A practical treatise on the diseases of the scalp / by John E. Erichsen.

A

PRACTICAL TREATISE

ON

THE DISEASES OF THE SCALP.

BY

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TO

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AT UNIVERSITY COLLEGE, LONDON,

This Work is Dedicated,

AS A

TESTIMONY OF ESTEEM AND RESPECT,

BY HIS

SINCERE FRIEND, AND FORMER PUPIL,

THE AUTHOR.

PREFACE.

I SHOULD feel that some apology were necessary in adding another to the already extended list of works on the Diseases of the Skin, were I not convinced that on the subject of the present treatise, the Affections of the Scalp, much error of diagnosis, and consequent confusion of treatment still exists. It is with the hope of remedying the one, and of simplifying the other, that this volume has been undertaken. It cannot, of course, be expected that much that is new can be advanced on a subject that has attracted the attention of so many eminent Dermatologists, and that has been so assiduously cultivated as this; but yet, I trust that by arranging what is already known on these diseases in a clear and methodical manner, by simplifying their diagnosis, and by showing how readily amenable they are, as much so as any other class of affections,

to a rational mode of treatment, that the object I had proposed to myself might be accomplished.

The writings of Willan and of Plumbe on the diseases of the scalp, excellent as they are in many respects, have appeared to me to tend to perpetuate the confusion that yet envelopes these affections, by their being grouped in them under the one term of "Porrigo," a most artificial and unphilosophical nomenclature, by which the very purposes of classification are defeated, and a set of diseases differing from one another in nature, seat, character, causes and treatment, considered as species of the same genus, whilst, on the contrary, they belong to distinct orders. Why this practice of classing together all scalp affections into one group has been continued, it is difficult to understand; for although their distinctive characters are, to a certain degree, obscured and modified by local situation, by the presence of hairs, &c., yet if care be taken, they will be found to be sufficiently strongly marked not to be mistaken, by even a somewhat unpractised eye, and to enable the practitioner to refer them, without much difficulty, to the class to which they belong.

Impressed with the conviction that these diseases will never be understood, until they are no longer considered as cases *per se*, but are placed

in those orders to which their *elementary characters* point them out as belonging, I have, in the present treatise, discarded all *specific* names, and have arranged them in accordance with these characters. I have also endeavoured to direct the attention of the reader more particularly to their differential diagnosis, which is the only sure guide to a safe and rational treatment.

The treatment recommended is such as I have had frequent occasion to adopt, or to have seen put in practice by others, and it has been my endeavour to lay down the indications to be fulfilled for its proper accomplishment, in as concise and clear a manner as possible; and I trust that I have shown that these affections, which have been for ages looked upon as the peculiar province of the empiric, are as amenable as any others to a rational practice.

I have prefaced the description of the individual diseases by an Historical Introduction, in which I have endeavoured to trace the progress of the history of the affections of the scalp down to the present time; more particularly with the view of defining with accuracy the terms employed by the ancients. I have avoided introducing the details of individual cases, as they appear to me to be of but little use in illustrating a class of diseases, which,

like those that are here treated of, can only be learnt by actual and repeated observation.

The plates which are taken from nature, with one exception, (Plate 5, from Alibert's work, no sufficiently well-marked case presenting itself to me in time for publication,) have been executed under my superintendence, by that able artist, Mr. Perry, who is well known for the beauty and accuracy of his delineations.

In conclusion, I beg to return my best thanks to Mr. Benjamin Phillips, and to Mr. Eastcott, for the opportunities they have afforded me of studying the diseases of the skin in those extensive fields of observation, the Marylebone and St. Pancras Infirmaries.

48, Welbeck Street, Cavendish Square;
June 30, 1842.

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DISEASES OF THE SCALP.

HISTORICAL INTRODUCTION.

THAT cutaneous diseases should have been known from the remotest antiquity is nothing more than we should expect, as they must, from their seat, have been constantly subjected to the notice of the most inattentive observer. We accordingly find that in one of the earliest of records, the book of Leviticus, express mention is made of a disease called *Leprosy*, which appears to have either affected the body generally, or been confined to the head and beard alone. It was considered to be of a contagious nature, those attacked by it being ordered to be kept separate from the rest of the people.

It would be out of place, in a work of this kind, to enter upon a discussion as to the precise nature of this affection. It may, however, be stated that the description given of it in the sacred writings

differs entirely from that of any known disease of the present day, and appears rather to have comprised the symptoms of several distinct affections than to have been applied to any one in particular. As, however, it is not my intention to give a history of the diseases of the skin generally, but merely to confine the observations that I have to make to those of the scalp, I shall not pursue this question any farther, but content myself with stating that a disease of the skin is distinctly mentioned, and the signs by which it may be recognized given, in the book of Leviticus.

By Hippocrates, affections of the scalp are spoken of in so vague and unsatisfactory a way as to leave us constantly in doubt as to what disease is referred to by the term employed. This remark applies to his descriptions of cutaneous diseases in general, which differs so much from his ordinary style that it can only be accounted for on the supposition, that the regular and sober mode of life led by the ancients, their frequent ablutions and strict attention to the rules of hygeine, would afford a comparative immunity to the occurrence of the diseases of the skin, or at all events would lessen their severity when they did appear; for had they been as frequent or as severe as they are at the present day, it would have been impossible that their distinguishing characters could have escaped this accurate and acute observer.

Under the head of πιτυρωδες, he speaks of certain eruptions that appear upon the scalp after some acute diseases; he also mentions the cause of alopecia and kerion* (impetigo of the scalp). On the whole, the works of the Father of Physic contain but little of importance on the diseases of the scalp, although he treats of cutaneous affections generally under several interesting points of view.

With the exception of a chapter on Elephantiasis and Phthiriasis, in which rather copious rules of treatment are laid down, Cœlius Aurelianus† makes but little mention of the diseases of the skin.

Celsus, after having in the preceding chapters spoken of those diseases that may occur on any part of the body, proceeds in the sixth book to treat of those that are confined to particular regions, beginning with the head. By the term *Porrigo* he evidently means pityriasis and eczema of the scalp, speaking of it as a scurf in which certain small scales are loosened from the skin and arise amongst the hairs, