, but only erosions, which disappeared in four days. A moderate neuralgia persisted for a week after the completion of the process.

The treatment of herpes consists in local applications and internal medicines. First on the list of the latter stands ergot of rye, recommended by Dr. Woakes, which drug acts on the vascular system by means of the ganglionic nerves. Next we have belladonna, which acts on the capillary vessels, constricting them in all their diameters. The bromides are also valuable. Bromide of ammonium can be prescribed in asthenic cases. Bromide of potassium seems to be largely used in America in the treatment of zoster. To procure sleep

and relief from pain, morphia or chloral are very valuable preparations in this and allied diseases; or "chlorodyne" may be used instead. As a rule, opiates in neuroses of the skin ought not to be given, as they increase the already existing congestion of the vessels. As is well known, the carbonate of iron, in large doses, is frequently prescribed in neuralgia; and, when the patient is anæmic, it is useful. Locally, the painful part may be painted with collodion; or a colloid containing hydrite of amyl, one ounce; aconitia, one grain; veratria, six grains; and ethereal collodion, two ounces. This is only to be used in the neuralgic stage, before the eruption appears. The amyl, by its rapid volatilisation, often produces almost instantaneously the desired result; but, should the pain continue, the alkaloids can be brought into activity by applying a piece of moist spongio-piline over the collodion film. This remedy can be used in sciatica, lumbago, and muscular pains. The author's name I forget. In herpes of the lips an ointment composed of white wax, one drachm and a half; almond oil, ten drachms; and a couple of drachms of laurel flower water, makes a very good application, similar to what is sold as "cold cream." The great point in the treatment of herpes is to keep the part protected from the air.





CHAPTER IX.

PEMPHIGUS.

IN some cases, we observe different elementary lesions occurring in the same person, but a certain predominant form is always present. Thus the large bullæ of pemphigus may have the smaller vesicles of herpes interspersed amongst them, rendering it difficult at first sight to ascertain the true nature of the disease. Pemphigus resembles urticaria, which latter, according to Hebra, not only in its acute, but even in its chronic form, sometimes presents the peculiarity that, instead of wheals, bullæ are found at certain spots. "But no one need be astonished at this exceptional occurrence who bears in mind that wheals themselves result from the pouring out of serum, and that an increase in the quantity of fluid is all that is necessary to raise the cuticle over a wheal, and to form a bleb. That this was known to the older authors is proved by the expressions—*urticaria vesiculosa*, *urticaria bullosa*." In pemphigus the capillaries are dilated; the temperature of the affected part is raised; pain, heat, and tension are complained of—an escape of fluid finally taking place, the cuticle being elevated in the

form of bullæ. In the late epidemic of cerebro-spinal meningitis in Dublin, during 1866-7, herpes and pemphigus were observed in several cases, complicating the disease. In consumption the excessive sweating is evidently due to nerve-paresis; and I may mention that no medicine is more useful to check it than large doses of tannin, with quinine, also sponging the part with very hot water.

The following remarks of Dr. Handfield Jones* bear upon the subject:—"The fact is of much significance that, in tolerably vigorous persons, the application of a linseed poultice produces only a macerated state of the epidermis, whilst in the weakly it gives rise to well-marked eczematoid eruption. The influence of vaso-motor paresis in promoting perspiration is shown by many facts, as the occurrence of profuse sweating during sleep in phthisical, rachitic, and other persons. The same results from strong exercise, where the nerve force is used up by the muscles, and to a much greater degree in those who are in training. This is partly proved by a statement made in a report of the Vienna Hospital that when the sympathetic nerve is divided on one side of a horse's neck, that side of the face and neck appear bathed in sweat. The occurrence of sweating and vesicular eruption as co-results of nerve-paresis is illustrated by a report given by Schranz respecting genuine intermitted fever in the Upper Palatine in 1856. The cold stage was short, while an abundant sweat came on early, varying in intensity, attended with an eruption of herpes and blebs, which occupied the

* Journal of Cutaneous Medicine, No. 6.

abdomen and forearms, and appeared to be rather the cause than the consequence of the sweat. In the above-mentioned instance the vaso-motor nerves, alone or with the sensory, seem to have been directly affected; but the same phenomena, or very similar, may be produced by inhibitory (reflex) irritation."

Some time since (August, 1868) I admitted a boy, aged twelve years, at the Hospital for Skin Diseases, who first suffered from urticaria, which gradually disappeared. Labial herpes and pemphigus of the lower extremities then ensued.

Moers* reports a case of Herpes zoster bilateralis of the lower extremities, which occurred in a child fourteen months old. The vesicles did not dry up, as is usual, but ran into bullæ, as in pemphigus. The child fully recovered in five weeks. Dr. Russell† has published a case of a female, aged twenty-three, affected with pemphigus. Every attack was preceded, from a few minutes to an hour, by itching, accompanied with pain. The part about to be affected appeared perfectly healthy until the eruption was becoming developed, when a raised red spot became visible, at the apex of which effusion rapidly took place, when, after the formation of a bullæ, the pain began to moderate. The exciting cause of pemphigus may be from exposure to cold and wet, pemphigus being often observed in barge and lighter-men, who are, from their occupation, frequently wet for hours, especially their lower extremities. In these

* Deutsches Archiv für Klin Med., IV., 249.

† *Medical Times and Gazette*, Oct. 29th, 1864.

individuals the eruption is often of a mixed character, if I may so express myself—viz., bullæ and vesicles, and a considerable area of the skin being often covered by the eruption. Inveterate drinkers are occasionally attacked with pemphigus.

Dr. Anstie, in his article on "Alcoholism,"* informs us that the congestion of various organs—as the lungs, kidneys, &c., are partly due to altered chemical relations between the blood and tissues, "and partly to a paralytic action of the alcohol upon the vaso-motor nervous system. It is, indeed, doubtful whether the degenerative changes which result from prolonged alcoholic poisoning are not, in a great part, due to the direct chemical influence of alcohol upon the nervous tissues," leading to degenerative changes from paralysis of the nerves which preside over nutrition. By the term pemphigus is understood an eruption of large bullæ on erythematous patches, which contain on their first appearance a clear fluid, eventually becoming opaque and bursting. The erythematous patch is generally of small size, and is owing to hyperæmia. Simon† states that a blister is first formed by vesicles, which increase in size, and join, forming a bleb. Pemphigus usually occurs in the same way, and in Scabies, for instance, the irritation of the itch insect, propagated to the cutaneous nerves, frequently occasion the appearance of vesicles or bullæ, after the bursting of which a crust forms, an excoriated surface being under-

* Reynolds' "System of Medicine," vol. ii., p. 85.

† "Die Hautkrankheiten durch, 'Anatomische veränderungen erläutert." Berlin, 1857. Page 195.

neath. The disease generally appears in successive crops. I shall adopt Neligan's division of pemphigus into *acute* and *chronic*; the former usually attacking young people, the latter those past the prime of life. Pemphigus is a rather rare form of cutaneous disease. The occurrence of pemphigus is due in the main to derangement of the vaso-motor nerves. Mr. E. Wilson* has remarked that it (pemphigus) may be "complicated with herpes; indeed, the smaller bullæ of this disease bears a considerable resemblance to the vesicles of herpes phlyctenodes." Hebra† has described a case of urticaria, in which several of the pomphi passed into bullæ; and the difference between pemphigus and urticaria may be briefly said to consist in the fact, that in the former affection the œdema ends in serous exudation, which is more superficial and not so deep as in the latter. A variety has been called relapsing pemphigus, and is evidently syphilitic; but many authorities consider that all forms arise from this cause, whilst others again deny that syphilis has anything whatever to say in the occurrence of pemphigus. M. Ricord‡ stated "that there is no distinctive sign serving to distinguish the syphilitic from non-syphilitic pemphigus, as is the case in other cutaneous affections." Dubois and Cruveilhier have shown that pemphigus is often met with in new born children, who sink under syphilitic abscesses of the lungs. Pemphigus usually occurs in debilitated subjects,

* Diseases of the Skin, 2nd Edition.

† Allg. Wien Med. Zeitung, 1858, No. II.

‡ Séance de l'Acad. de Méd., July, 1851.

frequently arising from intemperance, and is secondary to some constitutional derangement.

Dr. A. Chatagnon§ reports the case of a woman seventy-one years of age, who had had severe attacks of gastralgia, which had lately become more frequent and prolonged. Dr. Chatagnon had attended her during five months for these gastric paroxysms, when she complained of a general itching over the body, and erysipelatous patches were noticed, which quickly formed bullæ, which in time burst and collapsed, and the uplifted epidermis desquamated. The patient had no attacks of gastralgia for some time previous to the appearance of the rash nor since. Dr. Chatagnon thinks the case is remarkable from the fact of the eruption being so universal, from its desquamation in very large, thick scales, particularly upon the palms, soles, and heels, and its occurrence after severe gastralgic paroxysms. Pemphigus occasionally arises from local causes, and has been observed to co-exist with urticaria. Nervous exhaustion, masturbation, mental anxiety, dyspepsia, and dysentery—as in the variety described by Sauvage—are put down as probable causes of this complaint. Great heat must and does enfeeble nerve power, and may be adduced as another origin. We know that excessive heat influences the heart, causing syncope, as in sunstroke; and Dr. Handfield Jones has produced evidence to show that a paralysing shock (the same applies to excessive heat) acting through the vaso-motor nerves on the capillaries, may give rise to solution of their walls and extravasation.

Acute pemphigus, as remarked by Sir D. Corrigan, M.D., is occasionally ushered in by a severe shivering fit, which might be mistaken at first for an attack of intermittent fever. An abstract of a paper on pemphigus, by Dr. Van Dieren, taken from the "Dutch Archives of Medical Science," will be found in the *Dublin Quarterly Journal*, February, 1869. The case recorded occurred in the "form of intermittent fever;" temperature of the body, 104 deg. F.; pulse, 120; tongue dry. The patient, a child, was raving when first seen, and had from time to time convulsive twitchings in the arms and legs, after which bullæ appeared. In pemphigus, about the third day, erythematous spots appear on the abdomen and thighs, or other parts, accompanied by a painful sensation of burning, tingling, or itching. Vesicles usually appear on these patches, which rapidly pass into bullæ. The urine is high coloured, appetite bad, and the patient complains of headache, occasionally of sleepiness and exhaustion; the pulse is generally quickened. In about two or three days the bullæ break, scab, and crust—this latter frequently presenting the appearance of rupia. In rare cases the bullæ becomes confluent; and in one instance which I saw the patient was covered with blebs in various stages, the discharge from which, owing to its containing albumen, stiffened the sheets like starch.

Dr. Tilbury Fox* denies that the fluid contained in the bullæ of pemphigus stiffens linen; but I have seen several cases in which it has done so—one well marked case occurring in a female admitted at the Belfast Hospital

* *The Lancet*, Nov. 28th, p. 693.

for Skin Diseases, February 27th, 1869. From the *Medical Mirror*, January, 1869, it appears that acute pemphigus, according to Hardy, of St. Louis Hospital, is merely an accidental erythematous eruption, the bullæ being secondary to the erythematous patches upon which they appear, like the phlyctenæ bullæ of erysipelas. A curious case of this affection entered M. Hardy's wards. The patient was a man just recovering from an attack of lead colic, and had been similarly affected with pemphigus at the same period of a previous convalescence from the same disease. On admission he was as red from head to foot as a boiled lobster. The fiery patches were not absolutely coalescent, but so nearly so that the effect was almost as vivid. Upon the greater number the epidermis was elevated in bullæ of different sizes. Slight febrile symptoms accompanied the eruption. It was treated like an eruptive fever, left alone, and in a week had almost disappeared, leaving brown stains in the place of the patches, which in their turn faded rapidly. The affection was, therefore, essentially distinguished from real pemphigus by expending itself in a single eruption, whereas the more formidable disease is noted for the desperate tenacity with which fresh crops of bullæ continue to occur. In syphilitic subjects the disease usually appears on the fingers, hands, and lower extremities. When the attack was mild, Willan called the disease *pompholyx benignus*; when large bullæ appeared in succession singly, *pompholyx solitarius*. In many cases diarrhœa occurs, and it is asserted that this is owing to bullæ forming in the intestinal canal. Cazenave named a

species *Pemphigus pruriginosis*, in which intermittent itching is first experienced, and attends the eruption of bullæ. In *pemphigus foliaceus* the brain and spinal cord are frequently affected, diarrhœa carrying off the patient. The latter seems to be an affection of the vaso-motor nerves of the intestinal canal, as we may conjecture from the fact that diarrhœa is prevalent in hot weather, at which time the blood is freely determined to the cutaneous surface.

Dr. T. Fox informs us that this variety (*P. foliaceus*) commences on the front of the chest by a single bulla, and by the development of others around it, and spreads over the whole surface, the bullæ being more or less perfectly formed. The skin is red in many places, but there is not much infiltration, and itching is not severe. After the bullæ form, large yellowish squamæ are produced, with more or less desquamation; the scales, which may be large, are the remains of imperfectly formed bullæ, and are free at their margins; they are reproduced very rapidly. The bullæ are successive and confluent. Oftentimes the skin exhales an offensive odour. The scales have been described as resembling French pastry. The other varieties of this disease mentioned by authors are *pemphigus infantilis* and *contagiosus*. The existence of the last species is denied. The *pemphigus gangrænosus* of Dr. Whitely Stokes is rare, but was common in Ireland during the famine. Chronic pemphigus corresponds with the *pompholyx diuturnis* of Willan. The urine has been found to contain an abnormal amount of urea; in some cases the fluid contained in the bullæ

becomes sanguineous, or purulent. Chronic pemphigus frequently lasts for years. Mr. Wilson states that Dr. Dusches-Duparc saw a case at St. Louis Hospital in a girl eighteen years of age, of weakly constitution, who had been affected with chronic pemphigus since the age of five years. The prognosis is dangerous, if many complications exist. In long standing cases the health and strength of the patient becomes lowered.

In the treatment of pemphigus by internal remedies we may, if any febrile symptoms exist, prescribe the liq. ammon, acetat, and sweet spirits of nitre. To lower the pulse no remedy is so useful as the tinct. verat. virid., introduced by Dr. E. Cutter. When the disease occurs in young persons, without any well marked febrile symptoms, and when strong and healthy, I think it a good plan to commence treatment by a purgative of compound powder of jalap, which eventually removes any offending matter from the intestinal canal. This is to be followed by "Dover's powder" at night. A nutritious diet of easily digested food is necessary. If diarrhœa is present, opium is indicated. In a few days, cod-liver oil and quinine may be prescribed. I have derived much benefit from the syrup of the phosphate of iron, quinia, and strychnia. According to Professor Laycock, phosphorus is an important, and probably essential, constituent of brain and nerve tissue. "It is an equally important and essential constituent of all tissues, of at least higher organisms, whether animal or vegetable. Consequently, however beneficial the medicinal phosphor-compounds may be in certain diseases and defects of the nervous

system, they will be equally useful in certain diseases and defects of the tissues in general." In many cases stimulants are necessary; and if the patient has been accustomed to either beer, porter, or spirits, they may still be allowed. Sometimes claret answers best. In the relapsing variety arsenic is necessary, which remedy is well known to be a pure nerve tonic, acting on the capillary system. If a syphilitic taint be suspected, iodide of potassium should be prescribed. The local treatment I adopt is to open each bulla and apply carron oil, or oxide of zinc and oil; in some cases zinc ointment, to which one or two grains of carbolic acid to the ounce has been added, answers better. When the ulcerations left by the bursting of the bullæ appear gangrenous, a charcoal poultice is an admirable application. Warm baths seem to be injurious, as they increase the determination of blood to the skin.





CHAPTER X.

URTICARIA.

URTICARIA is a cutaneous hyperæsthesia, in which the pruritus, for the time being, is intense. There is—1st, hyperæmia (erythema), and serous infiltration of the papillary layer of the cutis, the skin being elevated in the form of wheals, like those caused by the sting of a nettle—hence the name. Urticaria differs from herpes zoster in the fact that in the latter the œdema ends in vesicular eruption. Hebra has seen cases of urticaria in which bullæ developed themselves upon some of the wheals, the blebs being merely the result of the extension of the pathological process—viz., exudation of serum beyond its usual limits. Urticaria is intimately related to, and connected with, the functions of digestion and assimilation. That the wheals in urticaria contain fluid has been proved by the simple experiment of G. Simon, who passed a needle into one, and subsequently observed fluid to ooze from the puncture. M. Dumontpalier* has related a case of intermittent urticaria, in which the attack appeared each night for six weeks. It is interesting

* Bullen de l'Acad. Imper. de Med., Nov. 30th, 1866.

to note that different members of the same family had each some nervous affection—the parents were asthmatic, the grandfather rheumatic, the grandmother had angina pectoris, the brothers were rheumatic, and four children suffered from intermittent diarrhœa. Again, the capillary vessels may be ruptured, as in purpura, allowing extravasation of blood, followed by the formation of wheals. This is the *purpura urticans* of Willan. Bazin and other French physicians look on urticaria as a manifestation of “dartre.” The wheals occurring under the influence of mental emotions are pale, but in the arthritic variety are deep red, complicating rheumatism. In urticaria the muscular spasm of the skin is considered to be occasioned by irritation of the deeper filaments of the cutaneous nerves, which nervous condition probably helps to cause the formation of wheals, these elevations being due to a circumscribed œdema of a cluster of capillary loops springing from a common stem, and under the influence of a common nervous twig.

Urticaria has been called a pruriginous neuroses of the skin, on account of the symptoms complained of, and also from its pathology. The affection, except in chronic cases, which often depend on a rheumatic or gouty diathesis, is of short duration. It is ushered in after eating certain kinds of food—as lobsters, shell-fish, almonds, &c.—by a feeling of fulness at the stomach, nausea, headache, quick pulse, &c., in which cases the eruption is a reflex irritation proceeding from the stomach, and under the control of a plexus of the sympathetic system. According to Dr. Burgess, the same exciting

cause will produce different kinds of cutaneous eruptions in different individuals. Thus, certain substances which suddenly derange the organs of digestion, sometimes produce urticaria, sometimes erythema, or roseola. The form presented by an eruption is no criterion as to its cause. In many instances, urticaria is nosologically identical with erythema, which is proved by their occasional occurrence in the same person and from the same cause.

The wheals are accompanied, as before remarked, by an unbearable pruritus, which is increased by scratching or warmth. This is caused probably by the further relaxing of the capillaries, the circulation of the blood at first being prevented, in a great measure, from the tension of the vessels, due to vaso-motor spasm. When this tension gives way, an opposite condition, that of dilatation, takes place, the sub-cutaneous tissue becoming filled, in limited patches, with serous fluid; and when the disease disappears desquamation of the skin in furfuraceous scales sometimes occurs, due to excessive cell formation. Hebra,* however, denies that there is any desquamation at all. The skin, in chronic cases, may be pigmentated; and Dr. Spender, in his book on "Ulcers," writing on pigmental deposits, informs us, at page 15, that there is an nerve element in the case which must not be ignored; for, according to Mr. Hilton, pigmentary degeneration represents a neurose derangement, leading, not to an alteration of nutrition, but to a degradation of it. And we are further reminded that it is to be looked

* Diseases of the Skin, vol. i., page 303.

upon as a local index of diminished physiological force—a sign, so to speak, of loss and waste occurring in a circumscribed area of tissue, denoting early embarrassment. The cuticular epithelium, owing to blood changes, is fed with a lower than the normal quality of hæmatine, and textural metamorphosis becomes less free. This deviation from the usual healthy state arises from a want of power in the vaso-motor nerves of the part affected, which cease more or less to preside over its nutrition.

Dr. F. F. Maury, Lecturer on Cutaneous Diseases, Jefferson Medical College, gives the following review of urticaria intermittens in the *Half-Yearly Compendium of Medicine* for 1869:—"Dr. Albert Eulenberg, Berlin, and Dr. Leonard Landois, Griefswald, class this disease among the angioneuroses (*Weiner Med. Wochenschrift*, No. 45, 1868.) J. Frank (*Hautkrankheiten*, Leipsic, 1843) first described the febris intermittens urticata a complication of nettle-rash with paroxysms of intermittent fever; which he saw occur epidemically at Pavia in 1794, and at Wilna in 1812. The eruption generally set in with fever, as in herpes, and vanished during the apyrexia. Ecupis observed an epidemic, and Bourdon and Guérard saw sporadic cases. In three of Bourdon's cases, two had a quotidian type, but were unattended by fever; the attacks each lasted an hour; quinine speedily put an end to the disease. Allaire saw, in a boy, æt. five years, after pertussis, regular attacks of quotidian fever, in which, from the second attack, urticaria spread over the body, being most intense on the face. Sulphate of quinine effected a cure. Tobold, of Berlin, stated that he had

seen a real urticaria intermittens of the face and upper extremities occur in the course of a case of diphtheritis pharyngea. Falger (*Virchow's Archiv*, xxxiv., 123—235) publishes a case of intermittent urticaria, in which there was present endemic larvata, with redness and swelling of the hands, particularly at the articulations, and impeded motivity of the same. Falger regarded the condition of the skin as urticaria, as he had not infrequently observed this eruption in cases of intermittent fever of a high grade." Dr. Fox, of Bristol (*Journal of Cutaneous Medicine*, vol. iv.), believes that "the fact that chronic urticaria so frequently takes on an intermittent form favours the idea that in this disease the nervous system is mainly in fault. It occurs, too, under the influence of depressing mental conditions, especially long-continued anxiety, and may be more or less connected with the cutaneous hyperæsthesia so often met with among the insane, which sometimes takes the form of prurigo, and more frequently leads to an invincible dislike to the touch of any clothes whatever. If it be granted that chronic urticaria is due to a neurosis, its dependence on uterine or ovarian irritation is easily intelligible. The influence exercised by such local irritation on the cutaneous nerves, or on the vaso-motor nerves in the immediate neighbourhood of the skin, is very similar to the reflex phenomena of epileptiform convulsions, of vomiting, of vertigo, of infra-mammary pain, and of many hysterical symptoms that own the same exciting cause."

Urticaria has been divided differently by different authors, as into *U. evanida*, *U. tuberosa*, *U. conferta*,

U. perstans, and *U. sub-cutanea*. In many cases irritation of the lining membrane of the uterus has occasioned the appearance of the disease, as mentioned by Scanzoni.* Urticaria is frequently connected with the presence of a rheumatic or gouty diathesis; and I have observed the eruption of wheals alternate with chronic bronchitis. Dr. T. Fox† states that “the solar plexus is oftentimes involved;” and those individuals subjected to this distressing complaint are frequently troubled with functional palpitation of the heart, which may be accounted for by means of its nervous connexions—that organ becoming symptomatically affected through the semi-lunar ganglia of the sympathetic. The splanchnic nerves, which form the ganglia, communicate in the thorax with the cardiac, the greater splanchnic receiving also a small branch from the pneumogastric and phrenic. This accounts also for the difficulty of breathing experienced in some cases; the pneumogastric, which is a sensory and motor nerve, being affected.

The treatment of an acute attack of urticaria is to remove the cause, and an emetic to unload the stomach is generally prescribed, followed by an aperient. During the attack, the skin can be sponged with a weak alkaline lotion, which tends to relieve the pruritus. If acidity and flatulence be complained of, a mixture containing powdered rhubarb, calcined magnesia, liquor potassa, aniseed, and cinnamon water will be found useful.

* *Edinburgh Medical Journal*, October, 1850.

† *Manual of Skin Diseases*, page 85.

Many who are liable to attacks of urticaria are subject to pyrosis and heart-burn. The tongue is often marked at the sides by the teeth. As is well known, in pyrosis the fluid is alkaline, and is secreted by the glands at the termination of the œsophagus; it is ejected without effort, and gives evidence of sulpho-cyanide of potassium by reddening the proto-salts of iron. Pyrosis, due to irritation of the stomach, occurs usually at early morning; the spasm of the œsophagus preventing the saliva from reaching the stomach. If vomiting occurs, the contents of the stomach are ejected, whilst in pyrosis, when even taking place after a meal, nothing but a clear alkaline fluid is evacuated.

In chronic cases the cause must, if possible, be ascertained. If it arises from a rheumatic or gouty diathesis, the remedies for those diseases must be prescribed—the tincture of *actea racemosa*, or bicarbonate of potash, in the former, and *colchicum* in the latter, are frequently of use. Referring to the use of *colchicum* in urticaria, the late Dr. Golding Bird* considered that, “whenever the general health appears to be tolerably good, and any marked irregularities of the digestive functions corrected, I would recommend the careful and guarded administration of this drug in small quantities, especially when there is an hereditary arthritic taint in plethoric patients.”

Dr. Maclagan found a diminution of urea in the urine in cases of urticaria; hence he recommends *colchicum*, by using which the normal amount of urea is excreted. Amorphous lithates are often deposited in the urine, and

* On Urinary Deposits, p. 154.

are frequently due to dyspepsia, or irregularities of diet, when, as the late Dr. Bence Jones observed, a little additional liquid, as an extra tumblerful of water, will dissolve the urate of ammonia by increasing the quantity of liquid in the urine. In addition to the urate of ammonia, purpurine, which is a highly carbonised substance, is often present, showing that there is some impediment to the free secretion of bile by the liver.

Mr. Milton, Surgeon to St. John's Hospital for Skin Diseases, London, informed me that colchicum and magnesia are most valuable remedies in the tubercular form of urticaria; and I believe that in all forms of this disease colchicum is useful. Where it is necessary to combine a tonic, especially if the patient is debilitated, the late Mr. Startin gave sulphate of quinine and carbonate of ammonia in peppermint water.

Sometimes the stomach seems morbidly sensitive to nearly all kinds of food, being in a state of what is called "gastric irritability." In such a case I have seen benefit derived from the administration of the hypo-phosphites of lime, soda, and potash, and a careful dietary, avoiding rice. I may mention that when copaiba occasions urticaria, as when given for the cure of gonorrhœa, I have found the oil of yellow sandal wood a very good substitute, having used it largely in several cases, either singly or combined with oil of cubebs. Urticaria is occasionally complicated with lichen (*lichen urticarius*), and also sometimes occurs in the course of many acute febrile diseases.

For chronic urticaria the use of mineral waters is often of service. The Spa of Ballynahinch, near Belfast, is

well known in the North of Ireland and much frequented. 10,000 grains of water, evaporated to dryness, gave a brown residuum of 3.21, consisting of:—

Muriatic Acid	...	...	...	...	...	0.18
Sulphuric Acid	..	..	..	..	..	0.24
Soda	..	..	..	..	..	0.35
Protoxide of Iron	..	..	..	..	..	0.15
Lime	..	..	..	..	..	0.35
Carbonic Acid	..	..	..	..	..	0.39
Organic Matter	..	..	..	..	..	1.55
—						3.21

The specific gravity of the water is 1,000.539. This water is useful in many forms of chronic cutaneous diseases, dyspepsia, affections of the liver, gout, &c. The surrounding country is extremely pretty, and a place called Saul is not very far off, where, it is asserted, St. Patrick was buried. The cathedral town of Downpatrick is only a few miles from Ballynahinch, and connected by rail.





CHAPTER XI.

PRURITUS AND PRURIGO.

PRURIGO, according to Hebra, is never congenital, but commonly appears during infancy, in the form of wheals, like those of urticaria. These indications are probably caused by irritation of the nerves that supply the tactile papillary layer. Prurigo is accompanied by an excessive and burning pruritus, and usually also with a papular eruption. When the latter is absent the affection is called pruritus. Prurigo is considered to be a neuralgia of the cutaneous papillæ. Dr. M'Call Anderson looks on this disease as a form of lichen, and, consequently, an eczema, "the papules being identical with those of lichen, the black crusts being produced by scratching." Various parts of the body are attacked with pruritus—as the arms, vulva, &c., which may, from irritation, give rise to an eczema. The causes of the disease are often the same as in urticaria. The following are usually mentioned by authors :—viz., the immoderate use of fermented liquors, a too sedentary occupation, great anxiety of mind, jaundice, and the use of various kinds of indigestible food. The

disease is often intermittent, and made worse by fatigue, warmth, &c. More or less pruritus accompanies various cutaneous diseases, as scabies and phtheiriasis, the latter affection being called by the older dermatologists, *prurigo senilis*. It is, however, a distinct disease, due to the presence of pediculi; these insects occurring in prurigo, according to Dr. Tilbury Fox, from the fact that the state of the secretions is that exactly suited to their development. Both prurigo and phtheiriasis are peculiarly diseases of advanced life, and by the vulgar are attributed to "poor-ness of the blood." It is known that the filaments of nerves, proceeding from various trunks, become dispersed in different directions on approaching the cutis, ultimately entering the papillæ. If, according to Hebra, the point of a pruriginous papule is shaved off horizontally with a scissors, there flows from its interior a drop of yellowish transparent fluid, which shows, under microscopic examination, epidermic cells and blood-discs, with here and there pus corpuscles. But the layer of cuticle which has been cut off does not at all differ from any similar portion of the normal skin. We may, therefore, conclude that each papule of prurigo is formed by a collection of fluid in the deeper layers of the epidermis, and by the constant evacuation of its upper layers. Under the head of "Nervous Affections," Mr. E. Wilson, in a paper on cutaneous statistics,* states that "The disorders characterised by itching, unaccompanied by a commensurate and morbid lesion of the skin—a condition referable to an altered state of innervation of the cutaneous

* Journal of Cutaneous Medicine, vol. i., p. 269.

organ—are two in number—pruritus and prurigo. Remote predisposing causes are the neuralgic, rheumatic, and gouty diathesis.”

Dr. Derby, of Boston, believes that Prurigo is usually regarded by modern writers to be of neurotic origin, and is often confounded with ordinary pruritus. It is most frequently observed in Germany. According to Dr. Derby, prurigo and pruritus have only one symptom in common—that is, the excessive itching. In prurigo the characteristic eruption arises in consequence of anatomical changes in the tissues of the skin, whilst in pruritus the itching precedes, and gives rise to a great diversity of structural changes, and its principal cutaneous phenomena are chiefly those produced by scratching, the direct result of mechanical irritation. Prurigo, as will be observed from the subsequent investigations of our author, is not of neurotic origin. This term, he thinks, has been somewhat loosely applied of late to various cutaneous lesions, for a neurosis of the skin is a lesion, primarily affecting nerve-tissue, and giving rise, in consequence thereof, to impaired modified nerve action, and subsequent structural changes in the surrounding tissues, of which H. zoster is a type, and almost the only example. However, leaving this debateable ground, we are informed that in prurigo there is uniformly a disease of the hair; from the outer root-sheath of which projects a growth, varying in length, consisting of epithelial cells, and closely united with the root-sheath. It insinuates itself between the muscular fibres of the *arrector pili*. The *arrectores pilorum* attain

an unusual degree of development, and through the increased traction that these exert on the hair, there results, on the one hand, a more vertical position of the hair; and, on the other, a hernial protuberance of the inner wall of the hair follicle and outer root-sheath. A serous exudation takes place in the vicinity of the diseased hair, infiltrating the tissue of the corium and the papillæ, and making its appearance as a clear or slight bloody drop on puncturing the papule. This discovery explains the absence of the papules of prurigo in places devoid of hair, such as the hollow of the hand, the sole of the foot; and their infrequent occurrence in places almost destitute of hair, such as the flexures of the extremities. The cells which form this projection from the root-sheath are cutaneous and identical with those of the latter. The hair-bulb also shows the presence of numerous round and shining cells, and the hair itself becomes thinner and is more easily pulled out. In consequence of the absorption of fat, the integument is dry and wrinkled. In aggravated cases, the sensations experienced in the affected parts are described as of a creeping or stinging character—as from ants, hence called formication—which may be general over the whole cutaneous surface, and which is made worse by exposure to heat. The patient's health begins to suffer, the face wears an expression of care and anxiety, and the mind is a prey to gloomy thoughts. After a certain time an increasing deposit of dark pigment in the epidermis may be observed, caused in part by the patient's scratching and tearing the skin, which becomes also harder and denser. Prurigo is also associated with

"Bright's disease," and organic disease of the liver, which often causes incurable pruritus. Dr. Day* states that this affection "is often accompanied (if not preceded) by a diminished secretion of urine, and this may furnish us with a hint in reference to treatment." This gentleman recommends the alkaline salts and stimulating diuretics in addition to regulating the biliary secretion.

Prurigo, according to Dr. Parkes,† attacks those of a highly exalted, sensitive, and irritable condition of the nervous system—a condition not unfrequently depending on a morbid state of the spinal cord. Several important local varieties of this disease exist, as prurigo of the scrotum and anus. The former is rather rare, and, in a few cases observed, seemed to depend on stricture of the urethra; it may also be an extension, so to speak, of the anal variety. This latter is called pruritus ani, or podicis, and is often present without any visible eruption. It may depend upon either hæmorrhoids, arising from congestion of the portal system and derangement of the liver, ascariides in the rectum, or enlargement of the prostate gland—a common complaint in old men. The seat of the itching is the margin of the anus, and papules frequently appear on the perineum and neighbourhood, which, when torn, cause an eczema. This variety is thought to depend, in some cases, upon a morbid state of the secretions of the rectum, and may arise from sedentary habits, in addition to the causes already enumerated. In some cases the skin at the verge of the anus is furrowed,

* Diseases of Advanced Life, page 291.

† Thompson on Skin Diseases. Edited by Dr. Parkes.

leading to the establishment of painful fissures. Prurigo pudendalis, when chronic, has led to masturbation, or nymphomania, and is frequently caused by irritation of the uterus, or bladder; indeed, females have been said to miscarry from this cause. Diabetes, it is asserted, occasions this affection; leucorrhœa, gonorrhœa, apthæ, &c., may do so likewise. Furunculi are occasionally met with in persons suffering from prurigo. In the "Journal of Cutaneous Medicine," vol. i., page 326, I published the case of a person who, after recovering from prurigo, became affected with successive crops of "boils," and died eventually from debility, arising from the exhaustive influence of several carbuncles which appeared on his neck and back. Hebra states that sebaceous tumours are common in people suffering from prurigo. "This affection resembles, to some extent, the small-pox pustules; it has in its centre a small depression, which may be compared to an umbilicus, and it may be observed to contain a plug of sebum, either of a whitish or dark colour. This little pit is surrounded by a raised border, covered with healthy cuticle." Both these affections arise from perverted nutrition.

Dr. Hofmann, of Vienna, is of opinion that the presence of hippuric acid, or of the anomaly of the transforming processes, which betrays itself by the altered composition of the urine, should be looked on as the cause of pruritus. It seems advisable, in every case of pruritus cutaneous (when no causal circumstance is otherwise known), to examine the urine, not only for albumen and sugar, but also for other substances, such as hippuric acid, xanthui,

and kreatinin. Any rather large quantity of these substances always points to a lesion of transformation processes, in which again may lie the explanation of this otherwise unexplained neurosis.

The treatment of this disease may be divided into constitutional and local; the former is the most important. In the first place, we must endeavour to find out the cause of the complaint. If the disease arises from a gouty or rheumatic diathesis, the treatment for these affections is indicated. As the bowels are usually costive, and the liver deranged, it is a good plan to commence treatment by giving a pill at bed-time, for a few nights, consisting of podophyllin, compound colocynth pill, and extract of Indian hemp; subsequently administering "cream of tartar," which, besides acting as a diuretic, is also, on the authority of Dr. Copland, most efficacious in promoting a discharge of bile, and removing viscid secretions from the intestinal canal. When prurigo appears to be due to exalted nervous sensibility, I have derived benefit from the administration of the bromides of ammonium and potassium; and I find that this statement is confirmed by Dr. Damon and others in America. Their efficacy may be increased by adding either aconite or belladonna; the latter drug, according to Brown-Séquard,* by its influence on the blood-vessels of the spinal cord, will diminish the reflex faculty, the tendency to convulsions, &c.; but when the dose is toxic, sensibility and the reflex faculty become morbidly increased, and convulsions occur. Bromide of ammonium

* Functional Nervous Affections.

acts specially on the medulla oblongata, and relieves congestion of that structure. It should be used in preference to the similar preparation of potassium when the nervous system is in a state of prostration. Chloral gives relief and a comfortable night's rest in cases of the disease under notice.

Bromide of potassium, it is stated by Dr. Bill,* deadens the sensibility of irritated peripheries, thus making the sensory ganglia less cognisant of local evil, so that sleep is allowed, not compelled, as where morphia is employed. Towards procuring sleep 20 to 30 grains of bromide of potassium is often prescribed. The advantages claimed for bromide of sodium over the bromides of potassium and ammonium are, that the taste, when perfectly pure and free from iodine, is almost identical with that of common salt, which, being familiar to all and disagreeable to few, will recommend it to patients to whom the taste of the other bromine combinations are specially unpleasant. Having soda as its alkaline base, it is more readily absorbed into the system—more quickly assimilated, and consequently acts more directly upon the animal economy than any salt of potassa can do. Neither have they found the same tendency to produce redness of the skin, external irritation, and eruption. If the patient is anæmic, bromide of iron can, of course, be added to the bromide of potassium, given in some vegetable infusion, as calumba. Occasionally nux vomica is of service. Cod liver oil and pancreatic emulsion of fat are excellent dietetic remedies. The former can be taken in conjunction with tincture of

* *Lancet*, Aug. 29th, 1868.

hop, orange peel, and dilute nitric acid. In some cases, when dyspepsia is present, pepsine wine is required, which may be given with Schacht's liquor bismuthi. Nitro-hydrochloric acid foot-baths are useful, as also emollient baths. For prurigo, confined to limited parts, a borax lotion is often of service. In some instances, the hypodermic injection of morphia is successful, as also lotions containing hydrocyanic acid, aconite, or chloroform ointment; or an ointment composed of chloride of lime, half an ounce; olive oil, two ounces; lard, three ounces. Dr. Beard states that, if electricity could do nothing more than relieve the itching of prurigo, it would be entitled to an honourable place in the armamentarium of the dermatologist. Dry faradization alone may bring relief in a very few minutes, and, when perseveringly used, may cure. He has seen immediate relief follow general electrization, used in the ordinary method with wet sponges. Professor Binz agrees with Hebra that pruritus and prurigo may be relieved by the internal administration of carbolic acid; however, I think the sulpho-carbolates might be tried with advantage.

Dr. Gruber,* by the name cutaneous pruritus, indicates an intolerable itching of the external meatus auditorium, which occurs in paroxysms, often periodical, but usually varying in duration and frequency. It is entirely unconnected with the itching alluded to by Hebra as the result of eczema of the same locality. The cutaneous pruritus of the ear is attended by no other objective or subjective primary symptom save the itching. It occurs,

* *Allgem. Wiem. Med. Zeitung*, 1868, 52.

for the most part, in persons of middle age, especially those labouring under some disturbance of the circulation. As palliatives for the itching, Dr. G. advises soothing watery or oily preparations to be dropped into the ear. For radical cure he employs a solution of nitrate of silver (6 to 8 grs. to the ounce of distilled water) with which the parts affected are to be frequently pencilled until the paroxysms of itching no longer recur.

Pruritus vulvæ, or prurigo pudendalis, is frequently due to irritation arising from uterine or bladder ailments. Sometimes ascarides in the rectum, especially in children, travel into the vagina, causing the disease; and in such cases the irritation they produced often leads to masturbation. Diabetes is another cause, the saccharine urine producing a fungoid growth, shewn by aphthæ, due to the presence of the fungus, the *oidium albicans*—the same growth that causes “thrush” in the mouth. In such cases sulphurous acid lotion, carbolic acid, and glycerine, or even borax, are useful. The tearing of the parts by the patient causes excoriations and an eczematous eruption, which have to be treated by nitrate of silver and astringents. Females are said to have miscarried from this form of pruritus. Pruritus of the anus is often associated with pruritus of the vulva, due to the same cause, viz., parasitic growths; the fact that both situations are naturally moist favours a vegetable growth.

In pruritus ani, when complicated with painful fissures, a morphia suppository should be used. Sometimes sulphate of zinc—ten grains to the ounce of water—answers better. Dr. Van Buren holds that pruritus ani is frequently

parasitic. He believes that there is one point of practice recently taught us by German dermatologists which you must never lose sight of—that is, the possibility of the presence of a parasitic plant, or insect, in the altered epidermis of the affected part, by which the disease, and consequent itching, is kept up. There is a form of eruption called by Hebra, “*eczema marginatum*,” with elevated edges and well-defined margin, which has existed in the most obstinate cases of pruritus of the anus he has encountered. If you rub these scurfy margins with a little glycerine thoroughly, and then scrape off a drop with the edge of a dull scalpel, and place it upon a slide under the microscope, you will recognise the spores of a parasitic plant, which is growing like a weed in the diseased scarf skin. If you kill this vegetable growth, the chronic inflammation of the skin will straightway get well, and to do this use the solution of sulphurous acid. Sop it on two or three times a day, at first diluted with an equal quantity of water, afterwards stronger if well borne, and within a week the obstinate disease will have taken its departure. But the disease frequently arises from other causes than parasitic. Congestion of the portal system and derangement of the liver have, in my practice, been the most common.

Cleanliness is of the utmost importance in the treatment of this disease, the best means of obtaining which is the occasional use of the Turkish bath. To procure sleep at night, chloral, hops, camphor, or hyoscyamus are useful; a little ipecacuanha powder can be taken to act on the skin, or, when itching is very severe, quinine,

in ten grain doses, is a useful remedy when the prurigo is neurotic.

Having recently prescribed iodoform in prurigo and other diseases, the following remarks may not be uninteresting:—Iodoform was introduced into practice by Dr. Glover, in 1848. It has the appearance of small crystals, possessing the colour and odour of saffron; the taste is sweet. It is volatile, soft to the touch, insoluble in water, but the opposite in alcohol and ether. According to Dr. Waring, the medicinal properties and action of iodoform is a union of tonic, stimulant, and alterative, exercising, at the same time, a remarkable influence on the nervous system.

Dr. Waring considers that, as an anæsthetic, iodoform has been supposed to produce effects similar to chloroform. He quotes Righini and Bouchardat to show that, though its influence on leeches, fishes, &c., is very marked, yet that on mammalia it will bear no comparison with chloroform, except, indeed, in its local application. Iodoform, introduced in the form of suppository into the rectum, exercises upon the sphincters a local anæsthetic effect, so that defecation has been performed unconsciously. Consequently, iodoform has been used in such painful affections as tenesmus, fissures, hæmorrhoids, &c. Moutré's formula is:—Iodoform, powdered, 20 grains; cocoa butter, half an ounce; melt and mix into six suppositories. As a disinfectant, its power has been ascertained by M. Righini. The first case in which I prescribed iodoform was in a medium-sized ulcer, situated nearly over the tibia on the left leg of a poor woman, fifty years

of age, a patient at the Belfast Hospital for Diseases of the Skin. She had been attending off and on for several months. She would not come into hospital, as it obliged her breaking up her little establishment, nor could she give her leg absolute rest. The ulcer was inflamed, irritable, and extremely painful. Sleep at night was only had in fitful doses. Various were the remedies tried; opium, locally and constitutionally; carbolic acid, nitric acid lotion, ointment, strapping, &c.; the latter, as well as water-dressing, made the ulcer worse. At last I thought of iodoform, and, having obtained a supply of it for the Skin Hospital, I was enabled to prescribe the same for her, commencing with one drachm of iodoform and a few drops of rectified spirit, to the ounce of lard. The ointment was of a yellow colour, had a pleasant odour of saffron, which could be perceived several yards from the patient; and, what is of more importance, had the desired effect, checking the pain, which, after a few applications, entirely ceased. Then granulations of a healthy nature began to spring up, and the ulcer assumed a clean appearance and rapidly healed over. The other complaints in which I have used iodoform locally are not numerous, owing to its expense being such as to prevent a very extensive trial of it at a public institution. I have used it in prurigo. One case was that of an old soldier, who had been several years in India. The disease was of a purely neurotic character; many drugs, baths, &c., had been tried before we commenced the iodoform. However, it did not succeed in affording anything more than temporary relief, and that only for a short time. Iodo-

form may be given with cod-liver oil and essence of aniseed, not only in prurigo, but also in phthisis, with benefit. I am trying it in scabies, not only for the purpose of allaying the itching, but I believe it also destroys the insect.

According to a recent notice in the *Medical and Surgical Reporter*, it seems that M. Demarquay is dressing cancerous sores with iodoform, in which cases it acts as a local anæsthetic and disinfectant. Dr. Stiles recommends it as an addition to the ordinary plasters and ointments for syphilitic periostitis; and an ointment, containing thirty to forty grains of iodoform, as an application to painful burns, chancres, boils, and for promoting rapid healing. In two cases of chancre, he says the dry powder was applied with magical results. I believe iodoform is a powerful parasiticide, as it contains 90 per cent. of iodine. It is useful in that painful affection described first by Boyer, and noticed by the late Mr. Syme, in his work on "Surgery"—viz., fissures and ulcers of the rectum; if not curative, it allows of defecation without pain, and certainly should be tried before surgical means are attempted. According to Boyer, as quoted by Syme, the disease under notice consists of one or more small superficial chops lying in the direction of the radiated folds of the anus, but rather more internal, so as not to be visible without a forcible separation of the nates. The pain of the complaint is very severe, especially during evacuation of the bowels, and for the cure of it M. Boyer recommended the sphincter ani to be divided, and Mr. Syme incisions

through the fissure. I believe that in the ordinary run of cases such means are seldom now resorted to, and iodoform deserves an extensive trial in this complaint. Some painful affections of the uterus are benefitted by suppositories of iodoform introduced into the vagina. However, all agree in giving to iodoform anæsthetic properties ; but it might be as well to mention that Dr. Brown-Séquard has found that various narcotic substances and ointments employed against neuralgic and other uterine pains, “act with greater rapidity and much more benefit when pushed up on a small ball of lint into the rectum, than in the vagina.” Showing that absorption is more rapid by the mucous membrane of the rectum than by the vagina. Iodoform has been employed locally and constitutionally in the treatment of glandular enlargements, and, combined with iron, given in scrofula, anæmia, chlorosis, and rheumatism.





CHAPTER XII.

PARASITIC DISEASES. (VEGETABLE.)

THE following notes are intended to be of a purely practical character. It may, however, be as well to preface them with one or two brief remarks on the structure, &c., of this most diversified vegetable tribe, which includes plants widely differing in appearance, yet agreeing in the essential nature of their construction. The *mycelium*, or root-fibres of fungi, consists of threads of various shapes and sizes, and is the flocculent webby substance popularly called "mould." The mycelium threads often intermix, exhibiting under the microscope groups of *spores*, which, when fully matured, are liable to be carried away by the air. In some cases the spores run together, having a close union, branching, however, in various directions, when the name of *sporidia* is applied. The structure of the spore is of a very elementary character, having merely an outer coat of cellulose, and an inner one, or utricle, enclosing a granular liquid. Dr. Tilbury Fox thinks that the presence of identical parasitic forms in hard structures which exist, is, at least, a proof of

their independent origin, as in corals, bivalves, &c. Yeast is a compound of microscopic plants, and fermentation is accompanied by the growth and development of torulouæ. Professor Hallier, of Jena, discovered the process and origin of all yeast fungi. He found that if the spores of a "mould" fungus, or blight fungus, were put into a fluid capable of fermentation, as a mixture of grape, sugar, and salt of ammonia, the first alteration observed was the division of the spore-plasma into numerous small nuclei, which finally leave their parents either by rupture or dissolution of the spore walls. Thus *Penicillium glaucum* and *Eurotium aspergillus niger*, according to Van Tieghem, by luxuriant vegetation on Tannin-solutions, become decomposed into Gallic acid and sugar, a process analogous to alcoholic fermentation.

Mr. Jabez Hogg, in his book on "Parasitic Origin of Skin Diseases," states that the fungi which attack the skin belong to a division of acotyledonous plants, called by botanists *Thallophytes* and *Cellulares*—plants composed of cellular tissue only, having neither stem, leaves, or stomata, and reproduced by spores.

Dr. Streuder states that the fungi thallus is divided into two parts of distinct formations, mycelium and cotyledons. The mycelium is formed from hyphe, which ramify in the nourishing ground of the fungi, and entwine loosely, or unite into a membranous expansion, or form finally, by an intimate entwining, firm tuberculous bodies. The cotyledons arise from the mycelium, which produce and carry the reproductive organs, either as a single seed hyphe, or as compound

seed-bodies of cup or knob form. The seed hyphes arise from the mycelium as upright threads, and are either single or ramified in a characteristic way. The propagation of the fungi is performed in a sexual and also an unsexual way. First, in regard to the unsexual propagation, the cells destined for reproduction (spores) can be formed in three different ways: by the free sporetube cell-formation within an enlarged cell, by free cell division within an enlarged cell (Sporangium), by ligation of a cell (Basidium). The spores are generally devoid of a nucleus, and present homogeneous contents, sometimes rendered opaque by granules and fat-drops. In many species the spores originally formed are divided by the secondary formation of partition cells into two or more parts, each one of which partakes of the character of a spore. They are designated *separated* or *compound* spores. The form of the spores in the different species of fungi change in various ways. They are globular, oval, cylindrical, lenticular, and pear-shaped. When germinating the spore swells, and drives then in one or two directions a tubular nucleus. Promycelium, enveloped by a prolongation of the endosporium, which ramifies according to the nature of the spores, forms partition walls, and grows thus into a new mycelium, which then again produces the typical reproductive organs. The fungi are dependent, in regard to their nourishment, on organic substance. They are, therefore, only found on organic bodies, living or dead. According to their mode of life, they can be divided into two great groups: into parasites, which settle themselves on or in living animals, and take their nourishment out

of them ; and into saprophytes, which inhabit only dead, decomposing, organic substances.

Mr. Dancer, of Manchester, considers that the varieties and sources of the fungoid growth from which the spores arise are numerous. A fungus is known to develop only on the corpses of spiders ; another grows only on the hoofs of horses in a state of decomposition. Professor Huxley, in a late address to the British Association, remarks as follows :—It is at present a well-established fact that certain diseases, both of plants and animals, which have all the characters of contagious and infectious epidemics, are caused by minute organisms. The smut of wheat is a well-known instance of such a disease, and it cannot be doubted that the grape disease and the potato disease fall under the same category. Among animals, insects are wonderfully liable to the ravages of disease caused by microscopic fungi. In autumn it is not uncommon to see flies motionless on a window-pane, with a sort of magic circle in white drawn round them. On microscopic examination, the magic circle is found to consist of innumerable spores, which have been thrown off in all directions by a minute fungus called *Empusa muscæ*, the spore forming filaments, which stand out like a pile of velvet from the body of the fly. These spore forming filaments are connected with others which fill the interior of the fly's body, and eats away its viscera. The disease is contagious, because a healthy fly coming in contact with a diseased one, from which the spore-bearing filaments protrude, is sure to carry off a spore or two. * * * The silkworm is known to be

subject to a fatal contagious disease called the muscardine, due to the development of a fungus—*Botrytis Bassiana*—in the body of the caterpillar.*

To the above remarks of Professor Huxley, we may add that Hooker discovered a fungus which attains considerable dimensions, and is to be found on the neck of a certain kind of caterpillar in tropical countries. It vegetates on the animal, fructifies on it, and the unfortunate caterpillar buries it with itself in the ground, whence it springs up like a funeral plume. Another singular vegetable is known as the *Racodium cellare*, which has never been found except on the casks in wine cellars. Many of the seeds of these vegetable growths

* In the year 1865, Pasteur was instructed by the French Minister of Agriculture, to specially investigate and report upon the diseases incident to silk-worms. During the interval between the years 1853 and 1865, these disorders had reduced the annual production of cocoons in France, from sixty-five to ten millions of pounds. In the work which resulted from his researches, the author remarks:—"Certain disorders of the human race are accompanied by spots upon the skin, which originate in consequence of various alterations of the intestinal canal. This is not the sole observation applicable to human pathology which the experiments detailed in this work will suggest to the intelligent reader." In the course of the experiments conducted by Pasteur, whenever a number of larves were selected for inoculation or infection, a similar number, of the same age and habitat, were set aside in a healthy condition, in order to serve the purposes of comparison. At the expiration of the period of incubation referred to above, a very sensible inequality was noticeable in these two classes. Those which were left uninfected, displayed unmistakable evidence of greater well-being; while the diseased worms, when examined by the aid of a lens, exhibited numerous excessively small spots or maculæ, hitherto unnoticeable, about the head and rings. These lesions did not at first indicate the presence of the characteristic corpuscles in the skin. The "extension of the latter from centre to circumference had not yet affected the external organs. These surface-spots," says Pasteur, "only occur when the internal skin, if I may be allowed the expression, is affected to such a degree as to seriously interfere with the functions of digestion and assimilation."—*Chicago Medical Journal*, July, 1874.

require a peculiar soil on which to grow ; otherwise the diseases caused by them (amongst human beings the forms of "ringworm," for example) would be much more common than is the case. The delicate constitutions of children or sickly people are prone to them. In phthisis we often see *P. versicolor*.

A necessary condition for the growth of fungi is the presence of heat and moisture, or dampness. They also require a certain amount of oxygen. With regard to those fungoid diseases attacking men and animals, a copious supply of nitrogen, with some hydro-carbonaceous nutriment, is required ; and it is well known that in certain diseased states of the body nitrogenous matter is actually exhaled from the skin. The mode of entry of these fungoid growths into the system appears to be by either natural openings or accidental abrasions, the germs being carried and freely disseminated by the air. For instance, in man, take common ringworm, frequently seen in children, exhibiting a circular patch of affected skin. Here we have a centrifugal growth of fungus, causing the circular appearance of the eruption, which, in the first instance, is due to the spores of a fungus, in this case, called the *trichophyton tonsurans*, alighting, say, near a hair follicle. The mycelium thread, or root fibre, forces itself deeper still through the superficial tissues. If the disease remains unchecked, the fungus becomes more matured, and we have new appearances presented by the eruption, as, for instance, favus. Common "ringworm"—a bad name, but the one in popular use—has been in many well-authenticated instances communi-

cated from animals to man. Dr. Tilbury Fox states, upon good authority, that this disease is of a very frequent occurrence in Australia, the milkers of cows especially being affected; and Professor Gerlach has noticed it in dogs, horses, and in man; but the sheep and pig seem to offer exception. Dr. Frazer, of Dublin, some years ago, published a valuable paper on a "Herpetic Epizootic Affection, and on its frequent transmission to the Human Subject." The paper contains several cases, occurring especially in County Monaghan. Dr. Fehr has noticed in Switzerland its transmission from cattle to man. Dr. Bazin, of St. Louis Hospital, Paris, has reported a most interesting case of the communication of herpes circinatus (common ringworm), quoted in Dr. Anderson's work. "A dragoon came to the dispensary, affected with herpes circinatus of the front of the right forearm. The skin of one patch was denuded of hair. He stated that five or six of his comrades had contracted this affection, as well as himself, from grooming horses. We went, he says, to the barracks, where, sure enough, we saw three horses which exhibited round patches, absolutely identical with those of herpes tonsurans, on the withers, shoulder, back, and belly. The hair in the centre of each patch was broken off close to the skin, and there was a whitish squamous production which was traversed by hair. The presence of spores was detected by the microscope." The most recent information on this subject is contained in Vol. I. of Dr. Dobell's "Reports from Different Parts of the World on Medicine," and is especially interesting as relating to the observations

of M. St. Cyr, of Lyons, on the occurrence of favus in cats and dogs, and its transmission to the human race.

We know, from the researches of Tulasne, that a fungus, no matter of what kind, may pass through different stages of development, and in each stage give rise to a different form of growth, looked on as distinct species. The mycodermatous fungi, connected with the skin diseases that have been mentioned, are all forms of common mould, as also those that grow on mucous membranes of birds, as in the throat, for instance. The parasitic affections of plants is a subject of very extensive range; however, I shall only mention that the potatoe disease, according to the Rev. Mr. Berkeley and others, is parasitic. The vine disease is another example. Many other diseases, as that of corn, are due to fungi; the *Uredo-segetum*, or smut, mildew, &c. With regard to "smut," the sooty powder is chiefly spores. Rye is, when ergoted, the production of a parasite—*Cordyceps purpurea*; the nutritious part of the grain is destroyed, and acquires different properties. Rice is sometimes attacked with a fungus, at one time supposed to be the cause of cholera; fruit, wood, &c., are likewise attacked by fungi. "Dry rot" is owing to the presence of a fungus. Parasiticides are remedies which destroy their growth; for instance, creosote prevents "dry rot" in wood, by preventing the pores from germinating, timber for railway "sleepers" being creosoted.

With regard to animals, besides using these remedies, we must also endeavour to change the soil upon which the parasite grows by suitable treatment. It is, perhaps,

proper to admit, at the outset, that the investigations of Professors Stricker and Kobner have completely exploded the theories of Losterfer, Salisbury, and others, as to the existence and casualty of *crypta syphilitica*.

From the great number of observations on the appearance of fungi in morbid processes, laid down in the literature of the subject, many, whose parasitic nature is questionable, are first to be discarded. They pertain to the vegetations of fungi which had infected external and internal cavities of the body, especially the outer auditory meatus, bronchial dilatations and cavities of the lungs, and belong to the universally distributed mould-forms. They stand in no casual relation to the disease which may be present, but develop only on tissues already dead or stagnant secretions, whose decomposition they promote, by which, at all events in certain cases, symptoms of irritation are called forth—as, for example, in the tympanum. They are, therefore, by no means to be considered as specific causes of disease. Independent of these saprophytic fungi, we have become acquainted, since Schœnlein's discovery of the parasitic nature of the favus, with a number of genuine parasitic fungi which inhabit the integument and mucous membrane, and cause specific distinct conditions of disease. They are the *Achorion Schœnleinii*, the favus fungus, *Trichophyton tonsurans*, the fungus of herpes tonsurans and of the sycosis, *Microsporon furfur*, the fungus of pityriasis versicolor and *Oidium albicans*, the thrush fungus. The diseases of the skin and mucous membrane caused by them are, indeed, only local, but distinctly contagious;

the distribution and the conveyance of the diseases to other individuals can only be accomplished by means of the propagating cells of the fungi. The named species of fungi have as yet been imperfectly studied in a botanical point of view. There are often designated spores, but they are only propagating cells, destined for the maintenance of the species, just as the germinating cells or gemmen of *mucor mucedo*. Typical organs of reproduction are not known in them.

Mr. Law, Professor of Veterinary Anatomy in the Cornell University, Ithaca, United States, in a letter to the writer, December, 1869, informed him that he had been much engaged of late in investigating the nature of an epidemic amongst cattle there, principally amongst those brought from Texas. The disease chiefly attacked cattle on low-lying and marshy districts, and he had discovered what he believed to be a fungus as the cause of the disease. We know, from experiment, that quinine checks and prevents the development of spores; and we likewise know, from the investigations of Dr. Bence Jones, that a substance resembling quinine is always, in health, present in the human body, and which is supposed to be "descended from albumen, and, doubtless, is an alkaline fluorescent substance of the utmost importance in the animal economy." May not its absence be a cause of the above mentioned complaints? At the present time much thought is being bestowed on diseases of cattle; their correct study embraces also a knowledge of disease in human beings. If germs of fungi cause disease in the latter, it is likely they will do so in animals.

The part played by fungi in causing disease is daily becoming more clearly recognized. Few now deny the vegetable nature of many cutaneous diseases, but, as may be expected, there are still very various and conflicting opinions in our modern school of dermatology. For example, no less than four dogmas are held to be indisputable by their various supporters, which may be divided, as correctly remarked by a reviewer in a late number of the *Glasgow Medical Journal*, into—1st. Those who agree with Erasmus Wilson in denying altogether the parasitic nature of the so-called fungus, and instead hold the belief of a granular or phytiform degeneration. 2nd. Those who, like Hebra, consider that a parasite may occasionally be present, when it is an accidental complication. 3rd. Those who, with Tilbury Fox, believe that the cause of these diseases is the presence of a fungus, the difference observed in the appearances of each affection being due to the state of growth of the cryptogam, soil, and patient's constitution. 4th. Those who, with M'Call Anderson, think that soil and constitution have little influence upon the growth and development of the parasite. Every one has noticed the low forms of vegetable growths to be found on old bread, cheese, ink, books, &c. This fungus is known as the *penicillium glaucum*, and has certain analogies to another, the *botrytes bassiana*, which frequently attacks the silkworm, producing the disease called muscardine. The most favourable condition for the growth of these, as of all other fungi, is the presence of damp. Another circumstance favourable to their development is the

presence of a certain quantity of oxygen, which they readily absorb, giving off carbonic acid. It is a fact worthy of note, that the vegetable moulds assume various forms, according to the localities and circumstances in which they are placed. For example, Dr. Tilbury Fox placed a hair taken from a patch of *tinea circinata* in sugar and water, when it was observed that after a few days the spores became larger, and linked together after the manner of the *achorion* mycelium (*favus*), and he further informs us that "favus has been known to spring up in a patch of *tinea circinata*; and a clue to a proper explanation is afforded by the fact that the fungus takes on an active state of growth and sprouting from a favous cup." We must look for an explanation of the differences between the varieties of *tinea*, not so much in differences of fungus, as of soil and seat upon which they grow. Any one engaged in a large cutaneous practice must have observed, especially on the body, the occasional occurrence of *tinea circinata* and *favus*. I have met with five such cases during the last four years, the notes of which I have published. I may, however, briefly mention, that in one case, that of a boy, aged seven years, admitted Feb. 8th, 1868, *tinea circinata* existed on the neck and chin. In the centre of one of the rings, which were all fading, there were several well marked favus cups. On the chin the disease had assumed a tubercular character; the affection on this part, if covered with hair, would probably have been called *sycosis parasitica*.

Cases similar to the above have been recorded, and we must consider the occurrence together of the two

diseases to be more than a mere coincidence. Mice, during their rambles, come in contact with a fungus, most probably the *Penicillium glaucum*, growing on old wood, for instance. In the natural state of affairs they are caught by the cat, which then becomes attacked in turn, always on the forepaws and face, owing to the manner in which they kill their prey. I have seen a little girl with favus on the arm, owing to nursing a cat similarly affected.

Dr. Purser, of Dublin, has published a case of *tinea circinata* occurring in a female who contracted the disease from a cat, the subject of favus on one of her paws. No doubt the ordinary forms of "ringworm"—viz., *tinea circinata*, *tonsurans*, and *sycosis*—are due to the same parasite—the *trichophyton tonsurans*.

This fact is conceded by all parties; and Dr. M'Call Anderson groups these diseases together, in his last edition on "Parasitic Diseases," under the name *Tinea trichophytina*. If we take a step further, and acknowledge the achorion to be a more matured form of the trichophyton, growing on a more favourable soil, I think that we will not be far from the truth. The researches of Tulasne and De Barry, quoted by Dr. Tilbury Fox, have "contributed to the establishment of the doctrine of polymorphism, which implies that one fungus may pass through a cycle of development, and in its different stages give rise to many different forms, originally regarded as distinct species."

In the address of Dr. Olavide, delivered before the Royal Academy of Madrid, in March 1873, on "Parasitic Growths," the *Pabellon Medico*, in which Dr. Olavide's

discourse appeared, contains in its recent numbers certain animadversions by Dr. Marians Benarente on the parasitic theory of disease. We give here his principal objections to this theory :—1st. In alleging low vegetable organisms as causes of syphilis and gonorrhœa, Dr. Salisbury and Professor Hallier, unfortunately for the theory, ascribe the origin of these diseases to different growths. If these maladies have a cryptogamic genesis, the species which generate and perpetuate them ought to be the same. 2nd. The mould of bread and the mould of straw are affirmed to be the specific causes of maladies like small-pox, carbuncle, typhus, measles, &c. It is worthy of note that these moulds must be almost omnipresent, and must be encountered in the human organism at any time. 3rd. Dr. Olavide's strongest support seems to lie in the fact that pytoparasitic affections increase, and can even be inoculated, in dead bodies. There is no doubt that the parasites of tinea adhering to the hair-bulbs are nourished and grow after death; but this, even if it were true, in diseases like thrush, &c., would be rather unfavourable than otherwise to Dr. Olavide's theory. It would not only prove that vegetable parasites find a congenial habitat in organic substances already undergoing change, Dr. Benarente would here distinguish between parasites and pseudo-parasites—the former requiring a certain congeniality and predisposition in the organism on which they fix themselves and live, the latter not so. As an instance, the *oidium albicans* and *achorion* are parasites, which live and grow only on certain and determinate subjects, while the pseudo-parasites, *mucor-mucedo* and

penicillum, fix and involve themselves in any point where there are organic substances in decomposition. Keeping this in mind, there will be little danger of confounding the vegetable parasites, characteristic of this or that affection, with those cryptogams or pseudo-parasites which are frequently met with in the saliva, mucus, pus, and on the greater part of ulcerated surfaces; whence Dr. Benarente would conclude that the spores or particular growths which are discovered by the microscope in many preparations of pathological tissues and secretions, are no more than an accidental phenomena, or a mere coincidence, depending on the faculty with which some of the infinite cryptogams floating constantly in the air can fix themselves in the solids or liquids of the human body.

With regard to the supposed identity of the vegetable parasites and their relations to common mould, Dr. White enters very fully into the conflicting opinions held, not only by dermatologists, but by botanists; however, Kobner, Petyritsch, Karsten, and De Barry, have never found any difficulty in obtaining *penicillium* and the like in their cultivation of favus matter. They regard its presence in their experiment as merely accidental. The elements of *penicillium*, *aspergillus*, &c., are omnipresent, awaiting only the proper conditions of soil, temperature, and moisture for development, so that unless these germs are primarily excluded by the most rigorous measures from the materials and atmosphere used in these experiments, their constant appearance, under circumstances best adapted to their growth, is not surprising, though their absence would be. Such exclusion has been found nearly

impossible. De Barry believes that the fungus of favus is a specific parasite, and Neumann rejects his former opinion, viz., that the fungus of favus can be traced to penicillium. Hallier, of Jena, as quoted by Neumann, deposited favus matter on slices of apples, lemon, &c., and discovered the development of the fungus (penicillium) from the achorion. Dr. White thinks that, with regard to the identity of the fungi found in cutaneous affections, we must still maintain their specific individuality, because clinically they are distinct, notwithstanding the deceptive inferences drawn from accidental coincidences, and because neither the results of transplanting, nor of artificial cultivation, have been such as to counterbalance even the negative evidence drawn from the same source; and, with regard to their identity with any of the common moulds, the evidence presented is still more questionable. Favus, due to the presence of the *achorion Schænleinii*, is a common affection in damp countries; for instance, in Holland, particularly damp from its numerous canals, also in Norway, the North of Ireland, and West Coast of Britain, these regions being the rainiest in Europe. The following statistics, which I some time since published,* compiled from "Tables of the Total Depth of Rain," by J. Symons, M.B., show the average rain-fall for four years ending 1868, in three large cities:—

Glasgow	..	..	...	43'07 inches.
Belfast	...	..	..	34'70 "
London	..	..	..	23'7 "

The frequency of favus will be observed from the annexed:—Glasgow, 118 cases in 6,451, recorded by

* Journal of Cutaneous Medicine, vol. iii.

M'Call Anderson, "Report of Dispensary," 1867; Belfast, 14 cases in 3,000, recorded by H. S. Purdon, "Report of Hospital," 1868; London, 3 cases in 10,000, recorded by Erasmus Wilson, "Journal of Cutaneous Medicine," vol. iii. Favus, it will be evident, is much more common in wet and rainy cities than in those of a drier atmosphere. We also know that low forms of fungoid growths appear with rapidity on preserves, cheese, bread, &c., when placed in damp localities, the usual fungus being the *Penicillium glaucum*. Hallier derives the fungus of Pityriasis versicolor from *Aspergillus*, the growth being favoured by a dry soil.

Dr. Tilbury Fox states:—"I would say that the parasitic fungi found upon the human surface are varieties which cluster around the penicillium, or torula, in their sporular state as a type." For the growth of fungi a copious supply of nitrogen must be present, with some hydro-carbonaceous nutriment, as mentioned by Kuchenmeister. It has also been left on record, by Dr. Golding Bird, that nitrogenised products are, in certain conditions of the system, exhaled from the skin, which probably favours the growth and liability to parasitic cutaneous disease, the most matured form of which is favus. I agree with recent writers that we have only one fungus, the differences observed in the appearance of each separate affection being due to the state of growth of the cryptogam, soil, and patient's constitution. This statement is, I think, proved, at least in a great measure, by the doctrine of polymorphism; for instance, the fungus foot of India, called Madura, is an

example of a low form of vegetable growth, assuming various appearances, and fungi take on peculiar forms, according to the localities and circumstances in which they are placed, as proved by Dr. T. Fox.

The experiments of Bazin on favus, and Pasteur's "germ theory," although as yet not generally accepted, are, nevertheless, worthy of the greatest respect, and have certainly led to more extended observation; but, no doubt, a peculiar state of the system is necessary for their growth, otherwise this class of diseases would be much more common than at present; and we are all familiar with the fact that *tinea versicolor* flourishes, and is to be met with frequently on the bodies of consumptive patients.

Favus attacks both the hair follicles, epidermis, and nails. The cup-shaped, peculiar smelling eruption is produced by the cryptogam gaining access to the hair follicles. The spores, after being first deposited at the mouth of the follicles, spread in a horizontal manner between the layers of the epidermis, causing more or less redness. A matured favus cup presents on section the following appearances:—"The basis consists of granular cells, having the surface next the skin covered by a few layers of epidermic cells. From this granular layer fine fibres run vertically towards the surface or centre of the cup, mixed with fine granular matter, and terminating in mycelial tubes, branching and yielding spores in abundance." The surrounding epithelium running with the cup holds it in position. At the commencement of the disease the favi are but mere

specks, but soon grow larger. In chronic cases, scaliness of the cuticle is present, the crusts being amorphous. When a cup is raised from its bed, a red, raw-looking surface is exhibited. There is also more or less thinning of the hair, which loses its shining look, becomes extremely dry, of a greyish colour, and very brittle. If permanent alopecia is left, the cuticle has a parchment feel. Dr. John Wilson reports, in the *Glasgow Medical Journal* for May, 1872, an example of favus in a canary. I have read of a similar disease attacking the feathers of a parrot. The crusts examined by Dr. Wilson, taken from the head of the bird, were very brittle, of a yellowish white or cream colour, and there was a fine dry dust over part of their surface. The affection had first shown itself at the root of the beak, and gradually extended backwards. It caused the bird to be very frequently scratching itself with its foot, and tearing off the incrustations, which soon re-appeared over the denuded surfaces. The lady to whom the canary belonged had been told by a bird merchant that the disease was very difficult to cure, and was usually called by them "cancer." Dr. Wilson, having broken up a portion of the crust, and moistened it with slightly diluted liquor potassa, examined it microscopically at 400 diameters, and found the characteristics of favus—the mycelium tubes, spore tubes, and spores of the *achorion Schælenii*, and a few very young feathers which had become imbedded in the crust. It is not unlikely that the disease was communicated through the seed, among which the bird required so often to burrow its beak, and the seed was probably

infected by mice, animals amongst which favus seem to be indigenous, and which are very fond of canary seed. Bazin relates that several mice caught in a trap had favus; they were given to a cat, which took the disease, and two children playing with the cat became affected. The late Dr. Andrew Buchanan, jun., detected favus in a dog that had been in the habit of killing mice. Several mice were caught and examined by him and Dr. M'Call Anderson, and found to have undoubted favus. Müller has detected it on Cochin China fowl and several chickens. Gerbach has effected its transmission from fowls to man, and Kobner has produced favus in rabbits by inoculating them from man.

Dr. Hilton Fagge* says:—"I am inclined to attach great importance to the tubes of fungus lying within the hairs, as accounting for the impossibility of curing most cases of favus without the most diligent and careful epilation. I can easily understand that no parasiticide should succeed in penetrating the follicle of the hair itself, so as to reach the soft bulbous ends of these tubes. I think it, therefore, evident that these fungus tubes not only possess a very stubborn vitality of their own, but are also able at any moment to form nuclei from which the spores and mycelium of the achorion may be developed. The exact way in which this takes place I have not been able to determine. But, in one instance I saw one of the tubes bend suddenly round at right angles, and run directly towards the exterior of the hair. As regards the termination of these tubes towards the free ends of the

* Guy's Hospital Reports.

hairs, I have no positive information. In all the hairs that I have been able to examine, the free ends have either been cut transversely or have been split up into an irregular brush of detached fibres. So far as I am aware, Dr. Hughes Bennett is the only writer who has described or figured these tubes in the interior of the hairs. Neither Bazin nor Dr. M'Call Anderson refers to them. In Dr. Hughes Bennett's figures of them, indeed, they are represented as being much larger than they really are, in proportion to the size of the hair."

I have recently had two cases of favus under treatment. In one, the duration of the disease was six years; the cup-shaped crusts characteristic of the affection were lost; the hair thinned, and patches of permanent alopecia left. The other case was of more recent origin, the cups being well marked, odour of mice plainly perceptible; hair dry, and covered with "nits." The adjacent skin was but little reddened or thickened. The late Mr. Startin, in his lectures (*Medical Times*, 1857), recommends the following method of treatment:—To have the hair cut short, but not shaved; the crusts are to be softened with hot water, next washed with tepid water and yolk of egg, and dried. He then applies an ointment of bisulphuret of mercury and creosote, whilst internally an infusion of quasia and iodide of potassium is given; a method of treatment which may be recommended. During the last ten years I have tried various plans of treatment. One case was carefully treated by depilation on two different occasions, and into each patch from which the hairs were extracted a solution

of the bichloride of mercury, two grains to the ounce, was rubbed, a little sweet oil being then applied. Suffice it to say, that the disease reappeared in all its vigour in about four months. Other cases were treated, first with oil of cade and glycerine, so as to remove and loosen the crusts, then with iodide of sulphur ointment; another with a solution of chromic acid. The last four cases have been treated (after the hair was cut short and crusts removed) by carbolic acid and oil, with the best results. In tinea tonsurans I have found the application of liquor potassa useful, cold water being applied to stop its action, if too severe. It is a most efficient parasiticide, and penetrates deeply into the diseased dermal tissues.

Professor Cantoni's plan of treatment is by fomentations of rectified spirit, the crusts to be removed first by warm poultices. We have the high authority of Küchenmeister in support of this method, who found that alcoholic solutions acted most powerfully as parasiticides.





CHAPTER XIII.

EPHIDROSIS.

THE following "rough notes" on Ephidrosis involve, by way of preface, one or two brief remarks on the sudoriparous glands, organic structures, which, by the way, are only secondarily affected. Dr. Willis has recently published some very interesting observations on the "Functions of the Sudoriparous System," and from which is extracted much of the information contained in the following paragraph. The perspiration is known to consist of from 96 to 99½ per cent. of pure water, and only from one-half to four per cent. of solids; to eliminate part, or even all, of this watery fluid is the proper office of the sudoriparous glands; the saline and organic ingredients contained in the perspiration are, however, entirely adventitious. Dr. Willis holds the conviction, that the vital action of the skin has little or nothing to do with the maintenance of the standard temperature of the animal body, the real factors of which process are the digestive and respiratory systems. Consequently, we may believe it to be an established physiological fact, that the office of the sweat-glands is merely to abstract water from the

peripheral circulation, and by this means secure the conditions necessary to the return into the venous circulations of the fluids that have been shed from the arteries for the purpose of nutrition and vital endowment. That this is the case is partly proved by Simon, of Berlin, who discovered that the arterial or outgoing current was constantly found to contain a larger quantity of water—*i.e.*, to be of less density than the venous or returning current—the difference being greatest in reference to the blood of those organs where there was the most abundant separation of watery fluid. In repeating these experiments upon the blood of sheep, it was found that the serum of the venous blood was of greater density than that of the arterial, and on putting quantities of the two kinds of serum into an apparatus for endosmosis, there was observed a current of considerable power established from the arterial to the venous side. This process, carried on between the arteries and veins of a living creature, is, according to Dr. Willis, venous absorption, the conditions necessary to which—*viz.*, the higher density of the blood in the veins, or returning vessels, than in the arteries or efferent vessels in all the peripheral parts of the body—being mainly due to the action of the sudoriparous glands. Now, in ephidrosis we have an excessive discharge of the watery secretion of this system, due to extra work being performed by the sweat-glands. Upon what does this depend? I believe, in a great measure, upon vaso-motor paresis. We are all familiar with the fact, that in hot weather perspiration is very freely produced, owing to increased muscular action, by which nerve force is

exhausted, whilst in a cold bracing air we can undergo double the amount of fatigue, and that with extra clothing.

Dr. Handfield Jones observes, that "the increased secretion from the cutaneous surface may be reasonably supposed, in a state of health, to be the result of an increased supply of blood to the perspiratory glands, and we have seen that such has actually been found to result from the hyperæmia induced by dividing the vaso-motor nerves." The same author has stated that the influence of vaso-motor paresis in promoting perspiration is shown by several facts, as the occurrence of profuse sweating, during sleep, in consumptive patients and others. In ague the sweating is probably due to malarious poisoning of the nervous centres; and, consequently, when palsy of the vaso-motor nerves ensues, the cerebro-spinal dilate the capillaries to an abnormal extent, allowing an increased amount of blood to enter the vessels, and thus congestion occurs. The sweat-glands endeavour to relieve this condition by extra work, and more watery fluid is secreted in the form of perspiration, accompanied by a diminished quantity of urine.

If this theory be true, it accounts likewise for the occasional occurrence of bloody or red-coloured perspiration, which, in the instances recorded, is usually combined with depression of the nervous system. Nervous debility, in fact—due to mental prostration, it may be, or from over bodily fatigue. To digress for a moment—Look at cholera: the cold, clammy sweat, copious watery stools, thick, black blood, and collapse. But to return—In *ephidrosis cruenta* there may be first

ordinary excessive sweating; at least, such is the opinion left on my mind by the perusal of published cases. Sooner or later, however, the secretion becomes tinged. Dr. Handfield Jones* mentions the following interesting case:—"M. Parrot relates the case of a female, a hystero-epileptic, in whom bloody sweating occurred, during many years, on the knees, thighs, chest, lower eye-lids, hands, and face. The tears were once also tinged with blood, and frequently some hæmatemesis. On one occasion, together with the hæmatemesis, there was severe gastric pain, and the skin of this part was covered with bloody dew. These hæmorrhages were never an isolated phenomenon; they always succeed to a mental emotion, and complicated a nervous attack, attended with absolute loss of motor and sensory power. At one time neuralgic paroxysms were attended with sanguineous exudation at the painful parts. There was no deception. Parrot himself witnessed the phenomenon. There was never any reddening of the skin in the parts where the hæmorrhage occurred. The catamenia seem to have been pretty regular, and their appearance always relieved the cutaneous hæmorrhage. Parrot recites various other recorded cases of a similar character, and observes, in conclusion, that this cutaneous hæmorrhage may co-exist with others of a similar character in persons of a delicate, irritable constitution, especially in females; that all these hæmorrhages not only are associated with general nervous perturbation, but are further frequently connected with localised phenomena of pain and spasm, and that

* Functional Nervous Affections.

they closely resemble these phenomena with regard to their efficient causes—the parts which they affect, the suddenness of their invasion and cessation, and their harmlessness. These hæmorrhages, which he terms neuropathic, proceed, he believes, from the glands of the external and internal integument. They consist of *true blood*, and not merely of red-stained serum.

That excessive grief and anxiety can affect the sympathetic system, producing various changes, is evident from many examples, as sudden blanching of the hair (of which I have met with one case, and that, upon minute investigation, was found to be truthful). Again, in *nostalgia* where there is an ungratified desire to return home, symptoms of melancholia are generally exhibited. But, without enumerating all the phases of this interesting disease, I may state that profuse sweating is a prominent one.

We have another example, occurring in the person of the “Man of Sorrows,” who, in His agony in the garden of Gethsemane, sweated, as it were, great drops of blood.

Hebra mentions the case of a young man who was attacked repeatedly by hæmorrhage from the surface of the limbs, which usually occurred at night; at this time, we know, the nervous system is most relaxed. Once Hebra saw a jet of blood corresponding in size to the duct of a sweat-gland shoot out of the hand, and rise above the level of the skin.

Erasmus Wilson, in his work, records several cases of *ephidrosis cruenta*, in one of which the blood came like sweat from the back part of the head. The patient was

a child, aged three months. Usually, however, these cases of cutaneous hæmorrhage are due to derangement or suppression of the catamenia. That the disease under notice is not always connected with vicarious menstruation is well known. A case occurred a few years ago in a little girl, an inmate of an orphan home, aged eight years, who, after mental excitement, exhibited a "bloody-looking discharge" from a patch of skin on her ankle, the part affected eventually regaining its natural appearance.

To quote from Dr. H. Jones again:—"Patients suffering from paralytic disorders often complain that the least exertion causes them to break out into perspiration; while they improve this tendency diminishes. Here, again, we seen a positive relation between nerve power and vascular dilation. The increased secretion from the cutaneous surface may be reasonably supposed, in a state of health, to be the result of an increased supply of blood to the perspiratory glands, and we have already seen that such has actually been found to result from hyperæmia, induced by dividing the vaso-motor nerves. Some hold the opinion that the sudorial eruption, as Trousseau calls it, is produced by the irritation which the sweat causes. I am convinced, by repeated observation, that this is specially prone to occur when the nerve power is low, and I believe it is mainly dependant upon vaso-motor nerve paresis. That the vaso-motor nerves exercise a great control over the smaller arteries—the regulators and disposers of the blood-stream—is notorious; but I believe that which they exert on the condition of the capillaries is scarcely less considerable."

Excessive sweating may be either partial or localised to a small area of the skin. We are all familiar with excessive sweating of the hands and feet, so distressing to the patient. In consumption, as before mentioned, perspiration, although usually present in the advanced stage, may, however, commence from the first—due, no doubt, to debility. Now, as there can be no practice without theory, I shall conclude this brief and rather unconnected chapter by a few words on the subject of therapeutics; and first on the list stands arsenic, which remedy, as a nerve tonic, is, I believe, unequalled. For instance, Dr. Jones* states, that a dose of arsenic, taken before a Turkish bath, has prevented perspiration being induced. In excessive sweating, due to vaso-motor nerve paresis, it is a most valuable remedy. Belladonna is a very useful drug in profuse perspiration. Dr. Sidney Ringer† recommends the liniment to be applied in cases of excessive sweating of the hands; but it is right to mention, that when belladonna is administered it frequently produces perspiration. Aconite has also been prescribed. Quinine tones the vaso-motor nerves. It is a useful remedy, when combined with dilute sulphuric acid, in sweating. For local application in sweating of the feet we may apply a dusting powder, composed of prepared chalk, carbolic acid, alum, and camphor; or try Hebra's plan—viz., litharge ointment, to be used spread on strips of linen. Such are the principal medicines administered in the disease under notice, an affection as yet only imperfectly understood.

* Functional Nervous Affections.

† Handbook of Therapeutics.



CHAPTER XIV.

SCROFULODERMA.

SCROFULOUS affections of the skin are easily recognised. I have had, however, during the last ten years, a good deal of practical experience regarding strumous maladies of the skin—scrofula in all its forms being a very common disease in Belfast. Mr. Milton, in the “Journal of Cutaneous Medicine,” vol. iv., offered some important suggestions on the present subject. Following his example, I include under the name all strumous complaints found on the skin, no matter where they are situated—as ulcers (superficial and deep), warty patches, enlarged glands, and also the indolent and dull red tubercular formations that tend to suppurate, eventually becoming covered with a thick scab, from beneath which oozes unhealthy pus, causing ulceration, that proceeds, accompanied by slight loss of substance, the process ending by the formation of a scar. Scrofuloderma verrucosum, which Dr. M‘Call Anderson has dignified by the name of *lupus verrucosus*, is met with in strumous subjects, commencing by the development of small circumscribed, dusky, red, or violet-

coloured patches, often assuming a somewhat tuberculated form, healing like lupus in the centre, and spreading at the margins. These little tubercular spots are in many instances confluent, but more frequently isolated; finally warty growths appear on these elevations, of a dusky hue, due to a thickened condition of the cutaneous papillæ. The eruption is of a tedious and chronic nature. I lately had a young girl for eight months under treatment with this disease, situated upon the instep of the left leg. The little patient's health had always been fair. The affection on the leg presented irregular rugous patches, covered with warty excrescences, separated from each other, with a tendency to ulceration around the margin of the disease. During the year 1867, 824 cases of skin disease were admitted to the Belfast Hospital for Diseases of the Skin. Of this number scrofulous affection occurred to the extent of 12 per cent., at which average these cases have remained—occasionally increasing, however, especially in the spring. Indeed, from the number of patients admitted in the early part of the year, one may say, with Shakespeare (who refers to the "King's evil" being cured by royal touch):—

" Strangely visited people,
All swollen and ulcerous, pitiful to the eye,
The mere despair of surgery—he cures
Hanging a golden stamp about their necks
Put on with holy prayer."

With regard to enlarged or strumous glands, we know that lymphatic glands enlarge by cell hyperplasy, and afterwards are prone to undergo cheesy degeneration, ending occasionally in an ulcer; by which we are to

understand one determined by the inflammation and ulceration of a lymph-gland, enlarged by cell hyperplasia, and which has undergone degeneration. These ulcers are liable to occur about the region of the neck, in company with eruptions on the mouth and cheeks, usually impetiginous, or with otorrhœa, discharges from mucous membranes of the mouth and nose, conjunctivitis, &c. They are characterised by great obstinacy and encroachment upon the connective tissue, and also by their serrated borders. In scrofula it is the glandular system that is primarily affected, accompanied by engorgement of the capillary vessels and languid circulation, the blood being decidedly degenerated. Dr. Steel, of New York, has lately (*Medical Gazette*) written on the production of scrofula. He finds that in scrofulosis perfect oxygenation of the blood does not take place; for physiological experiments have proved that fibrin, so necessary in supplying muscular waste, is formed in the blood from albumen by the action of oxygen. He says:—The air of our city (New York), we know, is to a certain extent vitiated, and does not contain the requisite proportion of oxygen; but, in addition to this, our population is undoubtedly afflicted with an abnormal condition of the receptacles of this oxygen in the lungs; the blood cells, which, owing to the use of insufficient suitable, or deleterious, food, or from other causes, do not possess the vitality necessary to a healthful performance of their functions. The urine of scrofulous persons and that of children, selected for obvious reasons, contains a superabundance of the salines, with an excess of hydrochloric, phosphoric, and lactic

acids ; not unfrequently oxalic acid. The perspiration has a decidedly acid reaction, and is of more than usually offensive odour. The secretions from mucus membranes are augmented, and tend to become excessively albuminous under inflammatory action. Lymph, too, exists in superabundance, owing to the inordinate activity of hypertrophied lymphatic vessels and glands, and, like the blood, it contains more than its natural proportion of albumen. The scrofulous diathesis I have always found most decidedly marked during and before the period of the first dentition.

“Scrofulous people are, as a rule, fleshy and heavy-looking, although not wanting in intellect,” says Mr. W. K. Treves, F.R.C.S., of the National Hospital for Scrofula (*Lancet*). The lips, alæ of nose and eyelids, of the scrofulous are tumid from congested mucous membrane, and the abdomen inclined to be prominent. The extremities being large and swollen, have a doughy feel and lack symmetry. The hair may be any colour. The red and the dark hair show the best types of the disease, and the latter are found to be the most numerous. Scrofulous people do not waste nor suffer from dyspepsia. Mr. Treves is of opinion that, after putting aside tuberculosis and hereditary syphilis as distinct diseases, there is no evidence of any specific taint in scrofula, but, on the contrary, there is reason to believe that scrofula is merely a slow inflammatory action of an unusually chronic character, produced by slight causes, or arising spontaneously in persons predisposed from constitutional debility (as evinced by defects in the performance of the

functions of the circulation), to take on its action, and the distinguishing pathological condition in a scrofulous person is a deficiency or weakness in the circulation. The blood appears to stagnate, especially in the superficial portions of the body, causing cold extremities, and the appearance of venous congestion. The congestion is observable on the cheeks and extremities by a pimple or bluish tinge, blended with the natural colour, or by patches of various shades of redness, which is a true indicator of the actual presence of scrofula, or of a predisposition to scrofulous attacks.

Some French physicians divide the great class of scrofulides into *benign* and *malignant*; and as symptoms of the first period of scrofula, recognize primary lesions, classified as *exudative*, *erythematous*, and *papular*. In the first mentioned class strophulus, impetigo, and sebaceous acne are contained, all forms of the latter being regarded as strumous. Amongst the erythematous forms of scrofuloderma, M. Bazin places chilblains, especially those accompanied by deep-seated chronic inflammation of the subcutaneous tissue, a structure affected in preference by scrofula. Tenacity, persistence, gradual extension to new tissue, participation of lymphatic glands, and subcutaneous cellular tissue, ending in suppuration, are characters common to scrofuloderma, which, moreover, differs from other skin complaints in absence of itching, and usually of pain. Cazenave looked on "malignant scrofulides," as manifestations of hereditary syphilis, being remarkable for their well-defined limits and tendency to relapse. "These eruptions are divided into three

classes—*ulcero-crustaceous*, *tuberculous*, and *erythematous*. The crustaceous scrofulide contains two important varieties—inflammatory ulcerating and ulcerating with fibro-plastic formations. The first commences with tubercles or pustules, simply inflammatory, which degenerate into ulcers, that destroy surrounding soft parts, but are arrested by the bones. These ulcers cover themselves with thick green crusts, imbedded in the skin and formed of concentric layers. After the crust has fallen off and the ulcer healed, there remains a white, irregular cicatrix, contracting the tissue like those of a burn, and adherent to the bone. In the second variety, the tubercles are fibro-plastic, caused by a proliferation of the cellular tissue, and the ulcers attack the bone as well as soft parts.” The primitive element in the class of tubercular scrofulides is a fibro-plastic tubercle remaining stationary without ulceration on the cutaneous surface; however, cicatrices are produced, as if from an open ulcer, new fibrous tissue filling up the excavation caused by the destruction of sub-cutaneous cellular tissue.

The erythematous scrofulides of Bazin appear to be of an innocent nature. In some cases the sub-cutaneous tissue becomes oedematous, and of a pasty feel. There is no burning, itching, or pain, and eventually a white, irregular cicatrix appears in the centre of the patch, which gradually extends to the circumference. Malignant scrofulides are distinguished from cancer by the edges of the ulcers, which are undermined instead of prominent; by the bottom, which does not present the hard, fleshly granulations of cancer; and by absence of pain.

With regard to treatment, Mr. Milton,* who, as a practical observer and trustworthy writer, is excelled by no one, places great faith in "plenty of purgatives." He believes that the patients get well as quickly, if not quicker, by this plan than with iron, cod-liver oil, &c. A tablespoonful of old rum, in half a pint of new milk, every morning, is, he thinks, a capital nutritive agent. Dr. Laycock recommends the phosphate of lime, either pure or as ivory dust in the various forms of struma, as well as in some syphilitic affections, on account of it supplying phosphorus to the nerve tissue. The local treatment is all-important; if there be much inflammation poultices are required. Say we have, in the person of a young lady, an enlarged and suppurating gland, on an exposed part, and which has been rigorously poulticed for several days, how shall we best avoid a mark? Simply by applying a leech, and through the leech bite, with a fine knife, such as is used for operations about the eye, make the necessary puncture—not incision. To prevent an enlarged gland from suppurating, I know of no remedy except nauseating doses of tartar emetic and ice to the gland. It is not every one, however, who will submit to this treatment. When an enlarged gland is in an "indolent" state, it is a good plan to apply a fly blister over it, which will either hasten suppuration or excite absorption; or Mr. Jordan's plan, of a blister near the enlarged gland, and the application of a bag, containing shot, to the enlargement, can be tried. If it be an open strumous ulcer, the iodide of lead ointment is a very

* Journal of Cutaneous Medicine, vol. iv.

excellent and well-known remedy; if, however, the discolouration of the skin is objected to, iodide of cadmium may be substituted. When there is much discharge, astringents at the commencement may be necessary, as acetate of lead, tannin, &c. The country people often use an alcoholic decoction of fresh walnut leaves, with which they bathe and apply to the "open sores," and, it is said, with advantage.

Some excellent remarks are contained in a back number of the *Medical Circular* on the treatment of the disease under notice, as well as in causing scars by meddlesome surgery in scrofulous glands. The scars do not depend, the writer says, on the strumous glands being opened, but on the time of doing so. If opened at all, they should be opened very early. A scrofulous gland, when it begins to suppurate, contains a substance like soft cheese; afterwards a thin ichor. If it has softened down before it begins to adhere to the integument, the method then to prevent scars will be to make a longitudinal incision, before the integuments are spoiled, with a knife, and press out all the softened gland. The cavity will then granulate and heal, and nothing remains but a white line. If the gland be left to pursue its course, and, still worse, if poultices be applied, or, if much inflamed, and tincture of iodine be used, the gland adheres to the integument, which becomes absorbed and destroyed; and, after healing, the wound becomes puckered, arising from loss of substance: hence the scar.

Empirical treatment of disease, and more especially of scrofula, is often absurd. Heberden, in his "Commen-

taries," writes as follows :—" It has been an old dispute among physicians whether the empirical or rational method of curing disease was to be preferred. If by the empirical method be meant that which is founded on facts recorded by others or observed by ourselves, it must be allowed that by this means only has the practice of physic been established. Facts and repeated experiments have alone informed us that jalap will purge and ipecacuanha vomit ; that the poppy occasions sleep, and bark will cure an ague. If we examine the whole *Materia Medica* and the whole practice of physic, we shall not find one efficacious, simple, nor one established method of cure which was discovered or ascertained by an other means."

The constitutional treatment of scrofulous affections may be dismissed in a few words :—Plenty of out-door exercise, residence, if possible, at the sea-coast ; and, as regards medicinal agents, cod-liver oil, syrup of the iodide of iron, iodide of ammonium, iodide or potash ; or, in some cases, Neligan's solution of arsenic, iodine, and iodide of potash. A good purgative, as recommended by Mr. Milton, containing calomel, is also of service, given about every four days. In some cases, tincture of iodine, administered in sherry, answers very well ; or used locally, five to eight drops being injected, with a hypodermic syringe, into an enlarged gland.

For several years, various plans of treatment had been tried at the Deaf and Dumb Institution, Belfast, for the purpose of preventing the ravages of scrofula. In the year 1862, it was determined to try linseed, it being well known to contain a large amount of oil, and excellent

nutritive matter, given combined with bran. It has been estimated that as much as twelve per cent. of nutritious matter is contained in bran, and this matter is commonly called by chemists gluten; but M. Mége, Mouries, has found this substance to consist of a vegetable ferment, or metamorphic nitrogenous substance, and which he has named *cerealin*, and another vegetable substance called *casein*.

Cerealin, which I may call the active principle of bran, is obtained by washing bran with cold water, in which fluid it readily dissolves, and may be precipitated by alcohol. As contained in bran, it is an active ferment on starch, and glucose producing the lactic and butyric changes, but never alcohol.

This substance, then, being a special solvent of starch and gluten, is combined with linseed, as in the following formula for one quart of the soup:—Take of linseed, half an ounce; fine bran, one ounce; water, one quart. Boil for two hours, and strain; then add beef, from half a pound to a pound, and make into a soup, with vegetables, &c. This soup is given at dinner, four days in the week, to all the inmates; and, since its use began, chest affections, and dyspeptic attacks, have not been so frequent as formerly.

For delicate children of a scrofulous diathesis, “wheat phosphates,” which is really cerealin, should be given with milk, especially, as pointed out by Dr. Klencke, of Leipzig, that the milk of stall fed cows, contains very little sugar, and that the butter and casein are diminished, whilst the albumen is often as high as 15 per cent.

Moreover, stall-fed cattle are liable to become tuberculous, as testified by Dr. Carswell. Scrofulous children are more liable than others to extensive eruptions and sores after vaccination, notwithstanding the most careful selection of lymph. In such cases, vaccination, like any other irritation, however harmless, may in rare cases excite the development of scrofula in the skin. The scrofulous constitution is hereditary; hence, several members of the same family may have obstinate skin affections from this cause after vaccination. Healthy children have been vaccinated from children known to be diseased in various ways, without the former being in any way affected. M.M. Guersant and Blanche assert that M. Taupin vaccinated a large number of young people at the Children's Hospital, in Paris, with vaccine lymph taken from subjects affected with itch, scarlatina, measles, chicken-pox, small-pox, rickets, scrofula, consumption, and various skin diseases, &c., without communicating to the patient any of those affections. "The hypothesis that scrofula was transferred by the vaccination, from one child to the other, is false. Sometimes children become scrofulous after vaccination, although the lymph has been taken from the arm of a perfectly healthy child; and sometimes children remain perfectly healthy after being vaccinated with lymph from a decidedly scrofulous child."

The acetate of soda, eight grains to the ounce, I have used as an application in strumous affections, but is inferior to the iodide of lead ointment.

Dr. Carl Friedlaender, of Strasbourg, published a valuable paper, which has been translated and condensed by Dr. Von Petershausen for the *Detroit Review*. I avail myself of this to furnish an epitome of Dr. F.'s views. He says that in scrofulous diseases of skin and bone, in scrofulous ulcers and abscesses of the skin, as well as in caries, there is regularly to be found an abundant eruption of tuberculous knots. All scrofulous diseases are, according to this, accompanied by the development of tubercles. Aside from the light thrown by these investigations upon the question about the relation of scrofulosis and tuberculosis, we are led by the late discoveries to a new territory—*local tuberculosis*. In many instances the scrofulous-tubercular diseases appear as primary affections, and do not affect other organs, while in others they may result from a tuberculosis of other organs. It is well known that lupus generally attacks persons in good health, and that this disease seldom leads to an infection of other organs besides lymphatic glands. And yet lupus consists principally of confluent little tubercles, with giant cells and epitheloid elements. Though local tubercular processes had no general malign character, they are of considerable local malignity. Spontaneous healing of lupus is rare, and will be observed only after extensive destructions. In scrofulous abscesses and ulcers of the skin, it is not, as in lupus, the cutis, but the deeper layers of the skin, which become destroyed. To promote their healing, the tubercular nodules must be removed, also the undermined skin; then healthy granulating tissue will form, and from this a scar. The

process in tuberculous inflammation of the joints is analogous to this, and likewise that in local tuberculosis of the lymphatic glands and in the testicle, save in the latter cases, large, cheesy masses are formed. The cheesy degeneration in these cases is similar to that of tubercles in the spleen, liver, lungs, brain, &c., and begins either in the centre of an aggregation of tuberculous nodules, or appears in a larger part of an organ, in which tubercles are interspersed.





CHAPTER XV.

ADDISON'S DISEASE.

IN the following I intend to glance briefly at a few of the principal views entertained regarding the pathology and skin changes observed in "Addison's disease." Dr. Hayden * says that "the pigmentation of the skin in "Addison's disease" results probably from either arrest of the process of molecular disintegration of the coloured cells of the cutis, or from excessive destruction of the red blood corpuscles, and consequent abnormal deposit of the escaped colouring matter, or pure hæmatin in the rete-mucosum in its passage to the outer surface of the cuticle, whence it is to be discharged from the body." Anæmia, Mr. E. Wilson believes, is a special feature, and the usual cause of pigment changes, giving rise, as a secondary result, to debility of the nervous powers.

According to Dr. Laycock, an excessive deposit of pigment is brought about by imperfect oxidation; the carbon is not burnt off, as carbonic acid, owing to imperfect elimination. But, in the words of Brown-

* *Dublin Quarterly Journal*, February, 1865.

Séguard, when the circulation of the blood is interrupted by vaso-motor spasm, nervous force can be transformed into chemical force, as in the salivary glands. An irritation of the nerves of these organs will for a time after the stoppage of the circulation, produce a secretion of saliva.

With these preliminary remarks, I proceed to the consideration of *lentigo* and "Addison's disease." The former—often improperly called "sunburn"—is a deposit of pigment in the rete-mucosum, often congenital. M. Jéanin considers that this affection is the same as chloasma, which disease may be correctly divided into non-parasitic and parasitic varieties—the former being common in pregnant females, disappearing after their confinement. Sometimes it persists, and is more apparent at the catamenial periods. It may, therefore, be taken for granted, as I shall endeavour hereafter to prove, that the deposition of pigment depends upon the influence of the ganglionic nerves; and, in Addison's disease, it is that portion of this system, called the solar plexus, which is involved. If it be not the sympathetic system, which presides over organic life, and, consequently, nutrition of the tissues, how can we account for the sudden increase of pigment at puberty in the scrotum and perinæum, or, during pregnancy, in the areola surrounding the nipple, or the absence of pigment in canites, as in the well-known case of Marie Antoinette, whose hair became grey from grief?

Now, in "Addison's disease," the principal symptoms may be said to be feebleness, gradual bronzing of the skin, inveterate vomiting, pain over the region of the

stomach, and loss of appetite; to which may be added, according to Tanner,* indications of disturbed cerebral circulation, and, after an average duration of eighteen months, death from extreme anæmia and exhaustion. The bronzing, not, as commonly said, due to disease of the supra-renal capsules; but, according to Jaccoud, to disease of the solar plexus, the great centre of the sympathetic system. Now, there may be:—Firstly, bronzing with lesion of the supra-renal capsules; secondly, bronzing without lesion of the supra-renal capsules; and thirdly, lesion of the supra-renal capsules without bronzing. At least such are the results arrived at by Jaccoud, who has examined 127 cases of the first division, 17 of the second, and 58 of the third. From these facts Damon† considers that “these series of phenomena, of which ‘Addison’s disease’ forms but a part, may be regarded as symptomatic only of some functional or organic disturbance of the ganglionic nervous system, especially of that portion denominated the semi-lunar ganglion, or solar plexus; that this disturbance may have its origin in the nervous centres of these ganglia, or in the organs in immediate connection with them, and that this portion of the nervous system being the regulator of nutrition, or organic life, and of the cutaneous secretions and excretions, becomes thereby the cause of disturbance of these functions, when it is itself diseased.” In the majority of cases contained in the first series, obstinate vomiting, we are informed, together with

* Index of Diseases.

† Lesions of the Skin.

persistent lumbo-abdominal pain, constituted the prominent symptoms. To these may be added occasional headache, which is now known to be a neurosis of the sympathetic, vertigo, convulsions, and muscular twitching of face and forearms, delirium, coma, and palpitation. With regard to the latter, the experiments of Cyon and Ludwig, on division of the splanchnics, the most important vaso-motor nerves in the body, which exercise the greatest control over the widest system of vessels, show that an influence is exerted upon the heart, apparent by the increase in the frequency of its beats.

Dr. Frank Smith,* of Sheffield, says that "all morbid pigmentations of the skin are to be classed in two divisions:—

"I. Pigmentations due to temporary access of uromelanoid pigment, or pigment-forming, substances in the blood.

"II. Pigmentations due to the abnormal attraction of the normal pigment, or pigment-forming matter to the skin.

"Of this second division there are two sub-divisions:

"(a.) Pigmentation, in which the pigment is attracted to limited portions of the skin.

"(b.) Pigmentation, in which the pigment is distributed more or less over the whole cutaneous surface.

"Of the first division, I know one example only. The morbid pigmentation of the skin, which is the accompaniment and consequence of the accumulation of pigment in the spleen, that occurs in some cases of malarious fever:

* Journal of Cutaneous Medicine, vol. iv.

a phenomenon described by Frerichs, in his section on the pigment liver. In these cases, it would appear that the blood accumulated in the spleen stagnates probably is extravasated; it undergoes decomposition, its hæmatocrystalline being converted into a uromelanoid pigment. This pigment may, under certain conditions, be carried into the general circulation *en masse*, and may be deposited in the liver, brain, kidney, and skin, constituting a pigmentary embolism; or some product of the stagnated hæmatocrystalline, intermediate between it and the uromelanoid pigment, such *e.g.* as urochrome, may be taken up and oxidised into the final pigmentary product in any of the regions above-mentioned. Parenthetically, I may say here I should like to know whether it is on record that, in cases of melanotic cancer, pigmentation of the skin has been observed. It seems possible that these tumours might act as reservoirs of pigment, just as the spleen has been shown to act; in this case, a second example might be added to the first division."

In "Addison's disease" the supra-renal capsules are occasionally transformed into white albuminous masses, of a lardaceous consistence, for, as Dr. Eade* has informed us, "the partial removal of nerve force is to allow the parts supplied to take on a lower form of vital action, and the degeneration will, of course, vary with the cause of the deprivation, with its intensity and seat, as well as with the constitution of the individual. Ordinary complete removal of motor or sensitive nerve influence, of course, produces ordinary paralysis, but removal of nutritive nerve influence produces other and distinct

* *British Medical Journal*, March 13, 1869.

effects." Sometimes the branches of the semi-lunar ganglia are united ; thus changes in the condition of these nervous centres, from whatever cause, may implicate one or more of the organs with which they are connected. No doubt the ganglia may become affected by reflex action from a remote or near organ ; but, as is well known, the supra-renal capsules are merely embryonic structures, and of little use, as their occasional absence proves. "Addison's disease," and "Grave's disease," which is a neurose of cervical sympathetic, are like each other in many particulars, both being affections of the sympathetic. The latter complaint bears a resemblance to the former in one or two particulars (my information being derived from "Trousseau's Clinical Medicine.") For instance, the exophthalmos most marked at menstrual periods, and by aid of the ophthalmoscope, the retinae were observed to be of a bright red colour from injection of the vessels, also on each side of the *optic papilla* pigment was deposited in semilunar masses, almost black in hue. In "Grave's disease," like "Addison's," there is marked difficulty of breathing, the patients are likewise generally anæmic ; when the patients are females, chlorosis, a disease of the sympathetic system, according to Dr. Hammond, is usually present. Thus we see that disease of the supra-renal capsules in "Addison's disease," and of the thyroid gland in "Grave's disease," are merely symptoms in these neuroses of the sympathetic.

Dr. Beigel, from whose paper, in Vichow's *Archives*, I take the following, believes that "eruptions of the most varied kinds are frequently found in diseases of the

nervous system, and epileptics, with a healthy skin, are most decidedly the exception. At least, such was the case with several hundred hospital patients whom I have examined. *Albinismus*, *nigrismus*, *psoriasis*, *herpes*, and *acute acne* were daily occurrences ; and, if a distinct form of skin disease were wanting, at least the skin itself was rough, and in an unusual condition. Pigment anomalies can, as is known, be more frequently and distinctly seen on those parts of the body which, in their normal condition, are distinguished by a greater amount of pigment, as the region of the nipples, scrotum, the orifice of the anus, &c. This circumstance caused me to examine another portion of the body in nervous diseases, which, under healthy conditions, so to speak, affords a receptacle for pigment cells—I mean the fundus of the eye—by which it has already been demonstrated by ophthalmologists that inflammatory antecedents from other intraocular pathological processes interfere with the normal distribution of pigment.

“ Among epileptics, and individuals who have long suffered from vertigo and other affections of the central nervous system, total nigrismus of the fundus of the eye is relatively frequent. The entire fundus appears of a dark colour, and the vessels can only be distinctly recognised when they are followed out from the optic nerve, which latter, in a remarkably beautiful manner, rises from its dark bed.

“ With Negroes every form of deficiency of pigment must appear more striking than with Europeans, in in whom the arising contrast cannot be so marked.

Partial albinismus was, therefore, first observed among blacks, and many authors have, up to the most recent times, denied the occurrence of partial deficiency of pigment in Europeans. The so-called Elstic Negroes have been described in manifold ways. I am indebted for a photograph to the kindness of the Rev. J. G. Wood, editor of Routledge's 'Natural History of Man.' The description of the individual in question is found in a book of travels by Captain Burton.* 'Before a hut at Accra,' says the author, 'sat a singular being, a checkered man, as he would be described in ethnological and dermatological works.' The greater portion of his skin was of a dirty white appearance, the rest consisted of succession of dark coloured spots. A few years before, the man was a Negro, but gradually changed into a white one, and when we saw him the rete mucosum seemed again returning to its normal state. Besides the important extent of the discoloration in this individual, the symmetry, with which the change of colour took place, is still of interest. The middle of the forehead and nose, right and left cheek, both ankles, the last phalanges of both feet, the breast, and also the hair of the head are white, while both shoulders remained black. From different books of travels, which speak of Albinoes among blacks, the opinion seems to prevail, that albinismus in many families is hereditary, so that the greater portion of those who show the abnormality are miserable, sickly subjects. We refer to the case reported by Boyle† of a native whose skin had an

* *Wanderings in West Africa, from Liverpool to Fernando Po.* London, 1863.

† *Frederick Boyle's Adventures Among the Dyaks of Borneo.* London, 1865.

unhealthy, dirty white colour, which was interspersed with large freckle-like spots. The colour of the hair could hardly be described; the eyes, on the contrary, were of a pale blue; he was unable to gaze with them, as he was blinded by a full flood of sunlight; consequently he could not see well until the sun was low in the horizon. He looked undoubtedly like a white, and the Dyaks of Magis Malipa cracked their jokes with him. The affection, according to Boyle, is not rare at Borneo. The parents of the individual just described have the national complexion, on the other hand all his brothers and sisters are Albinoes. Also, many of his ancestors are said to have borne the same discoloration.





CHAPTER XVI.

DERMATALGIA.

DERMATALGIA is a neuralgic affection of the skin, often associated with that proteiform malady, hysteria. In this case, it is observed most frequently on the left side, and is manifested by increased sensibility to touch. In the hysterical variety, the affection is said to be often due to "spinal irritation;" and, according to Trousseau, in neuralgia there is always tenderness, on pressure, over the spinous processes of the vertebræ, accompanied by cutaneous hyperæsthesia at the points of exit of the nerve-trunks. Again, this form may arise from, and accompany, chlorosis; it also may arise from amenorrhœa, dysmenorrhœa, and retro-flexions of the uterus,

Chlorosis, Dr. William A. Hammond* maintains, is primarily and essentially a disease of the nervous system, and that the changes which sometimes—by no means invariably—take place in the composition of the blood are consequences of the nervous disorders, and not its causes. "I do not contend," he says, "for the invariable

* *Journal of Psychological Medicine.*

occurrence of chlorosis without deprivation of the blood. I insist, however, upon the point, that chlorosis is a disease of the nervous system, and that, when morbid changes take place in the blood during its continuance, they are always secondary, and directly the consequences of the nervous derangement; and that, therefore, they are nothing more than accompaniments of the chlorotic condition; also, that chlorosis frequently runs its course without any of the symptoms of pathological changes in the blood being manifested. In the enunciation of this opinion, I claim nothing on the score of originality.

* * * I merely wish to present the view more connectedly and prominently than has yet been done."

All hysterical affections have the peculiarity of local tenderness about the part suspected to be the actual seat of the disease, and which extends over a considerable surface; and, although dermatalgia is limited to one particular spot, still, in hysterical females, may be erratic. That the disease is limited to the skin, can be proved by the fact that firm and deep pressure does not occasion as much pain as is complained of when a portion of the affected integument is raised between the fingers, so as not to press on the parts beneath.

Sir B. Brodie* has remarked that the hysterical neuralgic affections are often consequent on some trifling injury, or accident; and, according to the same authority, dissections of the affected part throw no light on the disease, the various nerves being observed in a natural condition.

* *London Medical Gazette*, vol. iii.

Exposure to draughts of cold air, and rheumatism, likewise occasion the appearance of dermatalgia. The part attacked may become erythematous, the pain being frequently associated with vascular disturbance, such as partial congestion. It is sometimes periodic, when it is probably due to an inflammatory condition of the cutaneous nerve to which it corresponds. Parts of the body covered by hair, as the head, are favourite situations.

According to Marce,* severe dermatalgia is one of the first symptoms of commencing myelitis. I have observed this affection in a case of meningitis.

In the treatment of dermatalgia, local and constitutional means are to be used. Take the hysterical variety first: If the neuralgia arises from any derangement of the uterine functions, it will be necessary first to rectify that affection. In these cases, the patients are frequently troubled with dyspepsia, which must be treated by appropriate remedies. To lessen the irritability and excitability of the system, anti-spasmodics and tonics are useful. A good form is a pill containing valerianate of zinc, quinine, and compound galbanum pill, or one containing musk and camphor. For flatulence, which is a common symptom, the compound aromatic powder of chalk is an admirable preparation. To produce local anæsthesia, and by this means afford temporary relief, chloroform or aconite liniment may be prescribed.

If rheumatism be the cause of the disease, alkalies are indicated, and the kidneys are to be made to act well. The bicarbonate of potash, to which, if the stomach is

* *Des Alterrations de la Sensibilité.* Paris, 1860.

irritable, a few drops of hydrocyanic acid may be added, is frequently of service, whilst chloral, to procure sleep, is useful. In a patient of mine, affected with dermatalgia of the head, and who was pale, weak, and anæmic-looking, I derived the greatest benefit from large doses of carbonate of iron—the old remedy for intermittent neuralgia. As his bowels were generally constipated, and as the iron would tend to increase it, he had a pill of podophyllin, rhubarb, and extract of Indian hemp at bedtime, for a short period. Locally, the application of small blisters, the raw surface being dusted with a little morphia, is of benefit. The *modus operandi* of blisters in neuralgia is thus stated by Dr. Chapman* :—“ The irritation they (blisters) set up is conveyed to the sensory nerve centres of those nerves which have been excited, a fresh afflux of blood is induced in those centres, the excitement spreads throughout the neighbouring nerve cells ; those presiding over the nutrition where the blister is applied flash back from the centre to the periphery the excitement in which they are sharing, and light up the previously normal process of textural life into intense local inflammation with the consequences copious serous effusion. In some cases the bromide of potassium is useful ; also, especially in the hysterical variety, oxide of zinc. The preparations of zinc are to the nervous system what iron is to the blood—viz., the best of tonics. Of course, if myelitis is suspected, it will be necessary to put the patient under a course of mercury, and the green iodide or bichloride, are the preparations to be preferred.

* *Medical Times and Gazette*, March 27, 1869.

Many forms of skin diseases are benefited, and various distressing symptoms relieved, by the use of morphia, especially the one under notice. Its advantage over opium is considered to be due to its occasioning a less degree of vascular or arterial excitement, seldom causing any headache, vertigo, or constipation. If morphia be taken in an overdose, itching and tingling of the whole cutaneous surface is often experienced, accompanied by more or less cerebral excitement. Dr. A. T. Thompson considered morphia to act as a sedative to the heart and a stimulant to the nervous system ; moreover, augmenting the exhalant functions of the skin, which, in certain diseases, as prurigo, makes this salt doubly valuable. The preparations used have been the hydrochlorate, bimeconate, and acetate. The last is best suited for hypodermic injection. None of these preparations are safe for young children—indeed, it is better to substitute the bromide of potassium.

In dermatalgia, or that neuralgic condition of the skin, often hysterical, as well as in the neuralgia of herpes, the hypodermic injection of morphia is of great benefit, being free from one objection to the use of opium—viz., that morphia does not tend to increase the existing congestion of the vessels as present in herpes. For the same reason it may be used to procure sleep in urticaria, but given internally ; as the hypodermic method has been known to produce the eruption of wheals, whether from the morphia or the irritation and wound caused by the needle in a sensitive and hyperæsthetic skin, I cannot say. We are all familiar with the necessity of prescribing sedatives in

certain cases of eczema—liq. opii, bromide of potassium, and recently, chloral, have been used. Morphia is no new remedy for this disease, but it is free from the objection against the use of opium, which frequently interferes with the already impaired digestive functions, stimulates and causes headache, and allows of no sleep; moreover, being partly eliminated by the sweat glands, actually makes the eczema much worse. This is frequently seen when the patients have been prescribing for themselves before applying to a medical man, their usual dose being thirty drops of tinct opii once or twice daily. In such cases morphia may be substituted, and that with advantage. We have it, on the authority of Mr. Skey, that opium is valuable given internally in chronic ulcerations of the lower extremities, and I believe that morphia is equally so. In cancer, to soothe and assuage pain, morphia is daily prescribed by the profession. In small-pox, when accompanied by much irritability, inveterate itching of the skin, loss of sleep, and tendency to convulsions, morphia—either the acetate hydrochlorate, or bi-meconate—may be prescribed in a full dose. The last mentioned I frequently ordered during the late epidemic in Belfast. Lastly, it only remains to say that the pain of a blister, especially if large, and to be applied to a “nervous” person, may be prevented by the hypodermic injection of morphia.





CHAPTER XVII.

ANÆSTHESIA.

ANÆSTHESIA of the skin is generally a secondary affection. Prolonged hyperæsthesia may, in some instances, cause it; and we are informed by Dr. Althaus* that these two conditions have been too much separated, seeing they are often allied. This gentleman has seen cases of neuralgia with complete anæsthesia of the skin of the affected part. Trousseau† states:—"There is another phenomena, quite the reverse of the above (hyperæsthesia), which sometimes, although more rarely, exists in neuralgia—namely, anæsthesia. It often follows on idiopathic non-spinal neuralgias—that is, on neuralgias apparently of rheumatic origin, or due to a slight lesion of the cord. At the outset, and often for a lengthened period, there is only an exaltation of sensibility; but when the affection has lasted a long time, the exaltation is replaced by a diminution; and, lastly, by a complete loss of sensibility. In such cases, I admit, there is something more than a neuralgia; and the anæsthesia may be regarded as the

* *British Medical Journal*, Dec. 19, 1869.

† *Clinical Medicine*, Part II., p. 85.

consequence of a change in the structure of the cord, or of the nerve-trunk, as occurs in cases of neuritis. It is still pretty frequent to find cutaneous anæsthesia succeed hyperæsthesia, especially in herpes zoster."

Again, Dr. Brown-Sequard* has "observed neuralgia, or irritation of the centripetal nerves, occasioning paralysis and anæsthesia by reflex action. He mentions a case of anæsthesia of the lower limbs, due to sciatica; also, a case of M. Notta, of anæsthesia of the arm, arising from cervico-brachial neuralgia."

Indeed, many cases of paralysis can be traced back to hyperæmia and œdema of the neurilemma, as well as to rheumatism. Anæsthesia frequently complicates sciatica. Dr. Anstie† states that, in the early stages of sciatica, there is almost always numbness of the skin previous to the first outbreak of neuralgic pains, and during the intervals between the attacks; the tactile sensibility is likewise much diminished. Affections of the vaso-motor nerves are considered by many to be the cause of anæsthesia, the office of these nerves being to preside over the blood-vessels and nutrition of the ultimate tissues. But some cerebro-spinal nerves may fulfil the same function, and, being abnormally affected, may give rise to the same disease; although, to a more limited extent, an instance of this may be observed in the chorda-tympani presiding over the secretion of saliva, which secretion, Ludwig asserts, is regulated by the fibres of the fifth nerve as the excitatory, and the sympathetic as the inhibitory. Though

* Lectures on Central Nervous System, page 164.

† Reynolds' System of Medicine, vol. ii., p. 734.

the sensibility to pain may be lost or diminished, the application of heat or cold may be distinguished. On whatever part anæsthesia occurs, alteration in nutrition takes place eventually. Dr. Althaus* has recorded a case in which the first symptoms were inflammation, afterwards compression and atrophy of the fifth nerve; then loss of muscular sensibility about the face. The conjunctiva was anæsthetic, and the sense of touch, as also temperature, absent. If the head is affected, the part may become bald. The local causes of insensibility of the skin are thus enumerated by Dr. Damon†:—"The disease or injury of nerves; neuromata; pressure of exudations upon the cutaneous nerves, the effects of heat and cold, and chemical agents. The internal cause of anæsthesia of the skin are diseases of the brain and its membranes; also of the spinal cord; pressure from extravasation upon the nervous centres; the effects of metallic poisons upon the system, and many chronic diseases, which produce alteration in the blood and tissues. It is a well-known fact that several agents, such as sulphuric ether, chloroform, and aconite, produce more or less anæsthesia, of an exceedingly temporary duration, when applied to limited regions of the skin. * * *

Exudations upon the cutaneous nerves, when they pass over ridges of bone, and in close contact with them, or through bony foramina, may cause so much pressure as to produce, first, hyperæsthesia, or neuralgia, and afterwards anæsthesia of those parts of the integument to

* *British Medical Journal*, Dec. 19th, 1868.

† *Neuroses of the Skin*, p. 87.

which these nerves are distributed. This happens to the ulnar border of the hand, when there is pressure from exudation, or callous at the point where the ulnar nerve crosses the humerus. * * * Those (diseases) in which the phenomena of anæsthesia is best marked, and is best known, are :—Ataxy, lepra anæsthesia, syphilis, pellagra, the “spedalskhed,” some cases of alopecia areata, the psoriasis of washerwomen, purpura, and typhoid fever. Diphtheria, chlorosis, albuminuria, and that morbid array of nervous symptoms known as hysteria, must be added to the above list.” Thus, many neuroses of the skin are merely reflex phenomena, arising from some change or irritation in distant organs, and can be divided :—Into those which act directly on the nervous centres, such as pressure and inflammation ; and into those which act through the medium of the blood. Amongst the former are cerebral hæmorrhage, tumours of the brain and spinal cord, and chronic encephalitis and myelitis. The causes which act through the blood are the poisonous effects of certain metallic and other substances, which have been introduced into the system either by accident or as medicine.

Dr. Southworth correctly remarks that “the term anæsthesia, as applied to the skin, denotes diminution, or loss of the special sense of touch, whilst analgesia expresses the abeyance of the sensation of pain, Though the former does not exist without some degree of the latter accompanying it, yet analgesia may be present alone. Both are symptoms of many organic and functional diseases of the nervous apparatus distributed to the skin.

They may exist as peripheral, central, or as transmissional forms, each requiring different methods of treatment. These symptoms may be diffused over a large extent of surface, or confined to one or several circumscribed portions, in either case being unilaterally, or symmetrically distributed. The special causes producing anæsthesia, and analgesia as well, are—the influence of extreme cold, the nervous sedatives of vegetable origin, such as aconite, veratria, &c.; certain chemicals, as cyanide of potassium, carbolic acid, chloral, chloroform, ether, &c.” Lead poisoning frequently produces analgesia, whilst the sense of touch remains. Diphtheritic patients are liable to anæsthesia, either alone, or in conjunction with motor paralysis. When analgesia is extensive, it frequently affects the mucous outlets as well. Occasionally, the tongue alone is affected, the sense of taste being also lost. When the Sneiderian membrane is analgesic, the sense of smell is also in abeyance. Malaria must also be mentioned as productive of anæsthesia in certain cases. The amount and degree of anæsthesia is determined by the æsthesiometer, or by the use of the ordinary draughtsman’s compass. Corresponding portions of the surface of the body should be compared with each other. Analgesia is easily ascertained by the introduction of a needle into the skin; the degree of pain produced will show if it is complete, or only partial. Motor paralyses are not infrequently accompanied by the symptoms under consideration; recovery being more or less complete as the motor power is restored. Jaksch states that four-fifths of his cases of anodynia were females, and that the

disorder prevailed mostly between the sixteenth and thirtieth years of life, Jews being more liable to it than others.

Injury to a large nerve trunk may cause paralysis, and produce increased heat and redness of the part, often followed by exudation and ulceration. Paralysis sometimes leads to atrophy and anæsthesia, as before remarked.

Diminished sensibility of the skin is occasionally followed by *cacotrophia cutis*, or want of healthy nutrition of the skin, which is discoloured, dry, but not marked by any visible eruption. The following are the principal diseases in which anæsthesia is present:—*Morphæa*—In this disease, the morbid deposit, pressing on branches of cutaneous nerves, occasions more or less anæsthesia, limited to the part diseased. In *scleroderma*, the same state of the skin is exhibited. Dr. Tilbury Fox considers this disease to be a hyper-plasia of the areolar tissue invading the normal structures, and gradually obliterating them, together with the nerves, vessels, hair-sacs, &c. The insensibility of the affected part, we are informed, appears to be due to the nerves being closely enveloped in the deposited material. *Locomotor-ataxy*—Anæsthesia of the skin occurs in this affection, during the progress of the disease, commencing in the extremities, and gradually extending towards the body. The mucus membrane of the mouth, nose, and eyes may also be affected. In some cases of locomotor ataxy, herpetic eruptions appear chiefly on the thighs, legs, and penis, and which may be accounted for by allowing the involvement of spinal nerves to be the cause, due to changes of structure in the cord,

viz.—substitution of connective tissue for the normal nerve tubes in the posterior columns and the posterior nerve roots. This condition is preceded by abnormal vascularity of the posterior columns. *Hysteria*—Hysterical anæsthesia is met with in females. Dr. Handfield Jones informs us—"That we have evidence enough," he thinks, "to show that causes of exhaustion of nerve power may generate all kinds of morbid phenomena—from the greatest hyperæsthesia, muscular agitation and convulsions, to anæsthesia, analgesia, and paralysis." *Syphilis*—Nodes pressing on branches of nerves may cause more or less anæsthesia. Syphilitic disease of the spinal cord may also do so. *Pellagra*—The insensibility of the skin appears to be due, in this disease, to softening of the white lumbar portion of the cord, as observed by Landouzy. The membranes of the brain are often congested. *Acrodynia* is attributed, in some cases to eating the bread made from ergoted rye, and the anæsthesia seems to depend on softening of the cord, occasioned by contraction of the vessels, thus interfering with its nutrition. In three diseases—viz., ataxy, pellagra, and acrodynia, there is softening of the white portion of the spinal cord, which is considered to be the conducting structure. *Spedalskhed*—Bœck and Danielssen have stated that in this disease the insensibility of the skin is at first limited, but gradually spreads, and is due to disease of the cord.

Leprosy, especially the anæsthetic variety, insensibility to touch, is here one of the first symptoms. Whatever the "poison" is, it, at any rate, acts on both the

peripheral plexus, as well as on the nerve-trunks. Dr. F. Lente,* of New York, writing on the diseases of Jamaica, states that leprosy commences with neuralgic pains; but as the disease exhibits itself these disappear, and are replaced by anæsthesia. There is no inflammatory stage, and the anæsthesia soon becomes so complete that the extremities often sustain serious burns before the patient is aware that anything amiss is going on. Dr. Bowerbank, of Jamaica, pointed out to Dr. Lente various mental conditions of the lepers.

Under the head of treatment of neurotic cutaneous diseases, I may notice the employment of galvanic currents. For the curable cases of cutaneous anæsthesia, faradization is a specific, if any remedy can be said to be a specific for anything. Even cases that depend on incurable central lesion may improve very decidedly under treatment. In cases of paralysis of motion and sensation, the sensation may be partially or completely restored under electrical treatment, even when the loss of motion remains unchanged.

Dr. George M. Beard, of New York, calls attention to the Electro-Therapeutics of Dermatology. He uses broad electrodes in the treatment of diseases of the skin. The galvanic current appears to act more efficiently and to fulfil a larger variety of indications than the faradic. The reason of this will be sufficiently clear to those who understand the general differential indications for the use of the two currents. The peculiar electrolytic action of the galvanic current, which the faradic current possesses

* *Medical Mirror*, Dec. 1868.

to but a feeble degree, is indicated in the discussion of tumours. For the relief of the symptoms of itching and pain, the faradic current is frequently sufficient, especially in prurigo; its effects are also curative, but to a less degree than the galvanic current.

The treatment of anæsthesia is unsatisfactory, and depends upon the cause of the disease. When it is produced by certain diseases which act through the medium of the blood, causing profound alterations in this fluid, and its effects upon the nutrition of the nervous centres, our chief reliance is to be placed in the different preparations of iron, of quinine, and in the mineral acids. A tonic regimen must be subjoined to these remedial measures.





CHAPTER XVIII.

ELEPHANTIASIS.

ELEPHANTIASIS ARABUM attacks most frequently the lower extremities. There is an excessive growth of connective tissue. In elephantiasis the part affected is hypertrophied, the skin being covered with a peculiar-looking crust—the disease usually terminating in extreme ulceration, at which stage hectic fever is generally present. Fuchs has proposed the name *pachydermia* for this disease, and Mr. E. Wilson *spargosis fibro-areolaris*. True elephantiasis arabum selects the corion for its seat; but there are several spurious varieties, which appear to arise from angioleucitis. The exudation from the lymphatic vessels subsequently becomes organised into white fibrous tissue, the affected limb becoming hypertrophied, owing to a deposition of a peculiar “tubercular matter” into the areolar tissue, and which, according to Simon, contains numerous fat cells. Dr. Chisholm, in his work on “Diseases of Tropical Countries,” considers elephantiasis to arise from “hyper-oxygenation, or a peculiar state of oxygenation of the human system within the tropics during hot and wet weather.” I believe that the modern

doctrine, with regard to this disease, is, that it is of blood origin—a view which was first advanced by Mr. Butcher, of Dublin; and in a case of this disease, admitted into Mercer's Hospital, in 1861, I saw that gentleman tie the femoral artery in Scarpa's space, and which cured the disease. The tying of the femoral artery was first proposed by Dr. Carnochan, of New York; and the operation has since been performed by Mr. Bryant and Mr. Statham, of London; Butcher, of Dublin; Alcock, in Staffordshire; Fayer, of Calcutta; and Buchanan, of Glasgow. All of the above cases, with the exception of Dr. Fayer's, proved successful. Dr. Fayer's patient died of pyæmia. The latest paper on this interesting disease is by Mr. E. Wilson, in the "Journal of Cutaneous Medicine," No. 2, page 184, and in the following remarks I shall avail myself freely of his communication:—In Bermuda, elephantiasis is of a trivial character, and is called the "rose." It is only in the South that it acquires the larger proportions of Barbadoes leg. The "rose," which is a slight form of cellulitis—in fact, a dermatitis sub-cutenea—is painless, of slow progress, and usually assumes a periodic character, accompanied by febrile symptoms and gastric derangements. As the disease advances, swelling of the affected integument, together with hardness, take place. Sometimes patches of an œdematous character, and which contain serum, are present. This fluid has been analysed by Wiedel, who found it to be a milky fluid, which contained, as solid ingredients, fibrine, albumen, fat, chloride of sodium, phosphate, and carbonate of lime. With regard to the

causes of elephantiasis, in countries where it is not endemical, Mr. Wilson considers it to depend on a variety of local lesions, determinating a morbid function of the vascular motor nerves of the parts; and, in the case of Mr. Bryant's patient, scarlatina seemed to be the predisposing cause; another followed *phlegmasia dolens*, and cases have been recorded of an attack of erysipelas, predisposing to this disease. The West Indian practitioners consider that elephantiasis depends on disease of the veins and lymphatics, and in bad cases the inguinal glands have suppurated. A section of the diseased skin usually exhibits white, fibrous tissue, infiltrated with serum, the cutaneous papillæ being greatly enlarged; and in very chronic cases the muscles have degenerated into fat. Cazenave has reported a case of elephantiasis, in which the leg was amputated, and in a short time the disease appeared in one of the patient's arms. Mr. Day* records his observations, as regards the prevalence of elephantiasis arabum in British Cochin, as follows:—

In 24 Indo-European families, 1 in 18·75 affected.

In 71 Native Christian families, 1 in 17·09 affected.

The right lower extremity is chiefly affected. A *venereal* variety has been described that principally attack the nymphæ and clitoris.

The treatment formerly recommended in this disease was, in the first stage, calomel and opium, pressure by bandages, the vapour bath, the various preparations of iodine, both internally and locally; and Mr. Day, of Cochin, has recommended a weak ointment of the red

* *Madras Medical Journal*, 1860.

iodide of mercury, as the most valuable preparation. Mr. Waring also speaks highly of this remedy. Arsenic has been also prescribed, but the only sure method of cure is ligature of the femoral artery.

Dr. Cockle* states, that in the cases of angeioleucitis, ordinarily observed, and generally resulting either from injury, or from the irritation of some specific poison, although the red riband-like band or cord extending to the nearest glands is seen, causing, at times, severe constitutional disturbance, resembling that described as peculiar to elephantiasis, still either extensive effusion of simple lymph, or permanent enlargement of the affected part, is of extreme rarity, indeed, almost an unknown result of such inflammation, and quite inadequate *per-se* to the production of the disease. Subsequently, Bouillaud and Cruveilhier, observing the immense œdema of the extremities, consequent upon obstruction of the femoral veins, and finding such effusion occasionally becoming solid, and undergoing conversion into fibrous tissue, regarded the permanent deformity as a secondary consequence of the obstructed venous current. The former pathologist, in the course of his valuable inquiries into the causes of œdema, met with the case of a young woman whose legs and thighs actually resembled those of an elephant in point of size, owing to complete obstruction of the cava and the femoral veins. Dr. Meigs has also known the enlargement of the extremity caused by *phlegmasia dolens* to persist for years. Indeed, a limb thus permanently enlarged would constitute the purest

* *British Medical Journal.*

type of local elephantiasis, and form a class of cases at times demanding treatment. Frequently recurring erysipelas, and even eczema, may occasionally be exciting causes of the disease, from the implication of the connective tissue, and adhesive phlebitis of the smaller veins. Syphilis and the paludal poison are, at times, more especially *influential*. Dr. Cockle has observed a case of chronic albuminuria, in which the skin of one of the enormously distended legs gave way, and constant drain ensued for nearly twelve months, preceding a fatal termination. Here the skin of the leg and thigh was exceedingly hard, brawny, and tuberos, with greatly diminished sensibility, giving the affected parts a somewhat elephantoid aspect. Of these alleged causes, however, none act with such uniform certainty in the production of the disease as to entitle them to a higher rank than that of "occasional" or "exciting." As Rhazes most accurately pointed out, there are two forms of Arabian elephantiasis—the white and smooth, and the brown and coarse—the former caused by "phlegm," or lymph, the latter by dark blood and knotted veins (to be distinguished, however, from simple varix). In the first form, the disease would seem principally to affect the deeper structures and dermic layers, giving rise, at times, to fatty degeneration of the muscular or even osseous tissues, or to a collection of viscid fluid, leaving the surface comparatively unaffected; while, in the second form, the cuticular aspect of the dermis is additionally affected, stretching the skin, and rendering it knotty, fissured, and otherwise diseased. Here the cuticular

sensibility is very much diminished, while in the smooth variety it mostly remains intact. It must, however, be borne in mind that the diminished sensibility is restricted to the part involved, and is, apparently, simply the result of the thickened cuticular surface, differing much from that more general anæsthesia which is so characteristic of one of the forms of Greek leprosy—*Lepra mutilans vel anæsthesia*. In this variety, the nervous cords are involved, as shown by the recent investigations of Studener. It must be admitted that genuine Arabian elephantiasis, at its outset, probably involves both the circulating and lymphatic systems, since more or less of local œdema usually heralds in the attack. This position, however, is disputed by Professor Allan Webb, who studied the disease on a very large scale in an hospital devoted to such cases in Bengal. He denies the participation of either veins or lymphatics, and describes the disease as commencing without these vessels, by the development of nuclei in a blastema, and their conversion into fibrous and elastic tissue, enclosing an albuminous fluid. This view derives support, to some extent, from Virchow's well-known researches in "cell pathology." There yet remains, then, to be discovered the unknown factor which immediately determines the perversion of nutrition on which the disease depends. It must be some special constitutional condition, since, notwithstanding what has been designated as elephantiasis, is, at times, apparently a simple local condition, there is abundant evidence to show that, in the great majority of cases, some general dyscrasia must co-exist. The following

notes on the anatomy of a case of elephantiasis will be read with interest. They are by Professor C. Von Lair, of Liege (*Virchow's Archives*, Feb., 1871). The elephantiasis dura of the extremities is based essentially upon a hyperplastic, not a heteroplastic, process. The first symptom is a peculiar erysipelas—elephantiasitic erysipelas. The second stage of elephantiasis is characterised by a progressive hyperplasia of the corium, affecting equally all three layers—papillary body, connective tissue, and elastic—with corresponding atrophy of the subcutaneous adipose tissue. With the increase of papillary body is connected a luxuriation of the epidermis. The stage of acme is designated by a hypertrophic coalescence of the two chief layers of the skin, while the papillary body, though likewise hypertrophic, always remains distinctly limited, and the adipose layer disappears more and more. The papillary body retains its physiological type longest. The fact that certain localities remain free from elephantiasitic swelling is explained by the pressure which the skin exerts upon itself—*e.g.*, in the folds about the joints. The deep layer of the corium of the affected parts is distinguished from the superficial layer, not alone by the general direction of its fibres, and by serous infiltration, but also and chiefly by its colour, which varies from yellowish to brown, owing to the prolific development of elastic tissue.

Fischer explains the therapeutic effect of the ligature for cure of elephantiasis by its removal of arterial pressure. It is this pressure which prevents the absorption of effused matters, and keeps up the swelling, and its removal allows

the natural curative process to come into play. How rapidly these may effect a cure was shown by cases in which a diminution of 8, 10, or 13 centimetres in the size of the swellings was observed the fifth day after ligature. Fischer thinks that the first hopes excited by the ligature treatment were excessive, and that it is attended with greater danger than was then supposed. For anæmic, cachectic patients, it is best to try methodical compression first. I have had five cases of elephantiasis under treatment at the Skin Hospital, during the last nine years. Pressure on the femoral artery produces all that is required.





CHAPTER XIX.

LUPUS.

THERE is a form of strumous syphilitic ulceration at a late period, commencing inside the nose, on the membrane of the cartilaginous septum, soon extending to and destroying the cartilage itself, with the adjacent soft parts, and, finally, extending even to the bones, which may be mistaken for non-specific lupus. This ulceration is of a lupoid character. In his classification, Virchow excludes entozoa and simple inflammatory swellings, and divides the tumours, properly so called, into :—1st, Tumours by exudation or extravasation ; 2nd, The group of ectasies, *i.e.*, tumours by dilatation or retentation ; 3rd, Pseudo-plasms, or neoplasms, properly so-called, tumours resulting from proliferation or vegetations ; 4th, Complex tumours. In these divisions he makes the development of the tumour the basis of the classification. Thus, in group 1, the tumour is developed at the expense of the blood ; in group 2, at the expense of secretions ; in group 3, by the proliferation of tissues ; and in group 4,

by the growth of several tissues or organs of different kinds. In reference, however, to group 3, with which we are now immediately concerned, the following passages are sufficient to explain the method of arrangement, and the characteristics of the tumours belonging to it:—

“Tumours by proliferation, or vegetations, properly so, differ from those already treated of—viz., those of the first and second groups—in the circumstance that the development of a new tissue in their case is not a gradual or accidental phenomenon, which complicates the formation of the tumour, but in some measure completes it, and aggravates it progressively; on the contrary, it causes the tumour from the first, and, consequently, constitutes its true essence. All the ulterior transformations which may give rise to particular exudations, to hæmorrhages or retentions (of secretions), and may, therefore, in this way lead, under certain circumstances, to the formation of cysts in the interior, or in the neighbourhood of the tumours. All this is merely accidental and secondary, in comparison with what, in their case, is of new formation. For the neoplasm proceeds immediately from the old tissues, which serve for its matrix.” In lupus there is a tendency to the formation of large quantities of germinal matter (according to Beale), with very little formed material. The capillaries in a lupus papule are twisted round the clubby kind of cells, and this disease attacks the connective tissue of the true skin. The elementary cells of the part undergo abnormal alteration of a permanent nature, leading to a new formation,

The late Dr. Buchanan* considered lupus to be a new or morbid formation, produced in two different ways:—First, by excitement of the nutritive energy of the cells, so that they are stimulated to accumulate in their interior substances, such as pigment, which were not there before; and then, secondly, by excitement of the reproductive energy of the cells, so that they are stimulated to divide and multiply till new parts are formed which were not there before. These two parts are either made up of cells similar to those from the irritation of which they originally spring, or the cells composing them have become more or less modified in the process of the repeated division; if the parts be still similar in elementary structure to the surrounding tissue, or, at all events, not much modified in the process of repeated division, so as to be easily traced back to their origin in these tissues, then we call them *homologous* or *benignant* formations. If quite dissimilar to these tissues, we call them *heterologous* or *malignant* new formations. Finally, the heterologous new formations may be conveniently subdivided into *pseudoplasms* and *neoplasms*; the former, as lupus, being incapable of independent growth, but extending by the implication of surrounding tissues; the latter, as cancer, containing fertile elements within themselves.

Virchow's second form of *granulation tumour* is lupus, though the term tumour hardly seems applicable to it; but it is a conglomeration of individual nodules, and hence it is to be considered among tumours. It is a process which affects the whole thickness of the cutis;

* *Edinburgh Medical Journal*, 1863.

a granulation process in the connective tissue, beginning at first superficially, and extending deeper and deeper, passing into the subcutaneous tissue, and in many cases even reaching the bone; frequently extending upon the mucous membrane, creeping into the nose, upon the lips, and the hard palate, it presents small, uneven bunches, which do not proceed from the epithelium, but from the connective tissue. Everywhere the formation of lupus consists of newly-developed granulation tissue, very soft, and often very vascular, containing, as a rule, small round cells, with simple nuclei, and one or two nucleoli, surrounded by a delicate intercellular substance. Ulceration is the most common sequel to these formations; superficial crusts are formed, the substance beneath goes on decaying, the tissues are destroyed, and an ulcer steadily increasing in depth ensues, thus giving us the type of *lupus exedens*. More rarely, even before ulceration has taken place, the process becomes stationary; the cells yield probably to a fatty metamorphosis, and are subject to absorption, while the remaining tissue becomes thickened and retracted, thus leaving white cicatrices, with loss of substance and superficial depression, like the syphilitic gummy tumours upon the surface of bones. This corresponds to *lupus non-exedens*. Again, we may have this thickening and retraction at one point, while at another, generally on the periphery, ulceration may be going on, stretching further and further. This is the *lupus serpiginosus* of Hebra. The disease exists as the result of a certain predisposition, but whether as the result of a scrofulous or any determined dyscrasia,

whether from greater vulnerability of the skin or from local tendencies, Virchow does not pretend to decide.

Lupus is usually met with on the face, neck, and chin, and Mr. Milton considers that many cases of sycosis should be classed with lupus, "being a true creeping lupus on a site covered by hairs."

Here, then, we have a series of formative processes which undoubtedly possess in themselves an active, productive, and irritative nature, and which comprehend the most simple inflammatory forms (as we are accustomed to call them), as well as the most extreme heterologous and malignant forms.

The treatment may be divided into constitutional and local. The constitutional consists in improving the patient's health by good diet, change of air and scene, cod-liver oil, iodide of iron, iodide of potassium, and arsenic; the last two remedies are the most important, and I find it a good plan to commence, say with the iodide of potassium, and continue its use for a couple of weeks, in doses of five grains, thrice daily. We may then stop it for a like number of weeks, the patient, in the meantime, being put on Fowler's solution. Mr. Milton strongly recommends a "purge of calomel" to be administered occasionally, and he states that it, "perhaps, beyond all other remedies, tends to check the progress of lupus." Dr. A. T. Thompson used the iodide of arsenic in this affection. If the appetite is bad, quinine may be given. If all the remedies were to be enumerated which have been given internally in this affection, an amount of space would be required which is not at my

disposal. With regard to the local treatment, Biett used the acid nitrate of mercury; Alibert, the solid nitrate of silver; Dupuytren, calomel and arsenic, sprinkled over the diseased surface, after removal of the crusts. Sir A. Cooper recommended an ointment composed of arsenic and sulphur, one drachm, mixed with spermaceti ointment, one ounce. Mr. Wilson prefers the acetum cantharides. Mr. Startin, a solution of the nitrate of mercury in nitric acid, which, after being applied, he covers the affected surface with collodion; and Hebra uses the nitrate of silver, also iodized glycerine, a compound of iodine, iodide of potassium, and glycerine, in the erythematous variety.

I published a paper in the "Journal of Cutaneous Medicine," vol. ii., on "Chromic Acid in Skin Diseases," and, from extensive experience since then, I think chromic acid to be a valuable caustic, having a slow and gradual action. It may be employed either sprinkled on the diseased part, as in cancer, or in solution. Chromic acid is a powerful oxidiser, yielding readily its oxygen to organic matter. It is a rapid and not very painful remedy. The strength of the solution as a caustic is two drachms to an ounce of water. The galvano-caustic is highly recommended by Mr. Bryant for the treatment of lupus. Acetate of zinc was used by the late Dr. Neligan; it may be applied in solution, eight grains to the ounce.

The following is Dr. Pancoast's (Philadelphia) formula:—Dried sulphate of zinc, one drachm; watery extract of opium, as much as will saturate one ounce of water; fine wheaten flour, enough to make a paste;

then add chloride of zinc, two drachms. This is spread over the diseased part, and left on for some hours.

To my mind one great objection to these powerful caustics is, that they all, except chromic acid and nitrate of silver, excite such a degree of inflammation that the adhesive process cannot be established. The following is my method of operating in this disease:—All crusts, &c., are to be removed from the affected surface by a poultice the night before operation, the patient being put under the influence of chloroform, or Richardson's ether spray apparatus can be used instead; a sharp-pointed stick of nitrate of silver is to be firmly bored, so to speak, into each tubercle (if the tuberculated variety). The after-dressing consists in letting the part crust and scale for a few days, when the disease underneath the scab heals. An opiate is necessary the evening after the operation. In spite of all our endeavours, the disease frequently progresses from bad to worse, the nose being occasionally destroyed—first the alæ, next the septum, and then the remaining fleshy portions fall away.

In *Lo Sperimentale* for March, 1872, there is an extensive review of No. 13 of Volkman's "Collection of Clinical Lectures." The subject in this number is "Lupus and its Treatment." I give here a short abstract of the review. Professor Volkman, in treating of the four clinical cases which he selects, notices that lupus is more common in the country than in towns, and that its attacks are confined in the main to young people between the ages of nine and fifteen years. One of the four selected cases, however, was that of a lady of fifty-nine

years ; but in this instance the patient had been a sufferer from the disease since her tenth year. Two other cases were decidedly scrofulous, and this led the Professor to examine into the relation between a scrofulous diathesis and this disease. Bazin, the first French dermatologist, looks upon lupus as a malignant scrofulide. Virchow denies the connexion between them altogether. Volkman says both opinions are wrong. He did not find in his experience a verification of the rule which Virchow lays down, that in those affected with lupus "there is a want of determinate forms in maladies of the lymphatic glands." In two of the instances selected for his clinical observations there were both hypertrophy and suppuration of the sub-maxillary and parotid glands. He has seen only a few cases in which the patients died of tuberculosis. His experience in this respect taught him that those who are affected with lupus in the upper parts of the body are more liable to tuberculosis than those attacked in the lower. In reference to the opinion of Bazin, he looks upon the connexion of lupus and scrofula as exceptional. Volkman denies any connexion between lupus and either acquired or congenital syphilis. The diagnosis of lupus, Volkman says, is generally very easy. Reddish brown nodules, situated in the thickness of the skin, are characteristic of lupus, which, on the face, where its ravages are most extensive, has such clear marks that it is impossible to miss them. There is need of mentioning in this respect that *malignant impetigo* which develops itself near the ear, and which concludes with the formation of nodular masses of granulations, and subsequent deep

cicatrices. Volkman would call this "eczema luposa." Hutchinson has described a "psoriasis-lupus." Lupus of the extremities is not so easily diagnosed as that of the face. The case of the lady fifty-nine years of age was interesting, on account of the development of two cancrioid nodules on the face, one of which was situated on the left cheek above the other, near the end of the nose. These arose out of old cicatrices and ulcers of lupus. The passage of lupus into cancrioid, however, Volkman tells us, is rare. He had seen only three cases of it, and all were women. There is a special histiogenetic interest in this transition. Numerous recent observations show that lupus originates from the cells of the Malpighian layer. The slow passage of lupus into the epidermoidal cancer is offered as a new and important argument for the epithelial origin of newly-formed lupus. This is an argument, the reviewer remarks, only for those who accept the doctrine of Thiersh concerning the development of the tissues from the three layers of the blasto-derma. Epidermoidal cancer, moreover, is known to arise from ordinary ulcers, from old osseous fistula, from the cicatrices of burns, &c. The course of lupus, too, speaks clearly against its cancrioid affinity. This is always marked by alternate periods of exacerbation.

The fourth case of Volkman was that of a young girl in the best general health. There appeared on the cheeks and nose reddish scarlet blotches of an irregular contour, slightly swollen. These had been about six months in developing. Here and there the skin was covered with leafy crusts, firmly adhering to the reddened skin; these

were unctuous to the touch. Cutting away these crusts, the skin underneath was found red, and apparently purely papillary. This latter appearance was resolved by an ordinary lens into a number of minute orifices closely set together. These were the orifices of the sebaceous glands, much dilated. The crusts would seem there to be a simple *seborrhœa congestiva*. Volkman, however, considers it to be a case of *lupus seborrhagicus* (lupus erythematosus). Besides the seborrhœa proper, there was the infiltration of some lymphoid elements. With regard to the therapeutics of lupus, Volkman notices that it has made, in recent times, prodigious strides—such, indeed, as to render the cure certain in a few weeks, or a few months, in cases which formerly took years. The curative treatment of lupus is exclusively local. It is necessary, in the first place, to remove the tissue attacked, embracing those territories which are destined to fall in the process of slow ulceration; and, in the second, to determine the re-absorption of the infiltrated lupus matter, whether this is in certain foci or scattered diffusely. The little nodes of the lupus, and those softened parts of the skin which dissolve, as it were, under the caustic, must be removed. All that possesses the normal character of the skin is to be spared, and especially the infiltrated diffused lupus matter, covered with smooth and non-ulcerated skin; as, for instance, those cutaneous regions strongly coloured, red, and inspissated (*lupus non-exedens exfoliativus*). Finally, an attempt must be made to destroy the germs of the new formations. The patient should be warned to tell when the new nodules appear,

so that they may be easily attacked. The caustic recommended is potassa fusa; after using which, compresses soaked with cod-liver oil are to be applied to the affected parts,

Lupus Erythematosus.—Hebra considers this variety to be a *seborrhæa congestiva*, and that there is a degenerative change, not only in the sebum itself, but also in the organs by which it is secreted.

I have had two cases of *lupus erythematosus* recently under treatment, and rather than describe them separately I will take this opportunity of saying a few words on the disease. Both patients were females—one, Mrs. T., aged fifty. In her case the disease occurred on the chin, commencing ten years ago as a small red spot, which became covered by a tenacious scab, nearly impossible to remove; it slowly spread, and when seen by me was about the size a two-shilling piece, mottled at one side, this white appearance being due to the growth of new white fibrous tissues. Her family history was bad, phthisis having carried off several of her relations. The treatment adopted was frictions with juniper tar soap, painting the part afterwards with a calamine lotion. Subsequently I prescribed a weak iodide of sulphur ointment, and tonics internally. The disease, after five months' treatment, is now cured. My other case, which I attended at the same time, occurred in the person of Mary P., aged twenty, a mill-worker. Both cheeks were attacked, as was also a part of the left ear. The skin was red; orifice of gland ducts plainly visible, and filled with "horny exuviae," bearing out the view of Hebra that

the disease is, in the first instance, an affection of the sebaceous glands. In this case I ordered locally a preparation containing oil of cade, and a mixture of iron wine and Fowler's solution. The disease is slowly improving. When the disease occurs near the scalp, permanent baldness is produced. In both these cases the disease will terminate in a white depressed cicatrix. Biett called this disease *erythema centrifugum*; but, as Erasmus Wilson observes, "at a first glance the patch appears trifling; its stationary habit and resistance of treatment excite suspicion that it is something more than common erythema, and its disposition to occasion atrophy of the skin proves it to be more serious in its nature; and, when it fortunately disappears spontaneously, the white cicatrix indicating the removal of the papillary layer of the derma, or on the scalp the destruction of the hair follicles, declares its relation to lupus."

I recall to mind the case of a young lady who was under my care for this disease, some four years ago, and it made sad havoc of her face; both sides were involved, and the hair all gone at both temporal regions. The disease under notice often attacks the fingers and toes, and is then confounded with chilblains; it is sometimes associated with lupus non-exedens.

The treatment is to remove the crusts by lint soaked in oil, and then washing the diseased part with a good lather of soft soap. If this fails, strong liquor ammonia, or liquor potassa, is applied; or iodine, iodide of potassium, and glycerine pencilled on the part.

Dr. Damon treats lupus erythematosus by applications of the ethereal tincture of iodine, continued for a long period, and occasionally evaporated down to the consistency of *pix liquida*. This mode of treatment, although less rapid than some, is, nevertheless, deserving of a trial, since the disease is thus eventually eradicated without any cicatrices being left, as is usually the case where the more potent caustics are employed.

In other cases Rochard's ointment may be used, which is composed of calomel, twenty grains; iodine, eight grains; and conium ointment, two ounces. Carbolic acid has been used externally with varying success, whereas arsenic, mercury, and cod-liver oil are generally of no benefit.

Mr. Hamilton, Surgeon to the Richmond Hospital, Dublin, in his pamphlet on the "Restoration of a Lost Nose," states that—"In Ireland, in the majority of cases where we are called to make a substitute for a lost nose, the destroying agent is lupus. This disease is very common among the scrofulous poor; and, while early treatment will arrest its course, the ignorant apathy and carelessness of the lower classes—particularly in this country, where it is most common—allow more or less of the organ to be lost before medical assistance is sought.





CHAPTER XX.

HÆMORRHAGES.

EPHIDROSIS CRUENTA, or bloody sweat, is a very rare disease, and is most frequently connected with derangement of the catamenia, the bloody sweat appearing as vicarious menstruation. It has been observed in infants, and, in a few cases, in adult males. Hebra tells us of a young man, strong and well made, who was attacked repeatedly by hæmorrhage from the surface of the lower limbs. This generally occurred during the night, and the patient was only made aware of it by finding the sheets stained in the morning by spots of blood. Hebra once saw a jet of blood, which would correspond to the size of a duct of a sweat gland, flow from the back of the hand of the patient. This disease is a hæmorrhage, and not a perspiration.

Purpura hæmorrhagica is often due, not to the blood being poor, deficient in quality or quantity, but to disordered nutrition of the part. Axman, according to Hebra, caused extravasation of blood by interrupting the nervous supply of part. He destroyed several ganglia of the great sympathetic nerve in frogs, and the result was not only hæmorrhage, but softening of the tissues in the parts thus deprived of nervous influence.

The capillary vessels may be ruptured, allowing extravasation of blood, followed by the formation of wheals—the purpura urticans of Willan.

Purpura is a disease of the system generally, but is usually described as an affection of the skin, the effused blood being bound down by the epidermis. In various diseases, especially fevers and small-pox of a low type, purpura is often present, the spots being called *petechiæ*. When of a larger size, *vibices* or *ecchymoses* are the terms adopted; sometimes the word *stigmata* is used when the spots are very minute. The colour varies, from a bright red to a violet hue, and, as the petechiæ gradually fade and lose their outline, they become of a yellowish shade. Purpura is generally preceded by febrile symptoms, pains in the limbs, and loss of appetite. The eruption may become confluent, each spot taking usually about six days to run its course, but the duration of the disease depends on the development of successive crops. The late Dr. Neligan divided this disease into *purpura simplex* and *purpura hæmorrhagica*. Willan has described a variety called *urticans*, in which there is a wheal-like elevation of the skin. The *purpura senilis* of Bateman is when this disease is met with in elderly people. In purpura simplex the petechiæ are frequently developed inside twenty-four hours, usually on the extremities. Purpura hæmorrhagica is a more aggravated and fatal form, and is accompanied by hæmorrhage from the mucous membranes, as from the gums, conjunctiva, nostrils, bowels, &c. The spots are usually larger, vibices and ecchymoses being present, accompanied by well-marked constitutional symptoms, as languor, debility,

&c. When any part of the skin is torn or scratched, hæmorrhage readily takes place; sometimes hæmoptysis arises, and which is usually an unfavourable sign. The loss of blood from this disease occasions a great degree of prostration and depression, with pallor of the skin. In some cases vesicles containing blood are to be seen inside the mouth and nostrils, and the gentlest pressure on the skin, especially where it is thin, will usually produce an ecchymoses. Purpura may last many weeks, and in fatal cases dropsical effusion, or diarrhœa, carries the patient off.

Dr. Graves has described a form of purpura accompanied by an exanthematous rash, and which he terms *exanthemata hæmorrhagica*. Mr. E. Wilson has applied the name *purpura cachetica* to this affection, when accompanying debilitating diseases. All authors agree that the female sex is more liable to purpura than the male. Its causes are not clearly ascertained; it has been attributed to engorgement of the liver, hæmorrhagic diathesis, bad food, and mental anxiety. The capillary system appears to be weakened, and Mr. Wilson considers it to be "a disease of debility of the nervous power, although not unfrequently associated with increased action of the arterial system." The diagnosis is easy; the petechial spots under pressure remain, and are distinguished from flea-bites by the central dark spot; from scorbutus the appearance of the gums is characteristic.

Samuel Plumbe* correctly remarked that purpura is "a disease dependent on the debilitated and deranged state of the system, and consequent diminished tone of the vessels of the cutis. He says—The disease termed purpura,

* On Diseases of the Skin. 1824.

in its more formidable shape, accompanied by a train of symptoms immediately threatening the existence of the patient, merits, and appears to have obtained, at various periods, the attention of some of the most distinguished characters in the history of medical literature. It is a disease under such form as frequently paralyzes the hand of the physician, and suspends in doubt and apprehension the decision of the most practised and fearless mind. Its distinguishing feature is, on the one hand, according to received notions, identified with the lowest degree of debility; on the other, it is ushered in with symptoms which cannot subsist many hours uncontrolled by active treatment, without the most imminent peril to internal organs. I entertain some doubts whether *purpura simplex* or *petechiæ sine febre* may not be said to be always preceded, whether in debilitated or other constitutions, by some disorder of the digestive organs, as in all the cases which I have had an opportunity of observing, where symptoms of such disorder were not plainly discernible, the state of the evacuations only fully justified the opinion.

The treatment may be summed up in a few words—viz., purgative doses of oil of turpentine and castor oil, ergot of rye and steel, with wine and good diet, and, as a beverage, Rose & Co.'s lime juice. The hypodermic injection of ergotine is to be highly recommended. Thus, 3 drachms of ergotine to 6 drachms of glycerine, and 6 drachms of water, may be injected hypodermically over the abdomen; from thirty to forty drops daily, according to the effect produced.



CHAPTER XXI.

PARASITIC DISEASES—ANIMAL.

THIS group of diseases consists, as Dr. Tilbury Fox* well remarks, of *scabies*, or itch ; *phtheiriasis*, those connected with the development of “bots,” the “chigoe,” the *dracunculus*, the *leptus*, the *flea*, the *bug*, and the *steatozoon folliculorum*. “Some of them,” he says, “require but little notice. The flea (*pulex irritans*) makes its bite, and produces a little circular erythematous spot, with a dark speck in the centre. The bug (*cimex lectularius*) produces a more marked condition of things ; there is a good deal of swelling, infiltration of sub-cutaneous tissue, in consequence of which the part or spot feels hot, tumid, and tender. The central point is light coloured, and exhibits the bite of the insect. The attacks of the *leptus autumnalis*, or harvest bug, produce erythema and papulation. In South America, the skin is the seat of the development of the *œstrus*, or “bots,” or gadfly. The larvæ burrow under the skin, giving rise to circumscribed furunculoid tumours the size of a nutmeg, which give exit to a serous

* Manual of Skin Diseases.

fluid, and finally end in ulceration. The chigoe (*pulex penetrans*) is common in the West Indies, and attacks the feet and hands, enters the skin beneath the nail, or betwixt the toes, and takes an oblique direction under the epidermis."

The *dracunculus*, or guinea worm, is common in India and Africa. The guinea worm does not usually produce any acute pain until it is fully matured. The first symptoms complained of are generally itching and tingling. On examination, a small blister is frequently found. As the disease advances, the affected part becomes inflamed and swollen, painful to the touch, in appearance like a boil, which slowly suppurates, the worm eventually protruding. Sometimes mortification has ensued; in other instances hæmorrhage and sloughing of the cellular tissue. The patient may have several of these worms in various parts of the body; and, in a surgical point of view, the *filaria medinensis* is the most important of all human entozoa. Its occurrence is attributed to drinking and using water in which the embryos are contained. In the human body the *dracunculus* cannot propagate itself. The male worm has not been discovered.

Dr. Carter states that a species "of microscopic filaridæ, called *urolabes palustris*, which exist in the ponds and rivers, in the mud, by entering through the skin when bathing, occasions the disease."

Mr. Balfour* states that this disease attacked the 108th Regt., in the month of August, in the most unaccountable

* *Madras Medical Journal*, October, 1866.

manner, raising the ordinary per-centage of sick from five and a half to nine. He considers that the cause of the disease was the bathing water, but many had the disease who did not bathe. One man was 79 days in hospital with this complaint in his forearm. A second had seven extracted; another had the disease in the scrotum; but the lower extremities were the common seat. Mr. Balfour thinks that it takes a year, at least, for the worm to arrive at maturity.

With regard to treatment, when the swelling is hard and painful, poultices are applied, followed by incisions. Mercurial ointment rubbed into the part is used, and also passing an electric shock through the place. When the constitutional symptoms are severe the antiphlogistic plan of treatment is necessary.

Steatozoon Folliculorum—According to Fox, in this disease the skin is thick, greasy, and the secretion retained. The face is the common seat. From the sebaceous glands a species of acarus can occasionally be squeezed out.

Phtheirasis, or *Morbus Pedicularis*, is divided into three varieties—*P. capitis*, *P. corporis*, and *P. pubis*. The pathognomonic evidence of the presence and attack is the louse-bite, and papule. “The *P. corporis* is whitish, and gives rise to eruptions, as eczema. The *P. capitis* is seen mostly in children, associated with impetigo of posterior region of the head. The hair is dry, and loaded with ‘nits.’ *P. pubis* grasp the hair a little way from the surface, and gives rise to pruritus.” The treatment is plain—plenty of soap and water, bathing the hair with vinegar, or whisky and water, to remove “nits.” A good

cleanly remedy for pediculi, wherever situated, is a lotion containing the yellow oil of sandal wood, suspended by means of glycerine and rectified spirit. This essential oil has a powerful odour, which destroys the insects. The oil is obtained by distillation from the wood of the tree *Syrium myrtifolium*, a native of the East Indies, "one pound of wood yielding about two drachms of oil."

Scabies—Dr. T. Fox* holds, "that the frequency of scabies is extreme, and its features definite. The disease depends upon the burrowing of the *acarus scabiei*. The female insect being the burrower, she gets under the skin and commences a canal in which to lay her eggs. The canal is tortuous and exhibits along its upper border little dark specks, which are regarded as breathing holes by some, by others as excreta. The male acarus does not burrow, but gets under scales and crusts. The effect of burrowing is to cause itching and irritation, that is worse in dirty people. The disease occurs chiefly on the hands, feet, buttock, and penis.

From scratching, eczema, ecthyma, urticaria, &c., are called out. According to Fox, the acarus has a tortoise-shaped head, two palpi, four mandibles, bidactyl legs, four anterior, terminated with a sucker; the respiration is by buccal aperture.

The *Acarian Furrow* presents, as stated by Mr. Squire, in the *Medical Circular*, the appearance of a curved dotted line under the surface of the epidermis, varying in length from the thirtieth to the third of an inch, and assuming the form of a comma, of a horse-shoe, or of the

* Manual of Skin Disease.

letter S. It may be either white or of a greyish colour. At one extremity of the furrow is a minute rounded, opaque, white elevation, the "acarian eminence;" from this, with a little address, the acarus itself can be extracted on the point of a pin. It is, however, easy to detach small pieces of epidermis of about the size of an acarus where no acarus is present, and such may often be mistaken for the insect. The itch-mite is distinguishable from fragments of epidermis by several tests. Of these, the most unequivocal is to place the suspected atom under the microscope, when the well-known anatomical characters of the acarus—if acarus it be—at once reveal themselves. But the microscope is an instrument that we might not always have at hand, and in its absence there are other tests which are scarcely less certain. Thus, if the point of the pin on which the supposed acarus has been extracted is held up to the light, the particle, if an acarus, appears to be semi-transparent and plump; if a piece of epidermis, it would be opaque and shrivelled.

The treatment is purely local:—Iodide of potassium ointment and the lotion of the pentisulphide of lime are used. In the Belgian army the person who suffers from itch is first washed with black soap, then rubbed with brick-dust to open the canals; next, rubbed for half an hour with compound sulphur ointment; then washed, and dressed in clean clothes. The cure is then complete. Where there is much secondary eczema, Hebra's ointment, as recommended by Anderson, is a very good application. It consists of tar, black soap, sulphur, prepared chalk, and lard. Or, if the disease is recent,

one good thorough application of the solution of the pentisulphide of lime is frequently sufficient. In private practice, iodide of potassium ointment, stavesacre ointment, or even petroleum or black soap, often cure the disease; of course, it may be contracted again from the clothes. A parafine ointment has been tried, but it was not very successful. It should be borne in mind, that any preparation containing sulphur is an irritant, consequently a secondary lichen, eczema, or urticaria, is often produced and kept up by the use of sulphur ointments. Every case of scabies admitted at the Belfast Hospital for Skin Diseases is given a printed card of directions, of which the following is a copy:—1. Wash all the body, excepting the head, thoroughly with black, or, if preferred, petroleum soap, and hot water. 2. Remain in a hot bath for fifteen minutes; if you cannot have a bath (which, however, can always be had at this Hospital), wash yourself with hot water. 3. Rub some of the ointment firmly into the skin of the whole body (except the head) for ten minutes or more, and let it remain on during the night. Wash it off the following morning, and dress in clean clothes. 4. Repeat these processes every evening for three nights. 5. Besides the above, put all your washing clothes into boiling water, and have all your clothes “ironed” with a hot iron.

The treatment of scabies pursued at St. Louis Hospital, as stated in the *Medical Mirror*, is as follows: The large number of patients renders necessary a rapid mode of treatment, and so itch at St. Louis is cured in two hours, and in nine cases out of ten most effectually.

The process in this :—In a long room are a number of partitions, just large enough to contain the patient, his bath, and his clothes; and in these, at a certain hour, all are collected and made to undress. They are then ordered to pass into a chamber; in the middle of them is placed a bowl of black soap (containing a good deal of potash), with which, after many injunctions as to order and silence, they are made to rub themselves completely; each one assisting his fellow, until the attendant, who assists despotically with his wand, is satisfied that no part is left untouched. They are then taken each to his hot bath, where they get rid of the soap, and come out with the galleries (*scions*, or, in English, furrows) of the insects broken open, and ready to admit the ointment of sulphuret of lime, placed ready to their hand, and with which they rub themselves until the time comes for a second warm bath, and thus the two hours are filled up. It is rarely necessary to use any disinfectant to the clothing, as the sulphur adhering to the skin sufficiently destroys all chance of contagion from that cause. This treatment is very severe, and often causes an erythema, or an eczema, with tingling of the skin for many days after, but a few simple baths relieve this effectually.

The remedies hitherto in use for itch—such as Wilkinson's sulphur ointment, Hebra's tar soap, Vlemingx's solution, &c.—are not to be compared, for certainty, rapidity, and pleasantness of cure, with styrax and Peruvian balsam. Styrax was first recommended in itch in 1865, by Von Pastan (Berlin). It has shown itself a most efficacious remedy, due to it containing cinnametin, cinna-

monic acid, and resin. It is used as a mixture:—Styrax, two ounces; olive oil, one ounce; or thus—styrax, two ounces; alcohol, half an ounce; olive oil, two drachms. Styrax is a good and cheap remedy, its only disadvantage being its very disagreeable smell. For children it is used in the form of soap. Balsam of Peru is even better than styrax for the cure of itch. It was first employed in 1853, by Bosck, and was strongly recommended by Bärensprung in 1864, on the strength of an extensive trial of it in the Charité Hospital of Berlin. Its component parts are cinnamein, cinnamonic acid, and resin. Balsam of Peru is preferable to all other vaunted remedies, because the *acarus scabiei* is most rapidly killed by it; because it does no injury to the skin; because it easily penetrates the skin; because baths are not absolutely necessary with it; and because it kills all the *acari* and their eggs, for, when well rubbed into the skin, it comes in contact with the eggs. In adults the best plan is to rub in the balsam of Peru all over the naked body—slowly, carefully, and gently—giving special attention to certain parts of the body, especially the fingers. Although, in the treatment of itch the rubbing-in cannot act mechanically, yet, whatever substance may be used, the mode of preparing the inunction is of great importance. As the balsam is readily distributed, nine drachms of it suffice for one operation. It is not at all necessary to begin the treatment with a bath; but if a bath is first given the rubbing-in should not follow the bath immediately, as the balsam is more rapidly absorbed by a dry skin. Hence, in persons who easily perspire, the

skin should be well dried before the remedy is used. When the operation is carefully performed, relapses occur very rarely, and there is never any increase in the eczema that may be present. It is seldom that prurigo occurs after the itch. Should it occur, this disagreeable symptom is more readily removed by the internal use of carbolic acid than by warm baths and soft soap or glycerine. The only objection to Peruvian balsam is its expense. Carbolic acid, on account of its efficacy, its facile employment, and its cheapness, deserves to be mentioned next to Peruvain balsam. It must be mixed with glycerine or olive oil, to prevent its caustic action. One scruple of carbolic acid is to be mixed with two ounces of either of the two other excipients. This remedy has this advantages, that, by its action on the peripheric cutaneous nerves, it completely removes and prevents the morbid itching and pruritus. In cases of prurigo or pruritus, independent of itch, the internal use of carbolic acid, in the form of pills, is an excellent remedy. As the carbolic acid gets pretty quickly into the circulation, it is necessary to give it in very moderate doses, especially where there are parts destitute of epidermis. But, as thereby its action is delayed, it is better to employ the carbolic acid in the form of a salt. According to Rothmund, carlolate of soda, in water, supplies all the requirements of a good, rapid, and certain itch remedy. With this the affected portions of the skin are to be rubbed, three times a day, and even in the most inveterate cases the treatment never lasts more than two and a half days. Relapses are not to be feared, and if the rubbing-in is carefully performed,

no erythema, to speak of, occurs. During the treatment, the patients are in no way hindered from following their usual occupations.

One advantage of the Peruvian balsam and carbolic acid treatment of itch is that it is not necessary to disinfect the clothes or bed linen. In order to make sure, Rothmund recommends an additional rubbing-in, to be made some eight or ten days after the cure of the itch, in order to kill any acari or their eggs that may have lurked among the clothes or bed linen.

I have tried the local application of balsam of copaiba in itch, with varying success.





CHAPTER XXII.

DERMATITIS,

DERMATITIS differs from erythema and eczema in being an inflammation extending to the deeper parts of the corium, and even to the cellular tissue beneath it. According to Buchanan, the inflammation is not primarily sub-cutaneous, but it is necessarily limited to the surface of the corium, as in true erythema. Hebra divides it into *Dermatitis calorica* (including burns and chilblains), *D. venenosa* (from acrid irritants), *D. erythematos*a (first degree of burns), *D. bullosa* (second degree), *D. escharotica* (third degree), *D. diffusa* (cellulitis), *D. circumscripta* (furunculus, anthrax, tubercle of Aleppo, frambœsia, and malignant pustule), *D. symptomatica* (erysipelas).

The late Mr. Colles, of Dublin, looked on erysipelas as a mere symptom of a peculiar fever. Some have a peculiar tendency to it. When extending to the sub-cutaneous cellular tissue, it is called *phlegmonous erysipelas*. The boundary of the disease is perceptible to

touch—the hardness of the adherent inflammation. The redness is uniform at first, but if it is broken up into detached spots, you may be sure the disease is about to give way; it next becomes yellow, and finally the cuticle scales off. In some cases vesicles and bullæ form, which may degenerate into ulcers, occasionally into gangrene.

Mr. Robertson has published in the November number of the *Australian Medical Journal* a paper on “Erysipelas; with particular reference to its recent occurrence in the Melbourne Hospital,” and which, to my mind, is so important that I give his remarks:—

“Regarding treatment there has always been great discussion, the antiphlogistic and the stimulating treatment being the two chief divisions. I think the former should be abandoned except under particular circumstances, such as in case of erysipelas of the head and face, where, through the swelling, there is any impediment to the return of the blood from the head, there is congestion of the membranes of the brain. I would, in such a case, strongly advise the application of leeches, at the same time watching the state of the pulse carefully, and I think this is the only instance in which we are justified in blood-letting. In the œdematous form, a puncture may be made early; and in the phlegmatous state, so soon as a limb presents that ‘boggy’ feel to the finger, one is perfectly justified in using the knife.

“Various applications have been recommended and tried; the oldest is the nitrate of silver applied to the skin encircling the blush. I have not much faith in it,

having seen the blush make its appearance beyond. Iodine, collodion, flour, sulphate of iron, cotton wool, &c., are among the external appliances recommended. I find the best application to be the iodized collodion (20 grains to the ounce). It has acted remarkably well in every case where I have used it.

“Tincture of iron and brandy are the internal remedies to be relied on; the former in doses of 20 to 30 drops every three hours, and the latter in small doses, given frequently. The sesqui-carbonate of ammonia is also a very useful remedy where there is much nervous disturbance, with a dry, brown tongue; but in the phlegmonous form sulphurous acid in drachm doses, acts better than anything else, with a poultice applied to the part, after an incision is made. I like the dressing of oakum lately come into use. It acts as an antiseptic, and stimulates the parts. The dressing is simply oakum. There is one sort better than another, and it may be applied dry, being previously teased out and laid on the wound; or being teased out, it may be wetted with warm water, and then applied with a piece of oil silk over it. It is clean, and has an agreeable smell.

“Sedatives are often necessary in these cases, and I find opium itself, or morphia, the best remedy. They may even be given in delirium, consequent upon congestion of the membranes of the brain. I have tried the chloral hydrate, and my experience is that wherever there is anything like suppurative fever it makes the patient delirious, and acts in any way but a beneficial one. Morphia produces at once the desired effect.”

As stated by Samuel Cooper,* burns are usually divided into three kinds :—1st, Such as produce an inflammation of the cutaneous texture, but which is so slight as to tend to terminate in resolution ; 2nd, those which occasion the separation of the cuticle, and produce vesication or supuration ; and 3rd, others in which the vitality and organisation of a greater or lesser portion of the cutis is either immediately or subsequently destroyed. and a soft slough or hard eschar produced.

Dupuytren described six varieties, and his division has been very generally adopted since his time up to the present day ; but it seems needlessly complex, some of the last mentioned of his series differing only as the gangrenous destruction is more or less deep, or involves the whole bulk of the limb.

Frambæsia.—In the *Bulletino delle Science Medicales* for October, 1871, there is a communication from Dr. Pedrelli on frambæsia, or “yaws.” This disease is confined chiefly to the Negroes of the torrid zone. The annotations of Dr. Pedrelli are of an historico-clinical character. He gives an account of the various notices of the disease, from Avicenna down to the present day. From what the Doctor can learn, he is inclined to believe that there are two distinct forms of this malady. The one is confined to a particular climate, and to its indigenous inhabitants. The other is common to every race, and possible in every region. The first has a virulent genesis, superinduced by influences not yet defined. The other is deemed the product of syphilitic infection, and is manifested under

* Surgical Dictionary.

the form of fungoid ulcers. Dr. Pedrelli gives several reasons why he does not consider the tropical variety syphilitic. One of the chief is the fact that the *pain*, as in Guinea, or the *yaws*, as in Malacca, are confined to particular localities. Marsh miasma may cause it.

From the *Glasgow Medical Journal*, August, 1874, I extract the following from "Notes of Practice in Samoa," by Dr. George Turner, more especially as we never meet with the disease here :—"The most common skin affection which I have seen is *Framboesia*, or the yaws. In this disease I have found that most reliance is to be placed in mercurials—calomel, or hyd. c. creta. A few doses made the pustules shrivel up and disappear, but whether the cure is permanent or not I have not yet been able to determine. I thought it was till recently, when one or two old cases, in which the pustules had entirely disappeared under the use of mercury, again made their appearance with a new crop springing up. Next in frequency comes *eczema rimosum*. This affection, as well as warts, is very often met with on the soles of the feet, caused by constant irritation in walking barefooted on the roads, and wading in the lagoon, treading on coral patches, &c. The cracks cause very great pain, and are of course very difficult to heal."

Furunculi, or boils, are a gangrenous inflammation, the so-called "core" being a dead gland. We know that the orifices of gland ducts are very vascular, and may readily become a centre of exudation, and whenever there is imperfect nutrition, furunculoid disease may arise—in fact, it can be regarded as a local gangrene, affecting the cellular tissue consequent upon debilitating causes.

A valuable paper on carbuncle, from the pen of Dr. Eade, of Norwich, appeared in the *Lancet* for December 11th, 1869. It contains the case of a patient aged 74 years, stout and robust for his age, but subject to chronic mania. This individual was attacked by carbuncular inflammation on the neck, which was rapidly cured by making a free crucial incision, poulticing, and subsequently applying, on lint inserted into the incisions, a liniment consisting of one part of carbolic acid to five of oil. The disease seemed inclined to spread. In order to prevent it doing so, a superficial slough was made with the acid nitrate of mercury, two inches in diameter. In addition to the previous treatment, supporting diet, &c., were also ordered. Dr. Eade remarks that he was led to take this method of treatment owing to the observations of the late Mr. Startin (*British Medical Journal*, November, 1866), who regarded "these maladies (boils and carbuncles) as having frequently a parasitic origin." . . . "I should mention," he says, "that this opinion is rather borne out by the success and efficiency of the practice in the cure of this ailment, than by microscopic verification, though in an example or two, amongst many failures, this test has demonstrated cryptogamic vegetation resembling that found in sycosis." Polli, of Milan, holds a similar view in regard to the blood origin of Furunculi; indeed, some impurity of the blood lies at the bottom of all these furunculoid inflammations; sometimes it is retained urea, and we know that an attack of "boils" is often observed in "Bright's disease," in diabetes, and occasionally in some liver complaints. I have no faith in the hypo-sulphites or bi-sulphides of soda, or magnesia, or in sulphurous

acid. I have often prescribed the bi-sulphide in diseases of blood origin, and the only action it seemed to have was that of a diaphoretic; to my mind, quinine or bromide of iron are more suitable.

Furunculi and carbuncles, as a rule, are met with in persons whose constitutions are below par, or upon whose system, either physically or mentally, a great demand has been made. For instance, boys growing fast and worked hard—say at school—having the same diet daily, frequently suffer thus. A boil, then, is a furunculoid inflammation, attacking the deeper portions of the true skin, and cellular tissue beneath, ending in suppuration and sloughing of a portion of cellular tissue containing a dead gland. They are generally multiple, occurring at any age, but frequently about puberty. The digestive organs are sometimes deranged; in other words, assimilative debility is present. Prolonged poulticing is another cause, giving rise to boils that appear in successive crops. Anthrax is a deep and more extensive inflammation, followed by the death of the cellular tissue.

Monsieur J. L. Reveratin, writing on anthrax and boils, says:—"1. Anthrax and furuncle of the face are grave affections. 2. This gravity is owing to their being prone to be complicated with phlebitis. 3. Facial phlebitis tends to a fatal termination, ending by its extending to the sinus of the dura mater, or by becoming the source of purulent infection. 4. Anthrax in the lips is complicated more frequently than when situated in other parts of the face with phlebitis, which fact is to

be accounted for by the particular structure of the lips. 5. Anthrax of the lips is entirely different from malignant pustule. 6. The extension of phlebitis to the orbit, shown by the presence of exophthalmia, shows almost positively that the sinus has become affected. 7. Incision, made as rapidly and as largely as possible, appears to be the best means of preventing, and sometimes of arresting, the complication of phlebitis."

The local treatment is zinc ointment and pressure, or the application of nitrate of silver, to make them abort, and incision; whilst, constitutionally, sulphate of iron, quinine, and sulphate of magnesia is a useful mixture. Good diet is necessary.





CHAPTER XXIII.

ACNE.

WILLAN defined acne to be "tubercular tumours, slowly suppurating, chiefly common on the face." This disease is an inflammatory affection of the glandular apparatus of the skin, the seat of which is the sebaceous follicles, arising from either scrofula, exposure to excessive heat, dyspepsia, derangement of the uterine functions, or debility.

Wilson considers acne to be a disease of nutritive debility, which may be observed in acne rosacea. The parts of the body attacked by acne are the forehead, chin, nose, thorax, and sometimes the legs. The disease is occasionally hereditary. There are four varieties of acne described by authors, viz.:—*A. simplex*, *punctata*, *indurata*, and *rosacea*. The three former merely differ in duration and intensity of inflammation; the latter is peculiar, being induced by certain causes, as intemperance; the nose is its favourite seat, the integument being of a deep violet colour, covered with elevations, which slowly suppurate. The affected skin is thickened, whilst in

chronic cases the alæ are pendulous, granulated, and liable to ulceration. In many instances the superficial veins are enlarged and varicose. Wilson considers acne rosacea to be an eczematous inflammation; and Hebra states that "accumulated sebaceous matter often sets up an inflammation of the follicles which would naturally be called a folliculitis, but is generally called acne." Acne rosacea is due, no doubt, to a determination of blood to the capillary vessels—a hyperæmia which leads to inflammation of the sebaceous follicles, which pustulate, but do not mature readily.

Hardy considers acne to be a purely local disease, whilst Bazin looks on the commencing erythema of this disease as arthritic, called St. Anthony's fire, or *couperose*, which he distinguishes from acne rosacea; of this it is a frequent complication. But the pustules belonging exclusively to acne—the *couperose*—are constituted by dilatation of the cutaneous capillaries. The scrofulous acne develop on the face. Syphilitic acne are disseminated all over the body, and noticeable by the characteristic colour of the areola and the fine epidemic scales that remain after dessication of the pustules. Bazin insists upon the latter sign. According to Wilson, "gutta rosacea originates in debility, most frequently assimilative; next nutritive, and sometimes nervous; is chronic in duration, and possess close sympathies with the digestive and reproductive organs.

The treatment of acne consists in applying some mild emollient unguent to the part affected, when the part is much inflamed, such as the glycerole of starch, calomel

ointment, or a lotion of borax and glycerine. Washing the part in very hot water, and always drying the face when it sweats, so as not to allow any moisture to gather about it, is necessary. In acne *punctata* and *indurata* we must use stimulating applications, of which the preparations of sulphur are the best ; a lotion of ten grains of sulphur to the ounce of water, to which a little glycerine has been added, answers very well, or sulphate of zinc, sulphuret of potassium and rose water applied on lint at night. Sometimes an ointment of hypochloride or the iodide of sulphur succeeds better ; or sulphur, one drachm ; green iodide of mercury, ten grains ; and lard, one ounce. Mercurial preparations, as the bichloride, are often used ; but if long continued they leave a scaliness and dryness of the skin that is as annoying as the acne.

Dr. Ross, of London, suggests a novel plan of treating acne. He says that you must destroy the gland completely, and by this means prevent its again inflaming. He makes with a lancet a small cut over the little tubercle, and then inserts a capillary vaccination tube, charged with a drop of nitric acid, which is puffed into the gland. This excites inflammation, and obliterates the follicle. In acne rosacea the hypochloride of sulphur ointment is useful, or painting the part with a solution of the terchloride of antimony, then in a few seconds applying a sponge soaked in a solution of carbonate of soda. Constitutionally we give aperients when the tongue is foul, and bowels costive. Then tonics, as the citrate of iron and quinine, and, if necessary, arsenic occasionally, combined with bromide of iron.

Reasoning upon the definite mode of elimination of remedies by certain organs, and that fatty substances are eliminated by the sebaceous follicles, M. Gabler* has endeavoured to verify the hypothesis clinically. A young girl having acne punctata, which had resisted other methods of treatment, was treated by the internal use of glycerine in doses of two dessert-spoonfuls per diem, in hope that this substance, so analogous to oils, would, like them, follow the ordinary modes of elimination, and, in traversing the sebaceous follicles, would modify their secretion, and render their contents more fluid. The result supported the theory, for, from the day that the remedy was first taken, the pustules diminished in volume and number, and soon disappeared altogether. The bowels, which had previously been costive, were rendered open and regular, though the glycerine did not act as a purgative. M. Gabler suggests the use of glycerine in cases where cerumen has accumulated in the ear.

Mr. Cauty, in acne rosacea, destroys any prominent large capillaries by means of the actual cautery, applied as a platina point heated to whiteness by galvanism. This plan is also used for treating tubercular lupus and naevi successfully.

Dr. Mesterton advises us to treat acne rosacea as follows:—First bathe the part affected with “spirit of black soap” and tincture of lavender. Then, in the evening, rub in firmly sulphur ointment or iodide of sulphur ointment. All comedones are to be squeezed out. At the junction of the sound skin with that diseased you

**Practitioner*, September, 1870.

are, with a lancet, to make several superficial incisions. which are to be allowed to bleed freely; collodion is then applied. This treatment is continued daily for some time.

When much hypertrophy occurs, giving rise to lipoma, excision is the only remedy. The enlargement is now due to a new growth of adipose tissue from excess in the nutritive process, causing the rapid production of fatty cells and of lobules around and between the connective tissue and blood vessels. Lipomas occurring on the nose are usually pendulous.

Wilson looks on acne as an inflammation of the follicles, associated with the development of the permanent hair at period of puberty. Guibout advises for acne rosacea, with hypertrophy of the nose, incisions into the affected part, the bleeding from which is to be encouraged; then lint, soaked in either Goulard's lotion or in solution of ammonia, is applied with pressure, the application being kept moist. This treatment is said to cause obliteration of the distended blood-vessels; it is very severe.

Mr. Cauty, of Liverpool, recommends for removal of the comedones met with in those subject to acne a lotion of rectified benzole, half an ounce; gum tragacanth, six drachms; and water eight ounces. The part is first to be rubbed with camphorated oil, and next morning the benzole is to be applied, and washed off with warm water and soap.

ACNE-FORM ERUPTION OF MILL-WORKERS.

I have had, during the last nine years, frequent opportunities of seeing patients at the Belfast Hospital for Skin Diseases who suffered under a peculiar and yet trivial affection of the skin, usually confined to the upper

extremities. I briefly noticed this disease in the *Medical Mirror*, August, 1867, when giving the statistics, &c., regarding the patients attending the Skin Hospital. Since then I have had more opportunities of observing the eruption.

This affection of the skin is peculiar, and is only met with in those workers who are employed in the "spinning-room" of our flax-spinning mills. Those attacked are usually young girls, called "doffers," whose occupation is principally to "doff" or remove the bobbins from the machines, and to clean and oil the same. The following case is an example of the disease :—

Arabella C——, aged fourteen, a "doffer," was admitted at the Skin Hospital, December, 1873. She has an extensive eruption on both forearms and arms. The skin of the affected parts is dry, harsh, and covered with a papulo-pustular eruption. The forearms exhibit, scattered over them, innumerable little black specks, showing the orifices of gland-ducts obstructed by sebum, which gets the black spot from dust adhering thereto. In some places the eruption (before the stage of maturity is reached) has a "shotty" feel, somewhat similar to what is felt in small-pox. The skin generally over the patient's body is of a yellowish colour and anæmic appearance. She was ordered to wash the affected parts with soft soap, to use the dilute citrine ointment, and to take a tonic aperient mixture.

As already remarked, the eruption is confined chiefly, if not always, to the forearms and arms of the young girls called "doffers," who are employed in the spinning-room,

the temperature of which is high. These girls are lightly clad, even in winter, "perspiring at every pore," and after a time their skin becomes of a dirty yellowish hue. The constant sweating makes the orifices of the sudoriparous and sebaceous gland-ducts more open and visible; and then the oil (which is train or sperm oil) with which the machinery is oiled saturates their arms and hands, and clogs and obstructs the orifices of these gland-ducts. The retained secretion, acting as an irritant, gives rise to inflammation, causing, in the first instance, a papular eruption, which, however, soon becomes pustular at the summit, with a black spot in the centre; these elevations, however, rarely burst or scab. The disease seems to me to be a combination of lichen and acne, if I may so express myself. The papules, in the first instance, are produced by an inflammation of the follicles, due to retained secretion acting as a foreign body, and giving rise to irritation, accompanied by prolific cell-growth.

I wrote to some of my professional brethren who attend the dispensaries in Belfast and the immediate neighbourhood of flax-spinning mills, and who have thus good opportunities of observing this complaint, asking them to give me any information they could regarding it. Dr. Newett, medical officer of the Ligoneil Dispensary, says: "I repeatedly see the cases of lichen-like eruption, chiefly on the arms (if not altogether so), to which you refer." Dr. Spedding, one of the medical officers of the Belfast Dispensary, writes:—"I have often observed the eruption you speak of. During the small-pox epidemic it often confused me, when there were symptoms of pyrexia

present. It always remains papular, is frequently, in the young, upon the face as well as the arms, and might be mistaken for acne. I have observed that it is only those employed in the hot rooms who have it. In fact, from its presence I can always diagnose the patient to be a 'spinner.' I have never tried any treatment for it, believing such to be useless while they are engaged in a warm moist atmosphere." With regard to the eruption being observed on the face, which Dr. Spedding mentions, I think it is accounted for by the person wiping her face, whilst it is perspiring, with oily hands. Dr. Martin, of Portlaw, wrote me that he had observed the eruption to be more prevalent when certain kinds of mineral oil were used in their jute factory.





20, King William Street, Strand,

London: January, 1875.

PUBLICATIONS

BY

BAILLIÈRE, TINDALL, & COX.

Essays on Conservative Medicine, and kindred topics.

By AUSTIN FLINT, M.D.,

Professor of the Principles and Practice of Medicine, and of Clinical Medicine, in Bellevue Hospital, Medical College, New York. Price 6s.

Lessons in Hygiène and Surgery, from the Franco-Prussian War. Forming the most complete text-book of Hygiène and Military Surgery of modern times.

By Surgeon-General C. A. GORDON, M.D., C.B.,

On Special Service, on behalf of Her Majesty's Government, with the Army in Paris. Illustrated, 10s. 6d.

"The work is an exceedingly valuable one as a record of personal observation, and of experiences so recently acquired in varied and extended fields of observation, by a medical officer of distinguished position and high professional attainments."—*Army and Navy Gazette*.

"Dr. Gordon's work has already attained a high character in medico-military literature."—*Boston Medical and Surgical Journal*.

By the same Author, 2s. 6d.,

Life on the Gold Coast. Being a Full and Accurate Description of the Inhabitants, their Modes and Habits of Life; interspersed with amusing Anecdotes, Hints to Travellers and others in Western Africa.

By the same Author, super cloth, 2s. 6d. ; or, popular edition, paper wrapper, 1s.,

A Manual of Sanitation ; or, First Help in Sickness and when Wounded. Specially adapted as a pocket companion for officers and privates of the regular and volunteer services at home and abroad, in peace and in war.

"Instructions conveyed in clear and intelligible terms."—*The Standard*.

"The official distribution of Dr. Gordon's little manual throughout the forces, would, indeed, be a boon. Volunteers would also do well to purchase and study it."—*The Medical Press and Circular*.

"Contains a great deal of useful matter simply arranged in alphabetical order for ready reference, and might be of great use to others besides soldiers."—*The Builder*.

"Though meant in the first place for army use, it might with advantage find a place in the household, as it is sensible and practical."—*The Graphic*.

By the same Author, 3s. 6d.,

Experiences of an Army Surgeon in India. A Concise Account of the Treatment of the Wounds, Injuries, and Diseases incidental to a Residence in that Country.

Also, price 1s.,

The French and British Soldier. A Lecture on Some Points of Comparison, delivered before H.R.H. Prince Arthur and the Garrison of Dover.

"Clearly and ably written, and may be read by civilians with much pleasure and profit."—*The Figaro*.

Short Lectures on Sanitary Subjects.

By RICHARD J. HALTON, L.K.Q.C.P., L.R.C.P. Edin., L.R.C.S.I., &c., Medical Officer of Health to Kells. 5s.

- | | |
|---------|--|
| Lecture | I. The Necessity of Sanitary Science. |
| " | II. Air. |
| " | III. Sanitary Science in the Sick Room. |
| " | IV. Ventilation. |
| " | V. The Relation of Popular Literature to the Public Health. |
| " | VI. Food. |
| " | VII. Clothing. |
| " | VIII. Cleanliness. |
| " | IX. Sanitary Science in Relation to the Training and Education of the Young. |
| " | X. Epidemics. |
| " | XI. The Influence of Amusements on the Public Health. |
| " | XII. Over-crowding. |

Food; its Varieties, Chemical Composition, Nutritive Value, Comparative Digestibility, Physical Functions and Uses, Preparation, Culinary Treatment, Preservation, Adulterations, &c.

By HENRY LETHEBY, M.B., M.A., Ph.D., &c.,
Professor of Chemistry at London Hospital, Food Analyst
and Medical Officer of Health to the City of London.

Re-written, enlarged, and brought up to the present time, 5s.

"An excellent notion of the chemistry and physiological action of the various foods will be derived from a perusal of Dr. Letheby's book, and the reader will be entertained throughout by the narration of many facts which will enliven the study."—*The Lancet*.

"Either as a text-book for schools or as a household guide, it is excellently adapted."—*Public Opinion*.

"Clergymen who are interested in 'cooking for the poor' will find much to aid them in this valuable work, a copy of which ought to be in every household."—*Figaro*.

A Manual of Hygiène, Public and Private, and Compendium of Sanitary Laws, for the information and guidance of Public Health Authorities and Sanitarians generally.

By CHAS. A. CAMERON, M.D., F.R.C.S.,
Professor of Hygiène, Royal College of Surgeons, Medical Officer of Health and Analyst for the city of Dublin.
With Illustrations, 10s. 6d.

By the same Author, price 1s.

A Handy-Book of Food and Diet in Health and Disease.

"The newest views as to the physiology of digestion, and the comparative values of food substance. It is short and sensible."—*The Globe*.

By the same Author, 6d.,

On Disease Prevention. A Practical Treatise on Disinfection.

"This little work, which is offered at the trifling charge of sixpence, contains practical directions for disinfecting rooms, clothing, bedding, &c., with chapters on vaccination, water impurities, and other important sanitary matters."—*The Review*.

Also, price 2s. 6d.,

Lectures on the Preservation of Health.

Price 6d.

On Vitiated Air. A Paper read before the Association of Medical Officers of Health.

By C. MEYMOTT TIDY, M.B.,
Lecturer on Chemistry and Professor of Medical Jurisprudence at the London Hospital. 6d.

Cutaneous Medicine, and Diseases of the Skin.

By HENRY S. PURDON, M.D., Edin. F.R.C.S., &c.,
Physician to the Belfast General Hospital, Physician to
the Skin Hospital. 6s.

Skin Diseases : an Inquiry into their Parasitic Origin, Con-
nection with Eye Affections, and a Fungoid Theory of.

By JABEZ HOGG,
Surgeon to the Royal Westminster Ophthalmic Hospital,
President of the Medical Microscopical Society, &c. 2s. 6d.

"Sound teaching will be found in Mr. Hogg's treatise."—*London News*.

By the same Author, in Preparation,

The Ophthalmoscope : a Treatise on its Use in Diseases of
the Eye. 4th edition, 10s. 6d.

The Treatment of Chronic Skin Diseases.

By E. D. MAPOTHER, M.D.,
Professor of Physiology in the Royal College of Surgeons
of Ireland. Price 2s. 6d.

Skin Eruptions : their Real Nature and Rational Treatment,
By Dr. BARR MEADOWS, Physician to the National Insti-
tution for Diseases of the Skin, &c. Sixth edition, 2s. 6d.

On the Tonic Treatment of Gout. With Cases.

By JAMES C. DICKINSON, M.R.C.S.,
late of the Medical Staff of H.M.'s Bengal Army, and
formerly Staff Surgeon Crimean Army. 2nd edit., 3s. 6d.
"A thoughtful and practical work."—*Public Opinion*.

By the same Author, 2s.,

Suppressed Gout : its Dangers and Treatment ; with an
Appendix on the Uses of the Vals Waters.

By the same Author, 1s. 6d.

Tropical Debility. A Treatise on the Causes and Treatment
of Debility, produced by prolonged residence in the Tropics.

Also, 1s.

Indian Boils : their Varieties and Treatment without Dis-
figurement.

The Training of the Mind for the Study of Medicine.

A Lecture delivered at St. George's Hospital,
By ROBERT BRUDENELL CARTER, F.R.C.S.,
Professor of Ophthalmic Surgery in the Hospital. 1s.

"A remarkable address."—*The Lancet*.

"No one can read it without learning and profiting much."—*Stud: Jour*.

Osteology for Students, with Atlas of Plates.

By ARTHUR TREHERN NORTON, F.R.C.S.,
Surgeon to, and Lecturer on Anatomy at, St. Mary's Hos-
pital. Atlas and text bound in one volume, price 7s. 6d.,
in two vols. 8s. 6d.

"The handiest and most complete hand-book of Osteology."—*The Lancet*.

In the press by same Author, Second Edition.

Affections of the Throat and Larynx.

"Short, simple, and thoroughly practical instruction."—*Medical Times*.

Lessons in Laryngoscopy: including Rhinoscopy and the
Diagnosis and Treatment of Diseases of the Throat—
Forming a Complete Manual on the Use of the Laryngo-
scope in Diseases of the Throat, Chest, and Lungs.
Illustrated with Hand-coloured Plates and Wood-cuts, for
the use of Practitioners and Students.

By PROSSER JAMES, M.D., M.R.C.P.,
Lecturer on Materia Medica and Therapeutics at the
London Hospital, Physician to the Royal Hospital for
Diseases of the Throat, &c. 5s. 6d.

By the same Author, 1s.,

The Progress of Medicine. A Lecture delivered at the
London Hospital.

Overwork and Premature Mental Decay: its Treatment.
An Essay, with Cases read before the Medical Society of
London.

By C. H. F. ROUTH, M.D., M.R.C.P. London,
Senior Physician to the Samaritan Hospital for Women
and Children, Consulting Physician for Diseases of Women
to the North London Hospital. Price 1s.

By the same Author, price 3s. 6d.,

On Fibrous Tumours of the Womb: Points connected
with their Pathology, Diagnosis, and Treatment. Being
the Lettsomian Lectures delivered before the Medical
Society of London.

Also, by the same Author, price, 1s.

Lectures on Diseases of Women and Children.

Also, price 1s.,

On Uterine Deviations.

The Text-Book of (113) Anatomical Plates, designed under the direction of Professor MASSE, with Descriptive Text.

By E. BELLAMY, F.R.C.S.,

Senior Assistant Surgeon to Charing Cross Hospital.

Second edition, plain, 21s.; hand-coloured, 42s.

"With these plates the student will be able to read up his anatomy almost as readily as with a recent dissection before him."—*Student's Journal*.

In preparation, price 42s.

The Text Book of Operative Surgery. From the French of Professors CLAUDE BERNARD & HUETTE.

Illustrated with numerous hand-coloured and lithographic plates. Translated and re-written by Arthur Trehern Norton, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, St. Mary's Hospital.

The Students' Case Book: containing Practical Instructions, and all the Necessary Information for Clinical Work and Systematic Case-taking, with a number of Blank Ruled Sheets, for recording full particulars of cases as seen.

By GEORGE BROWN, M.R.C.S.,

Gold Medalist, Charing Cross Hospital. 1s.

Elements of the General and Minute Anatomy of Man and the Mammalia. From Original Researches.

By Professor GERBER, University of Bern, and

Professor GEORGE GULLIVER, F.R.S.

2 vols., containing thirty-four plates. 15s.

The Pathological Anatomy of the Human Body. Translated from the German of Professor VOGEL.

By GEORGE E. DAY, M.A. Cantab., M.R.C.P. London.

With 100 plain and coloured engravings. 18s.

Anatomy of the External Forms of Man: designed for the Use of Artists, Sculptors, &c.

By Dr. J. FAU.

Edited, with Additions, by R. KNOX, M.D., F.R.C.S.E.

Twenty-nine Drawings from Nature. Folio. Plain, 24s.; hand-coloured, 42s.

Muscular Anatomy of the Horse.

By J. I. LUPTON, M.R.C.V.S. 3s. 6d.

Cholera : how to Prevent and Resist it.

By Professor VON PETTENKOFER,
Professor of Hygiène, University of Munich, President of
the Sanitary Department of the German Empire ; and
THOMAS WHITESIDE HIME, A.B., M.B.,
Lecturer on Medicine at the Sheffield School of Medicine.
Illustrated with Woodcuts and Diagram, 3s. 6d.

Diarrhœa and Cholera : their Successful Treatment.

By JOHN CHAPMAN, M.D., M.R.C.P. London. 1s. 6d.

"His arguments are enforced at great length in the pamphlet before us, and are supported by an extensive array of facts."—*Medical Times and Gazette.*

Causes of Cholera : its Treatment.

By WM. GROVE GRADY, M.D., M.R.C.S. 1s.

Deafness : its Causes and Treatment, with Anatomy and Physiology, Human and Comparative, of the Organ of Hearing ; the Diseases incidental to its Structure, and their Treatment.

By JOHN P. PENNEFATHER, M.K.Q.C.P., L.R.C.S., &c.,
Surgeon to the Royal Dispensary for Diseases of the
Ear, &c. Illustrated, 5s.

Diagnostics of Aural Disease. Second Edition, with a
Chapter on the Application of Electricity, and Description
of the Author's Magneto-Electric Catheter.

By S. E. SMITH, M.R.C.S. Illustrated, 2s. 6d.

The Philosophy of Voice. An Essay upon the Physio-
logical and Physical Action of the Breath and Vocal Cords
in the Production of Articulate Speech, conjoined with
Vocal Utterance. By CHARLES LUNN. 1s.

**Experimental Researches on the Causes and Nature of
Hay Fever.** With Wood-cuts and Lithographic Tables.

By CHARLES H. BLACKLEY, M.R.C.S. 7s.

"It is a piece of real honest work, original and instructive, and will well repay perusal."—*The Lancet.*

"We have read Mr. Blackley's very instructive treatise with much interest, and have been much impressed by his ingenuity in devising experiments, his industry in carrying them out, and his obvious candour in giving the results of his observations."—Dr. George Johnson in the *London Medical Record.*

A Treatise on Pharmacy, designed as a Text-book for Students, and as a Guide for the Physician and Pharmacist, containing the officinal and many unofficinal Formulas, and numerous examples of extemporaneous Prescriptions.

By EDWARD PARRISH,

Late Professor of the Theory and Practice of Pharmacy, Philadelphia College. Fourth Edition, enlarged and revised, with 280 Illustrations, half-bound morocco, 30s.

By THOMAS S. WIEGAND.

"There is nothing to equal Parrish's Pharmacy in this or any other language."—*Pharmaceutical Journal*.

The Pharmacopœial Companion to the Visiting List; Being a Posological Table of all the Medicines of the British Pharmacopœia, arranged according to their action.

By R. T. H. BARTLEY, M.D., M.B. Lond.,

Surgeon to the Bristol Eye Hospital. Price 6d.

The Specific Action of Drugs. An Index to their Therapeutic Value. Price 10s. 6d.

By ALEXANDER G. BURNES, and F. MAVOR,

President of the Central London Veterinary Society.

The Sewage Question: a Series of Reports. Being Investigations into the condition of the Principal Sewage Farms and Sewage Works of the Kingdom, from

Dr. LETHEBY'S Notes and Chemical Analyses. 4s. 6d.

"These Reports will dissipate obscurity, and, by placing the subject in a proper light, will enable local authorities, and others interested in the matter, to perceive the actual truths of the question, and to apply them practically."

Notes on Nuisances, Drains, and Dwellings: their Detection and Cure. By W. H. PENNING, F.G.S. 6d.

"The directions, which are plain, sound, and practical, will be found useful in every household."—*The Doctor*.

"This little pamphlet should be studied by everybody."—*Scientific Review*.

On Scarlatina: its Nature and Treatment.

By I. BAKER BROWN, F.R.C.S. (Exam.),

late Surgeon Accoucheur to, and Lecturer on Diseases of Women and Children at, St. Mary's Hospital. 3rd edit. 3s.

By the same Author, 1s.,

Sterility: its Causes and Treatment. Being a Paper read before the Medical Society of London, and printed by request.

On Change of Climate in the Treatment of Chronic Diseases, especially Consumption: A Medical Guide for Travellers in pursuit of Health to the Southern Winter Resorts of Europe and Africa, the South of France, Spain, Portugal, Italy, Algeria, the Mediterranean, Egypt, &c.

By THOMAS MORE MADDEN, M.D., M.R.I.A.,
Examiner in Obstetric Medicine in the Queen's University, Ex-Physician to the Rotundo Lying-in-Hospital, &c.

Third Edition, 5s.

"Evidently the work of a well-informed physician."—*The Lancet.*

"Such a book is very opportune."—*The Athenæum.*

By the same Author. Third Edition, 5s.,

The Spas and their Use. A Medical Handbook of the Principal Watering Places on the Continent resorted to in the Treatment of Chronic Diseases, especially Gout, Rheumatism, and Dyspepsia, with Notices of Spa Life, and Incidents of Travel.

"Not only full of matter, but withal most readable, chatty, and interesting."—*British Medical Journal.*

"A useful handbook for both the professional and the general reader."—*The Lancet.*

By the same Author, Second Edition, Price 1s.,

The Diseases of Women connected with Chronic Inflammation of the Uterus. Their constitutional character and treatment.

By the same Author, Demy 8vo., price 1s.,

The Diagnosis and Treatment of Uterine Polypi.

Also, Royal 8vo., price 1s.,

On Uterine Hydatidiform Disease, or Cystic Degeneration of the Ovum.

Typhoid Fever: its Treatment.

By WILLIAM BAYES, M.D., L.R.C.P. 1s.

African, West Indian, and other Fevers and Diseases.

By ALEXANDER LANE, M.D., Surgeon Royal Navy. 6d.

How to Prevent Small Pox.

By MORDEY DOUGLAS, M.R.C.S., L.R.C.P. Third edition 6d.

"This is a very valuable pamphlet."—*Medical Press.*

Short Lectures on Experimental Chemistry. Introductory to the general course.

By J. EMERSON REYNOLDS, F.C.S., M.R.C.P.,
Professor of Chemistry, Royal College of Surgeons, Professor of Analytical Chemistry, and Keeper of the Minerals, Royal Dublin Society. 3s. 6d.

Notes on the Pharmacopœial Preparations. Specially arranged for the use of Students preparing for Examinations, and as a Note-book for General Practitioners.

By HANDSEL GRIFFITHS, Ph.D., L.R.C.P., &c.,
Librarian to the Royal College of Surgeons of Ireland. 2s. 6d.

"Will be found useful to students engaged in the study of *Materia Medica* and the *Pharmacopœia*; the Notes are faithful."—*The Lancet*.

"From the many excellences of the work, we can confidently recommend it as a most valuable help for those who are preparing for medical examinations."—*Students' Journal*.

By the same Author, third edition, 1s. 6d.,

Posological Tables: Being a Classified Chart of Doses; showing at a glance the Dose of every Officinal Substance and Preparation. For the use of Practitioners and Students.

"We welcome these Tables, which are the best we have seen, as a great boon to students and practitioners."—*Hospital Gazette*.

"The Local Government Board might advantageously consider the propriety of supplying every dispensary and workhouse with a copy, the cost of which would weigh little against the benefit which such ready information would be to the Poor Law service."—*Medical Press and Circular*.

Also by the same Author, 1s. 6d.,

A System of Botanical Analysis, applied to the Diagnosis of British Natural Orders, for the Use of Beginners.

"Backed by such high authority as Professors Bentley, Henslow, and other eminent botanists, we can safely introduce it to the notice of our readers."—*Students' Journal*.

"The author has placed the student under considerable obligations by his system of botanical analysis."—*Pharmaceutical Journal*.

Practical Observations on the Harrogate Mineral Waters.

By A. S. MYRTLE, M.D., L.R.C.S.E.
Third Edition, 2s. 6d.

Chemistry in its Application to the Arts and Manufactures. A Text-Book by RICHARDSON and WATTS.

Vol. I. : Parts 1 and 2.—Fuel and its Applications. 433 Engravings, and 4 Plates £1 16s.

Part 3.—Acids, Alkalies, Salts, Soap, Soda, Chlorine and its Bleaching Compounds, Iodine, Bromine, Alkalimetry, Glycerine, Railway Grease, &c., their Manufacture and Applications £1 13s.

Part 4.—Phosphorus, Mineral Waters, Gunpowder, Gun-cotton, Fireworks, Aluminium, Stannates, Tungstates, Chromates and Silicates of Potash and Soda, Lucifer Matches £1 1s.

Part 5.—Prussiate of Potash, Oxalic Acid, Tartaric Acid, Many Tables, Plates, and Wood Engravings, £1 16s.

Parts 3, 4, and 5 separately, forming a complete

Practical Treatise on Acids, Alkalies, and Salts : their Manufacture and Application. In three vols., £4 10s.

Collenette's Chemical Tables : Oxides, Sulphides, and Chlorides, with Blank Forms for Adaptation to other Compounds. Arranged for the use of Teachers and Students, by Professor COLLENETTE. 6d.

"We have great pleasure in recommending this little work to all who are interested in having the study of chemistry simplified and methodically treated."—*Chemical News*.

"An excellent means for the communication of much valuable information."—*Chemist and Druggist*.

Chemistry in its Relation to Physiology and Medicine.

By GEORGE E. DAY, M.A. Cantab., M.D., F.R.S.,
late Professor of Medicine in the University of St. Andrews. 10s.

A Practical Text-Book of Inorganic Chemistry, including the Preparation of Substances, and their Qualitative and Quantitative Analyses, with Organic Analyses.

By D. CAMPBELL,
late Demonstrator of Practical Chemistry in University College. 5s. 6d.

Rudiments of Chemistry, with Illustrations of the Chemistry of Daily Life. Fourth Edition, with 130 Woodcuts.

By D. B. REID, M.D., F.R.S., F.R.C.P. Edin. 2s. 6d.

The Chemical and Physiological Balance of Organic Nature : an Essay. 1 vol., 12mo.

By Professors DUMAS and BOUSSINGAULT. 4s.

Elements of Chemistry; including the application of the Science in the Arts.

By T. GRAHAM, F.R.S.,
late Master of the Mint. Second Edition, revised and enlarged. Illustrated with Woodcuts. 2 vols., 8vo. £2.
Vol. II. Edited by H. WATTS, M.C.S. Separately, £1.

Practical Treatise on the Use of the Microscope.

By J. QUECKETT.
Illustrated with 11 Steel Plates and 300 Wood Engravings. Third Edition, £1 1s.

Lectures on Histology: Elementary Tissues of Plants and Animals. On the Structure of the Skeletons of Plants and Invertebrate Animals. 2 vols., 8vo. Illustrated by 340 Woodcuts. By the same Author. £1 8s. 6d.

Introduction to Cryptogamic Botany. 8vo. Illustrated with 127 Engravings. By Rev. M. J. BERKELEY. £1.

A Practical Treatise on Coal, Petroleum, and other Distilled Oils. Illustrated with 42 Figures, and a View on Oil Creek, in Pennsylvania. 8vo.

By A. GESNER. 10s. 6d.

Practical Mineralogy; or, a Compendium of the Distinguishing Characters of Minerals, by which the Name of any Species may be speedily ascertained. 8vo., with 13 Engravings, showing 270 Specimens.

By E. J. CHAPMAN. 7s.

Schleiden's Plants: a Biography, in a Series of Fourteen Popular Lectures on Botany.

Edited by Professor HENFREY.
Second Edition, 8vo., with 7 Coloured Plates and 16 Woodcuts. 15s.

The Architecture of the Heavens.

By J. P. NICHOL,
Professor of Astronomy in the University of Glasgow
Ninth Edition, entirely revised and greatly enlarged.
Illustrated with 23 Steel Engravings and numerous Woodcuts. 16s.

The Protoplasmic Theory of Life. Containing the Latest Researches on the subject.

By JOHN DRYSDALE, M.D., F.R.M.S.,
President of the Liverpool Microscopical Society. 5s.

"Subjects beyond the pale of precise knowledge are treated of in a manner which will quite repay perusal."—*Nature*.

By the same Author, |

Life and the Equivalence of Force.

Part I. Historical Notice of the Discovery of the Law of Equivalence of Force. 1s.

Part II. Nature of Force and Life : containing the Harmony of Fletcher and Beale. 1s. 6d.

"The book is well worth perusal."—*Westminster Review*.

"We cannot part from this work without praising the calm and excellent spirit in which the subject is handled."—*The Examiner*.

Practical Lessons in the Nature and Treatment of the Affections produced by the Contagious Diseases ; with Chapters on Syphilitic Inoculation, Infantile Syphilis, and the Results of the Contagious Diseases Acts. Sixty coloured and plain Illustrations.

By JOHN MORGAN, M.D., F.R.C.S.,
Professor of Anatomy in the Royal College of Surgeons,
Lecturer on Clinical Surgery, Physician to the Lock Hospitals, Dublin. Second thousand. Paper wrapper, 5s. ; cloth, 6s.

"Contains much that is original and of practical importance."—*The Lancet*.

"This is a most instructive work, and reflects great credit on Dr. Morgan."—*The Medical Press and Circular*.

By the same Author. Illustrated, price 1s.

On the Cure of Bent Knee, and the immediate Treatment of Stiff-joints by extension.

Also, Second Thousand, Price 2s.

The Dangers of Chloroform and the Safety and Efficiency of Ether as an Agent in securing the Avoidance of Pain in Surgical Operations.

The Dental Profession. A Letter by a Dental Surgeon, Member of the Royal College of Surgeons, on the abuse of the profession. Price 1s.

Responsibility and Disease : an Essay upon moot-points in Medical Jurisprudence, about which Medical Men should not fail to be well instructed.

By J. H. BALFOUR BROWNE, Barrister-at-Law,
Author of "The Medical Jurisprudence of Insanity," &c. 2s.

Diseases of the Prostrate Gland.

By J. STANNUS HUGHES, M.D., F.R.C.S.,
Professor of Surgery, Royal College of Surgeons, Vice-President of the Dublin Pathological Society. Revised Edition, 3s.

Syphilis : Its Nature and Treatment.

By CHARLES R. DRYSDALE, M.D., F.R.C.S.,
Physician to the Metropolitan Free Hospital; late Secretary Harveian Medical Society's Committee for the Prevention of Venereal Diseases. Second Edition, 4s. 6d.

"We bespeak a cordial welcome to this new work, which contains in a moderate compass the conclusions of an industrious, painstaking syphilographer."—*Medical Press and Circular.*

By the same Author,

Alpine Heights and Climate in Consumption. 1s.

Medicine as a Profession for Women. 1s.

The Population Difficulty. 6d.

Functional Derangements and Debilities of the Generative System : their Nature and Treatment.

By F. B. COURTENAY, M.R.C.S. Eighth Edition, 3s.

On Certain Forms of Hypochondriasis, and Debilities peculiar to Man. Translated from the German of DR. PICKFORD,

By F. B. COURTENAY, M.R.C.S.
Eighth Edition, price 5s.

Modern Hydropathy : with Practical Remarks upon Baths, in Acute and Chronic Diseases.

By JAMES WILLIAMS, M.D., M.R.C.S. Fifth Edition.
limp cloth, 2s.

Practical Guide to the Baths of Aix in Savoy.

By the Baron DESPINE, Physician. 2s.

Horses : their Rational Treatment, and the Causes of their Premature Decay. By Amateur. 5s.

An Abridgment of the above. 1s.

Via Medica : a Treatise on the Laws and Customs of the Medical Profession, in relation especially to Principals and Assistants ; with Suggestions and Advice to Pupils on Preliminary Education.

By J. BAXTER LANGLEY, LL.D., M.R.C.S., F.L.S.
Fourth Edition, 3s.

Engineering Precedents for Steam Machinery : embracing the Performances of Steamships, Experiments with Propelling Instruments, Condensers, Boilers, &c., accompanied by Analyses of the same ; the whole being original matter, and arranged in the most practical and useful manner for Engineers. 2 vols., 8vo. With Plates and Tables.

By B. E. ISHERWOOD,
Chief Engineer United States Navy. 15s.

Dictionary of Technical Terms used in Iron Ship-building, Steam-engines, &c. In English, French, and Latin.

By GIORGIO TABERNA. 3s.

On Mental Capacity in Relation to Insanity, Crime, and Modern Society.

By CHRISTOPHER SMITH, M.D. Price 3s. 6d.

WORKS BY DR. ROTH,

1. **The Prevention and Cure of many Chronic Diseases by Movements.** With Ninety Engravings. 10s.
2. **The Handbook of the Movement-Cure.** With One Hundred and Fifty-five Original Engravings. 10s.
3. **Contributions to the Hygienic Treatment of Paralysis, and of Paralytic Deformities.** With Thirty-Eight Engravings. Illustrated by Numerous Cases. 3s. 6d.
4. **The Prevention of Spinal Deformities, especially of Lateral Curvature ; with Notes.** 3s. 6d.
5. **On Paralysis in Infancy, Childhood, and Youth.** With Forty-five Engravings. 3s. 6d.
6. **A Short Sketch of Rational Medical Gymnastics, or the Movement-Cure.** With Thirty-eight Engravings. 1s.
7. **Table, showing a few Injurious Positions, and some Deformities of the Spine, produced partly by bad positions, and tight lacing.** With Forty-six Engravings. 6d.
8. **A Table of a Few Gymnastic Exercises without Apparatus.** With Thirty-three Wood Engravings. 6d.
9. **Gymnastic Exercises on Apparatus, according to the Rational System of LING.** With Eighty Illustrations. 1s.
10. **The Gymnastic Exercises of Ling.** Arranged by Dr. Rothstein ; translated by Dr. Roth. Second Edition. 2s. 6d.
11. **The Russian Bath : with some Suggestions regarding Public Health.** Second Edition. 1s.
12. **On the Causes of the Great Mortality of Children, and the Means of Diminishing them.** 3d.
13. **On the Importance of Rational Gymnastics as a Branch of National Education : a Letter to Lord Granville.** 1s.
14. **On Scientific Physical Training and Rational Gymnastics ; a Lecture.** 1s.
15. **Exercises or Movements, according to LING's System: With Forty-two Illustrations.** Fourth Edition. 1s.
16. **Two Tables of Gymnastic Exercises without Apparatus ; with Explanations.** 1s.
17. **A Plea for the Compulsory Teaching of Physical Education.** 1s.

Practical Guide for the Young Mother. Translated from the French of Dr. BROCHARD, late Director-General of Nurseries and Crèches in France, Edited with Notes and Hints for the English Mother.

Crown 8vo., 2s.

TABLE OF CONTENTS.

FIRST PART.

PHYSICAL EDUCATION OF THE INFANT.

Chapter	I.	Precautions which a pregnant woman should take.
"	II.	Preparation of the baby-clothes and cradle.
"	III.	Care of the mother during and after labour.
"	IV.	First cares of the Infant.
"	V.	Of the Importance of Diet in the newly-born Infant.
"	VI.	Maternal Suckling.
"	VII.	Hired Wet-nursing, Choice of a Nurse, Nurses at Home, Married Women, Maiden Mothers, Nurses in the Country.
"	VIII.	Diet of the Nurse.
"	IX.	Change of Nurse.
"	X.	Weaning.
"	XI.	Maternal Suckling and Bringing-up by the Bottle.
"	XII.	Food of the Infant after Weaning.
"	XIII.	Clothing.
"	XIV.	Toilet, Lotions, Baths, Frictions.
"	XV.	Cleansing of the Head, Crusts in the Hair, Dressing of the Hair.
"	XVI.	Sleep.
"	XVII.	Exercise, Walking, Promenade.
"	XVIII.	Atmosphere—its Action on the Infant.
"	XIX.	Dentition.
"	XX.	Milk Crusts.
"	XXI.	Worms in the Intestines.
"	XXII.	Vaccination.
"	XXIII.	Care to be taken of the Infant in case of disease, before the Doctor comes.

SECOND PART.

MORAL EDUCATION OF THE INFANT.—Development of the Senses, Development of the Intellectual Faculties, Habits, Imitation, Language, Passions.

CONCLUSION.—The Ignorance of Mothers and of Nurses is for France a Powerful Cause of Depopulation.

APPENDIX.—Of Maternal Love.

MISCELLANEOUS.

THE CRY OF ITALY AGAINST THE ROMISH CHURCH.

The Religion of Rome described by a Roman. 8s.

Translated, with Introduction and Notes,

By WILLIAM HOWITT,

Author of "The History of Priestcraft," "Homes and Haunts of British Poets," &c., &c.

"Should be read by all."—*Standard*.

"The object is to prove the emptiness of Roman Ecclesiastical Religion, and the moral unfitness of many of its chief professors to act as religious teachers. A closing chapter upon Catholicism in Spain, and the influence of the priesthood on political affairs in that country, is of special interest at the present moment."—*The Mail (Evening Edition of The Times)*.

"Mr. Howitt has seen Old Giant Pope at home, and marked for himself the monster's baleful influence. To his testimony we can add our own corroborating witness, and so, we believe, can every sojourner in Italy. Written with great vigour and vivacity."—*Mr. Spurgeon in the "Sword and Trowel."*

"The value of the work lies in its contemporary character."—*Literary Churchman*.

"A scathing and unflinching revelation of the iniquities inseparable from the Papal system."—*The Rock*.

"This is a book which we hope will excite much public attention."—*Evangelical Magazine*.

"The book bristles with facts which ought to startle and arouse."—*Surrey Congregational Magazine*.

"For a real view of the blessings of Popery we must study its growth, and development, and influence in its own real home. The book before us enables us to understand something of what it is and what it has done."—*Literary World*.

"There is no probability of controverting such a work as this, and if it were generally read throughout England, we believe it would give Popery a deadly wound in this country."—*Protestant Opinion*.

"This is in every sense a seasonable book, and deserves a wide circulation."—*Watchman*.

"The book remains an exhaustive and telling indictment against the whole pontifical system."—*The Examiner*.

Cheerful Words: Volumes of Sermons, specially adapted for delivery before Inmates of Asylums, Unions, Workhouses, Hospitals, Gaols, Penitentiaries, and other Public Institutions. Composed by distinguished Dignitaries of the Church, and Clergymen. Edited by WM. HYSLOP, Proprietor of the Stretton House Private Asylum for Gentlemen, Church Stretton, Shropshire. First and Second Series, price 5s. each.

Hymnologia Christiana Latina; or, a Century of Psalms and Hymns and Spiritual Songs. By Various Authors, from LUTHER to HEBER. Translated into Latin Verse by the Rev. RICHARD BINGHAM, M.A. 5s.

"There are something under a hundred and twenty versions in this elegant little volume, many of them of considerable length. It is valuable, merely as an evidence of that elaborate cultivation, that perfect polish of classical scholarship, which it is very good for the world at large that some men should possess."—*Literary Churchman*.

A Physician's Sermon to Young Men. By WILLIAM PRATT, M.A., M.D., &c. 1s.

"The delicate topic is handled wisely, judiciously, and religiously, as well as very plainly."—*Guardian*.

Electricity Made Plain and Useful. By JOHN WESLEY, M.A. Second Edition, 2s. 6d. A Popular Edition, 1s.

"A curious and entertaining little work."—*Literary Churchman*.

Glimpses of a Brighter Land. Cloth extra, 2s. 6d.

Manual Alphabet for the Deaf and Dumb. Official. 6d.

Brilliant Prospects. A Novel. By R. L. JOHNSON, M.D. 3s. 6d.

Queer Customers. By the same Author. 1s.

My First Start in Practice. By the same Author. 1s.

Constipation: its Causes and Consequences. With Hints. By a CLERGYMAN. 1s.

Patent Wrinkles. With Practical Suggestions, written in a humorous style, for Amendment of the Patent Laws. 1s.

Revelations of Quacks and Quackery. Giving a complete Directory of the London and Provincial Quack Doctors; with Facts and Cases in Illustration of their Nefarious Practices. Twenty-fifth thousand. 1s. 6d.

"The narrative is too good to be abridged, and ought to be, as we believe it is, largely circulated, which is no less than it deserves, both for its fearless tone, and for the care and research which have been bestowed on its compilation."—*Saturday Review*.

"Buy, therefore, reader, by all means buy 'Revelations of Quacks and Quackery.' Its contents will amuse and astonish you, while they invoke your indignation and disgust."—*Punch*.

PERIODICAL PUBLICATIONS.

- The Medical Press and Circular.** Established 1838. Published every Wednesday Morning in London, Dublin, and Edinburgh. Is one of the oldest and most influential of the Medical Journals. 5*d.* Per annum, post free, in advance, £1 1*s.*
- The Student's Journal and Hospital Gazette.** A Fortnightly Review of Medicine, Surgery, Arts, Science, Literature, and the Drama. The only Paper that represents the whole body of Medical Students in the United Kingdom. 4*d.* Per annum, post free, 7*s.* 6*d.*
- The Doctor.** A Monthly Review of British and Foreign Medical Practice and Literature. Published on the 1st of every Month. 6*d.* Per annum, post free, 6*s.*
- Anthropologia.** The Quarterly Journal of the London Anthropological Society. 4*s.* each part.
- The Ecclesiastical Gazette ; or, Monthly Register of the Affairs of the Church of England.** Established 1838. Published on the Second Tuesday in every Month, and sent to the Dignitaries of the Church at home and abroad, Heads of Colleges, and the Clergymen of every Parish in England and Wales. 6*d.* Per annum, post free, 6*s.*
- The Clergy List (Annual).** Established 1841. Contains Alphabetical Lists of the Clergy at Home and Abroad. Benefices in England and Wales, with Post Towns, Incumbents, Curates, Patrons, Annual Value, Population, &c. The Patronage of the Crown, Lord Chancellor, Archbishops, Bishops, Deans, Universities, Private Patronage, &c., &c. 10*s.*
- The Irish Medical Directory (Annual).** Contains a complete Directory of the Profession in Ireland ; their Residences and Qualifications ; the Public Offices which they hold, or have held ; the Dates of Appointments ; and the published Writings for which they are distinguished. 5*s.*
- The Medical Register and Directory of the United States of America.** Containing the Names and Addresses of about 70,000 Practitioners of all grades, systematically arranged by States. 30*s.*

STANDARD FRENCH WORKS.

	£	s.	d.
Alvarenga.—Thermométrie clinique - - -	0	5	0
Anger.—Nouveaux éléments d'anatomie chirurgicale, avec atlas	2	0	0
——— Maladies chirurgicales nouvelles fractures et luxations, coloriées - - -	7	10	0
Anglada.—Etudes sur les maladies nouvelles et les maladies éteintes - - -	0	8	0
Armand.—Traité de Climatologie générale - - -	0	14	0
Barnes.—Leçons sur les opérations obstétricales - - -	0	12	0
Barthes et Rilliet.—Traité clinique et pratique des maladies des enfants - - - 3 vols.	1	5	0
Bayard.—Traité pratique des maladies de l'estomac - - -	0	10	0
Beaude.—Dictionnaire de médecine usuelle à l'usage des gens du monde - - - 2 vols.	1	10	0
Beaunis et Bouchard.—Nouveaux éléments d'anatomie descriptive - - -	0	18	0
Becquerel.—Traité des applications de l'électricité à la thérapeutique médicale et chirurgicale - - -	0	7	0
——— Traité élémentaire d'hygiène privée et publique - - -	0	8	0
Beraud.—Atlas complet d'anatomie chirurgicale topographique - - -	3	0	0
——— Ditto ditto, with coloured plates - - -	6	0	0
——— et Robin.—Manuel de physiologie de l'homme et des principaux vertébrés - - - 2 vols.	0	12	0
——— et Velpeau.—Manuel d'anatomie générale et thérapeutique - - -	0	7	0
Bergeret.—Abus des boissons alcooliques - - -	0	3	0
——— Fraudes dans l'accomplissement des fonctions génératrices - - -	0	2	6
Bernard-Chevell.—Leçons de physiologie expérimentale appliquée à la médecine - - -	0	14	0
——— Leçons sur les effets des substances toxiques et médicamenteuses - - -	0	7	0
——— Leçons sur la physiologie et la pathologie du système nerveux - - - 2 vols.	0	14	0
——— Leçons sur les propriétés physiologiques et les altérations pathologiques des liquides de l'organisme - - - 2 vols.	0	14	0
——— Leçons de pathologie expérimentale - - -	0	7	0
——— De la physiologie générale - - -	0	6	0
——— et Huette.—Précis iconographique de médecine opératoire et d'anatomie chirurgicale - - -	1	4	0
——— Ditto ditto, with coloured plates - - -	2	8	0
——— Ditto ditto, plain - - -	0	3	0
——— Ditto ditto, coloured - - -	0	6	0
——— Premiers secours aux blessés - - -	0	2	0
Best.—Leçons sur la physiologie comparée de la respiration - - -	0	10	0

	£	s.	d.
Billroth.—Éléments de Pathologie Chirurgicale général -	0	14	0
Bocquillon.—Manuel d'histoire naturelle médicale - 2 vols.	0	14	0
Boisseau.—Des maladies simulées et des moyens de les reconnaître -	0	7	0
Boivin et Duges.—Anatomie pathologique de l'utérus et de ses annexes -	2	5	0
Bonnafont.—Traité théorique et pratique des maladies de l'oreille, et des organes de l'audition -	0	10	0
Bouchardat.—Le Travail, son influence sur la santé -	0	2	6
— Annuaire de thérapeutique, de matière médicale, de pharmacie, et de toxicologie -	0	1	3
— Formulaire vétérinaire -	0	4	6
— Manuel de matière médicale, de thérapeutique et de pharmacie - 2 vols.	0	16	0
— Nouveau formulaire magistral -	0	3	6
Bouchut.—Histoire de la médecine et des doctrines Médicales 2 vols.	0	16	0
— Traité de pathologie générale et de séméiotique -	1	0	0
— De la vie et de ses attributs -	0	3	6
— Traité pratique des maladies des nouveau-nés -	0	16	0
— et Despres.—Dictionnaire de médecine et de thérapeutique -	1	5	0
Boudin.—Traité de géographie et de statistique médicales, et des maladies endémiques - 2 vols.	1	0	0
Bourgery.—Traité de l'anatomie de l'homme, comprenant la médecine opératoire, dessiné d'après nature, par H. Jacob—8 vols. folio, with 726 plates -	30	0	0
— Ditto ditto, with coloured plates -	50	0	0
— et Jacob.—Anatomie élémentaire en 20 planches, représentant chacune un sujet dans son entier à la proportion de demi-nature, avec un texte explicatif	10	0	0
— Ditto ditto, coloured -	20	0	0
Bourgeois.—Les passions dans leurs rapports avec la santé et les maladies -	0	2	0
Brehm.—La vie des animaux illustrée—Les mammifères 2 vols.	1	1	0
— Ditto ditto Les oiseaux 2 vols.	1	1	0
Briand et Chaude.—Manuel complet de médecine légale -	0	18	0
Burdel.—Du cancer considéré comme souche tuberculeuse -	0	3	0
Carles.—Etude sur les quinquinas -	0	2	6
Casper.—Traité pratique de médecine légale, traduit de l'Allemand par M. G. Baillière - 2 vols.	0	15	0
— Coloured atlas separately -	0	12	0
Cauvet.—Nouveaux éléments d'histoire naturelle médicale, 2 vols.	0	12	0
Cerise.—Mélanges médico-psychologiques -	0	7	6
Chailly-Honore.—Traité pratique de l'art des accouchements -	0	10	0

	£	s.	d.
Chauffard.—De la fièvre traumatique, etc.	0	3	6
Chauveau.—Traité d'anatomie comparée des animaux domestiques	1	0	0
Civiale.—Traité pratique sur les maladies des organes génito-urinaires 3 vols.	1	4	0
Codex Medicamentarius, pharmacopée française, rédigée par ordre du gouvernement	0	10	0
Colin.—Traité de physiologie comparée des animaux 2 vols.	1	6	0
Comite-Consultatif.—d'hygiène publique de France, recueil de travaux et des actes officiels de l'administration sanitaire, chaque vol.	0	8	0
Comte.—Structure et physiologie de l'homme, démontrées à l'aide des figures coloriées, découpées, et superposées	0	4	6
Corlieu.—Aide-mémoire de médecine, de chirurgie, et d'accouchements	0	6	0
Cornil et Ranvier.—Manuel d'histologie pathologique. Parts I. and II., chaque	0	4	6
Coze et Feltz.—Recherches cliniques et expérimentales sur les maladies infectieuses	0	6	0
Cruveilhier. — Traité d'anatomie pathologique générale 5 vols.	1	15	0
——— Anatomie pathologique du corps humain. 41 livraisons, chaque	0	11	0
Cuvier.—Les oiseaux décrits et figurés. 72 planches, 464 figures, noires	1	10	0
——— Ditto ditto, coloriées	2	10	0
——— Les mollusques. 56 planches, 520 figures, noires	0	15	0
——— Ditto ditto, coloriées	1	5	0
——— Les vers et les zoophytes. 37 planches, 520 figures, noires	0	15	0
——— Ditto ditto coloriées	1	5	0
Cyon.—Principes d'électrothérapie	0	4	0
Cyr.—Traité d'alimentation, dans ses rapports avec la physiologie, la pathologie, et la thérapeutique	0	8	0
Daremborg.—Histoire des sciences médicales 2 vols.	1	0	0
——— Médecine, histoire et doctrines	0	3	6
Davaine.—Traité des entozoaires et des maladies vermineuses de l'homme et des animaux domestiques	0	12	0
Demarquay.—De la régénération des organes et des tissus	0	16	0
Deschamps.—Compendium de pharmacie pratique	1	0	0
Desmarres.—Chirurgie oculaire	0	8	0
Despres.—Rapport sur les travaux de la 7 ^{ème} ambulance à l'armée du Rhin et à l'armée de la Loire	2	0	0
Dolbeau.—Leçons de clinique chirurgicale	0	7	0
——— De la lithotritie périnéale	0	4	0
Donne.—Hygiène des gens du monde	0	4	0
Dorvault.—Officine ou répertoire générale de pharmacie pratique	0	17	0

	£	s.	d.
Duchartre.—Éléments de botanique, comprenant l'anatomie, l'organographie, la physiologie des plantes, les familles naturelles, et la géographie botanique -	0	18	0
Duchenne.—De l'électrisation localisée -	0	18	0
Durand-Fardel.—Traité pratique des maladies chroniques 2 vols.	1	0	0
——— Dictionnaire général des eaux minérales et d'hydrologie médicale - 2 vols.	1	0	0
——— Traité pratiques des maladies des vieillards -	0	14	0
——— Traité clinique et thérapeutique du diabète -	0	5	0
Duval et Lereboullet.—Manuel du microscope -	0	5	0
Farabeuf.—De L'épiderme et des épithéliums -	0	5	0
Follin et Duplay.—Traité élémentaire de pathologie externe. Vols. I., II., et III. -	1	17	0
Fonssagrives.—Hygiène et assainissement des Villes -	0	8	0
Fort.—Pathologie et clinique chirurgicales - 2 vols.	1	5	0
Foville.—Etude clinique de la folie, avec prédominance du délire des grandeurs -	0	4	0
——— Moyens de combattre l'ivrognerie -	0	5	0
Galante.—Emploi du caoutchouc vulcanisé dans la thérapeutique médico-chirurgicale -	0	5	0
Galezowski.—Traité des maladies des yeux -	1	0	0
——— Du diagnostic des maladies des yeux par la chromatoscopie rétinienne -	0	7	0
Gallard.—Leçons cliniques sur les maladies des femmes -	0	12	0
Gallez.—Histoire des kystes de l'ovaire -	0	12	0
Ganot.—Traité élémentaire de physique, expérimentale et appliquée, et de météorologie -	0	7	0
Garnier.—Dictionnaire annuel du progrès des sciences et institutions médicales -	0	7	0
Garrigou.—Bagnères de Luchon -	0	8	0
Gaujot et Spillmann.—Arsenal de la chirurgie contemporaine - 2 vols.	1	12	0
Gervais et Van Benenden.—Zoologie médicale -	0	15	0
Gintrac.—Cours théorique et clinique de pathologie interne et de thérapie médicale - 9 vols.	3	3	0
Girard.—Traité élémentaire d'entomologie coléoptères. Avec atlas, colorié -	3	0	0
——— Ditto, ditto, noire -	1	10	0
Gloner.—Nouveau dictionnaire de thérapeutique -	0	7	0
Godron.—De l'espèce et des races dans les êtres organisées -	0	12	0
Goffres.—Précis iconographique des bandages, pansements, et appareils -	1	16	0
——— Ditto, ditto, in parts, plain -	0	3	0
——— Ditto, ditto, in parts, coloured -	0	6	0
Gori.—Des hôpitaux, tentes, et baraques -	0	3	0
Gosselin.—Clinique chirurgicale de l'hôpital de la Charité 2 vols.	1	4	0
Goubert.—Manuel de l'art des autopsies cadavériques, surtout dans les applications à l'anatomie pathologique	0	6	0

		£	s.	d.
Graefe.	Clinique ophthalmique	0	8	0
Grehant.	Manuel de physique médicale	0	7	0
Grellois.	Histoire médicale du blocus de Metz	0	6	0
Gubler.	Commentaires thérapeutiques du codex medicamentarius	0	13	0
Guibourt.	Histoire naturelle des drogues simples 4 vols.	1	16	0
Guyon.	Éléments de chirurgie clinique	0	12	0
Hacquart.	Botanique médicale	0	6	0
Herard et Cornil.	De la phthisie pulmonaire	0	10	0
Houel.	Manuel d'anatomie pathologique générale	0	7	0
Jamain.	Manuel de pathologie et de clinique chirurgicales 2 vols.	0	15	0
————	Manuel de petite chirurgie	0	7	0
————	Nouveau traité élémentaire d'anatomie descriptive et des préparations anatomiques	0	12	0
————	Figures coloriées	2	0	0
Jeannel.	Prostitution dans les grandes villes aux dix-neuvième siècle	0	4	
————	Formulaire magistral et officinal international	0	6	0
Jobert (de Lomballe).	De la réunion en chirurgie	0	12	0
Kiess et Duval.	Cours de physiologie	0	7	0
Kiener.	Le Spécies général et iconographie des coquilles vivantes, continué par le Docteur Fischer. Genre Turbo, avec 43 planches gravies et coloriées	2	10	0
————	Genre Trochus (paraîtra prochainement)			
Lancereaux.	Atlas d'anatomie pathologique	4	0	
Lecour.	Prostitution à Paris et à Londres	0	4	6
Le Fort.	La chirurgie militaire et les sociétés de secours en France et à l'étranger	0	10	0
Lefort.	Traité de chimie hydrologique	0	12	0
Legouest.	Traité de chirurgie de l'armée	0	14	0
Lemaire.	Acide phénique	0	6	0
Levy.	Traité d'hygiène publique et privée 2 vols.	1	0	0
Liebrieck.	Atlas d'ophtalmoscopie représentant l'état normal et les modifications pathologiques du fond de l'œil visibles à l'ophtalmoscope	1	10	0
Littre et Robin.	Dictionnaire de médecine, de chirurgie, de pharmacie, de l'art vétérinaire et des sciences qui s'y rapportent 2 vols.	1	0	0
Longet.	Traité de Physiologie, 3ème édition	1	16	0
Lorain.	Études de médecine clinique : Le choléra, observé à l'hôpital Saint Antoine	0	7	0
————	Le pouls, ses variations et ses formes diverses dans les maladies	0	10	0
Luys.	Iconographie photographique des centres nerveux	7	10	0
Mailliot.	Auscultation	0	12	0
Malgaigne.	Manuel de médecine opératoire	0	7	0
————	Traité d'anatomie chirurgicale et de chirurgie expérimentale 2 vols.	0	18	0

	£	s.	d.
Mandl.—Maladies du larynx et du pharynx - - -	0	18	0
Marais.—Guide pratique pour l'analyse des urines - - -	0	3	6
Marce.—Traité pratique des maladies mentales - - -	0	8	0
——— Recherches cliniques et anatomo-pathologiques - - -	0	1	6
Marchant.—Étude sur les maladies épidémiques - - -	0	1	0
Marvaud.—Effets physiologiques et thérapeutiques des ali- ments d'épargne ou antidépenseurs - - -	0	3	6
——— Les Aliments d'épargne Alcool et Boissons aroma- tiques (café, thé, &c.) - - -	0	6	0
Maunory et Salmon.—Manuel de l'art des accouchements - - -	0	7	0
Mayer.—Rapports conjugaux, considérés sous point de vue de la population, santé, et de la morale publique - - -	0	3	0
Mayer.—Mémoire sur le mouvement organique dans ses rap- ports avec la nutrition - - -	0	3	0
Meyer.—Traité des maladies des yeux - - -	0	10	0
Montmeja.—Pathologie iconographique du fond de l'œil, traité d'ophtalmoscope - - -	0	18	0
Moquin-Tandon.—Éléments de botanique médicale - - -	0	6	0
——— Éléments de zoologie médicale - - -	0	6	0
Morel.—Traité d'histologie humaine - - -	0	12	0
Naegele et Grenser.—Traité de l'art des accouchements - - -	0	12	0
Naquet.—Principes de chimie fondée sur les théories modernes 2 vols. - - -	0	10	0
Nelaton.—Éléments de pathologie chirurgicale - 3 vols. - - -	1	9	0
Nielly.—Manuel d'obstétrique ou aide-memoire de l'élève et du praticien - - -	0	4	0
Niemeyer.—Pathologie interne - - - 2 vols. - - -	0	14	0
Onimus et Legros.—Traité d'électricité médicale - - -	0	12	0
Penard.—Guide pratique de l'accoucheur et de la sage-femme - - -	0	4	0
Peter.—Leçons de clinique médicale - - - vol. 1 - - -	0	15	0
Petrequin.—Nouveaux mélanges de chirurgie et de méde- cine - - -	0	7	6
Pidoux.—Études sur la phthisie - - -	0	9	0
Poggiale.—Traité d'analyse clinique - - -	0	9	0
Poincare.—Leçons sur la Physiologie normale et patholo- gique du Système Nerveux - - -	0	4	0
Quatrefages et Hamy.—Les crânes des races humaines, par livraison chaque - - -	0	14	0
Quetelet.—Anthropométrie, ou mesure des différentes facultés de l'homme - - -	0	12	0
——— Physique sociale, ou essai sur le développement des facultés de l'homme - - - 2 vols. - - -	1	0	0
Raciborski.—Histoire des découvertes relatives au système veineux - - -	0	3	0
——— Traité de la menstruation - - -	0	12	0
Racle.—Traité de diagnostic médical, guide clinique pour l'étude des signes caractéristiques des maladies - - -	0	7	0
Reindfleisch.—Traité d'histologie pathologique - - -	0	14	0
Requin.—Éléments de pathologie médicale - - - 4 vols. - - -	1	10	0

	£	s.	d.
Richet, A.—Traité pratique d'anatomie médico-chirurgicale -	0	18	0
Robin.—Programme du cours d'histologie -	0	6	0
Robin.—Traité du microscope -	1	0	0
——— Anatomie et physiologie cellulaire -	0	16	0
——— Leçons sur Les Humeurs, 2ème édition -	0	18	0
Roubaud.—Traité de l'impuissance et de la stérilité chez l'homme et chez la femme -	0	8	0
Saboia.—Accouchements -	0	13	0
Sandras et Bourguignon.—Traité pratique des maladies nerveuses - 2 vols.	0	12	0
Saint-Vincent.—Nouvelle médecine des familles à la ville et à la campagne -	0	3	6
Schimper.—Traité de paleontologie végétale vols. 1 and 2 vol. 3 sous presse.	5	0	0
Sedillot et Legouest.—Traité de médecine opératoire 2 vols.	1	0	0
Senac.—Traitement des coliques hépatiques -	0	4	0
Tardieu.—Dictionnaire d'hygiène publique et de salubrité, 4 vols.	1	12	0
——— ETUDE MEDICO-LEGALE sur les blessures par imprudence, l'homicide, et les coups involontaires -	0	3	6
——— Ditto ditto sur la pendoison, la strangulation, et la suffocation -	0	5	0
——— Ditto ditto sur l'avortement -	0	4	0
——— Ditto ditto sur l'empoisonnement -	0	12	0
——— Ditto ditto sur les attentats aux mœurs -	0	4	6
——— Ditto ditto sur l'infanticide -	0	6	0
——— Ditto ditto sur la folie -	0	7	0
——— Ditto ditto sur l'identité -	0	3	0
——— Manuel de pathologie et de chirurgie médicales -	0	7	0
Trousseau.—Clinique médicale de l'Hôtel-Dieu de Paris 3 vols.	1	12	0
Valleix.—Guide du médecin praticien, résumé général de pathologie et de thérapeutique appliquées, 5 vols.	2	10	0
Vandercolme.—Histoire botanique et thérapeutique des salsepareilles -	0	3	6
Vaslin.—Plaies par armes à feu -	0	6	0
Vidal.—Traité de pathologie externe et de médecine opératoire 5 vols.	2	0	0
Virchow.—Pathologie des tumeurs - 3 vols.	1	16	0
Vulpian.—Leçons de physiologie générale et comparée du système nerveux au musée d'histoire naturelle -	0	10	0
——— Leçons sur l'appareil vaso-moteur - vol. I	0	8	0
Wagner.—Traité de chimie industrielle - 2 vols.	1	0	0
Wolliez.—Dictionnaire de diagnostic médical, comprenant le diagnostic raisonné de chaque maladie, leur signes, &c. -	0	16	0
Wundt.—Traité élémentaire de physique médicale, traduit de l'Allemand par le Dr. Monoyer -	0	12	0
——— Nouveaux éléments de physiologie humaine -	0	10	0
Wunderlich.—De la température dans les maladies -	0	14	0

BIBLIOTHEQUE
DE
PHILOSOPHIE CONTEMPORAINE.

IN VOLUMES 2s. 6d. EACH.

- Alaux.—Philosophie de M. Cousin.
Auber, Ed.—Philosophie de la médecine.
Barot, Odysse.—Lettres sur la philosophie des histoires.
Beauquier.—Philosophie de la musique.
Beaussire.—Antécédents de l'Hégélianisme dans la philos. franç.
Bentham et Grote.—La religion naturelle.
Bersot, Ernest.—Libre philosophie.
Bertauld.—L'ordre social et l'ordre moral.
Buchner, L.—Science et nature.
Bost.—Le protestanisme libéral.
Bouillier (Francisque).—Du plaisir et de la douleur.
— De la conscience.
Boutmy, E.—Philosophie de l'architecture en Grèce.
Challemel Lacour.—La philosophie individualiste, étude sur Guillaume de Humboldt.
Coignet, C.—La morale indépendante.
Coquerel, Ath.—Origines et transformations du christianisme.
— La conscience et la foi.
— Histoire du credo.
Dumont.—Heckel et la Theorie de l'Evolution en Allemagne.
Faivre.—De la variabilité des espèces.
Fontanes.—Le christianisme moderne. Étude sur Lessing.
Fonvielle, W.—L'astronomie moderne.
Franck, Ad.—Philosophie du droit pénal.
— Philosophie du droit ecclésiastique.
— La philosophie mystique en France aux viii^e siècle.
Garnier, Ad.—De la morale dans l'antiquité.
Gaukler.—Le Beau et son histoire.
Herzen.—Physiologie de la Volonte.
Janet, Paul.—Le matérialisme contemporain.
— La crise philosophique. MM. Taine, Rénan, Vacherot, Littré.
— Le cerveau et la pensée.
— Philosophie de la révolution française.
Laugel, Auguste.—Les problèmes de la nature.
— Les problèmes de la vie.
— Les problèmes de l'âme.

- Laugel, Auguste.—La voix, l'oreille, et la musique.
 — L'optique et les arts.
 Laveleye, Em. de.—Les formes de gouvernement.
 Leblais.—Matérialisme et spiritualisme, préface par M. E. Littré.
 Lemoine, Albert.—Le vitalisme et l'animisme de Stahl.
 — De la physionomie et de la parole.
 Letourneau.—Physiologie des passions.
 Levallois, Jules.—Déisme et christianisme.
 Leveque, Charles.—Le spiritualisme dans l'art.
 — La science de l'invisible. Étude de psychologie et de théodicée.
 Mariano.—La philosophie contemporaine en Italie.
 Max-Muller.—La Science des Religions.
 Mill, Stuart.—Auguste Comte et la philosophie positive.
 Milsand.—L'esthétique anglaise, étude sur John Ruskin.
 Moleschott, J.—La circulation de la vie.
 Odysse-Barot.—Philosophie de l'histoire.
 Remusat, Charles de.—Philosophie religieuse.
 Reville, A.—Histoire du dogme de la divinité de Jésus-Christ.
 Ribot.—Philosophie de Schopenhauer.
 Saigey.—La physique moderne.
 Saisset, Emile.—L'âme et la vie, une étude sur l'esthétique franc.
 — Critique et histoire de la philosophie.
 Schoebel.—Philosophie de la raison pure.
 Selden, Camille.—La musique en Allemagne. Mendelssohn.
 Spencer, Herbert.—Classification des sciences.
 Taine, H.—Le positivisme anglais, étude sur Stuart Mill.
 — L'idéalisme anglais, étude sur Carlyle.
 — De l'idéal dans l'art.
 — Philosophie de l'art.
 — Philosophie de l'art en Italie.
 — Philosophie de l'art dans les Pays-Bas.
 — Philosophie de l'art en Grèce.
 Tissandier.—Des sciences occultes et du spiritisme.
 Vacherot, Et.—La science et la conscience.
 Vera, A.—Essais de philosophie Hégélienne.

FORMAT IN-8.

			£	s.	d.
Agassiz.—De l'espèce et des classifications	-	-	-	0	5 0
Bain.—Les sens et de l'intelligence	-	-	-	-	-
Barni, Jules.—Le morale dans la démocratie	-	-	-	0	5 0
Quatrefages, de.—Darwin et ses précurseurs français	-	-	-	0	5 0
Saigey, Emile.—Les sciences des 18 ^e siècle	-	-	-	0	5 0
Spencer, Herbert.—Les premiers principes	-	-	-	0	10 0
Mill, Stuart.—La philosophie de Hamilton	-	-	-	0	10 0

BIBLIOTHEQUE
D'HISTOIRE CONTEMPORAINE.

IN VOLUMES AT 3s. 6d.

- Bagehot.—La constitution anglaise.
Barni, Jules.—Histoire des idées morales et politiques en France au XVIII^e siècle. 2 vols.
——— Les moralistes français des XVIII^e siècle.
——— Napoléon 1^{er}. et son historien M. Thiers.
Barry, Herbert.—La Russie contemporaine, traduit de l'Anglais.
Beaussire, Emile.—La guerre étrangère et la guerre civile.
Boert.—La guerre de 1870-71 d'après Rustow.
Bourloton, Ed.—L'Allemagne contemporaine.
Carlyle.—Histoire de la révolution française. 3 vols.
Clamagerau.—La France républicaine.
De Rochau.—Histoire de la restauration.
Despois, Eug.—Le vandalisme révolutionnaire.
Dixon, H.—a Suisse contemporaine, traduit de l'Anglais.
Duvergier, De Hauranne.—La république conservatrice.
Hillebrand.—La Prusse contemporaine et ses institutions.
Laugel, Auguste.—Les États-Unis pendant la guerre (1861-65).
Meunier, Victor.—Science et démocratie.
Montegut, Emile.—Les Pays-Bas. Impres^{ns} de voyage et d'art.
Reynald, H.—Histoire de l'Espagne depuis la mort de Charles III. jusqu'à nos jours.
Sayous, Edouard.—Histoire des Hongrois et de leur littérature politique de 1790 à 1815.
Teste, Louis.—L'Espagne contemporaine, journal d'un voyageur.
Thackeray.—Les quatre George.
Veron, Eugène.—Histoire de la Prusse depuis la mort de Frédéric II. jusqu'à la bataille de Sadowa.
——— Histoire de L'Allemagne depuis la bataille de Sadowa.

FORMAT IN-8, 7s. EACH.

Alglave, Emile.—Histoire de l'impôt sur le Revenu en France (sous presse).

Delord, Taxile.—Histoire du second empire, 1848-69. 4 vols.

De Sybel.—Histoire de l'Europe pendant la révolution française. 2 vols.

Lewis, Sir G. Cornwall.—Histoire gouvernementale de l'Angleterre de 1770 jusqu'à 1830, précédé de la vie de l'auteur.

VALUABLE SCIENTIFIC DICTIONARIES IN COURSE OF PUBLICATION.

	£	s.	d.
Dictionnaire de Chimie pure et appliquée, en livraisons -	0	4	0
Dictionnaire de Médecine, de chirurgie, et d'hygiène vétérinaires. Edition entièrement refondue par A. Zundel, en 6 parties, aux souscripteurs - - - - -	2	10	0
Dictionnaire Encyclopedique des Sciences Médicales publié par demi-volume de chacun 400 pages et en trois séries simultanées : la première, commençant par la lettre A ; la deuxième, par la lettre L ; la troisième, par la lettre Q .	0	6	6
Nouveau Dictionnaire de Médecine et de chirurgie pratiques, d'environ 30 volumes, chaque - - - - -	0	1	0

Revue des Deux Mondes. 1st and 15th of every Month.

Revue Scientifique de la France et de l'Etranger. Weekly 6d.

Revue Politique et Littéraire. Weekly. 6d.

La Jeune Mère. Weekly, 6d.

La Petite Bibliographie française contains a monthly summary of the Literature of the Continent in all its branches. This small catalogue is published on the 1st of each month, and will be sent gratuitously upon application.

WORKS NOT IN STOCK, PROCURED AT THE SHORTEST POSSIBLE NOTICE.

Messrs. BAILLIÈRE, TINDALL, & COX are the specially appointed Agents for the *Revue des Deux Mondes*, and most of the Scientific and Medical Periodicals of the Continent.









Riley Dunn & Wilson Ltd



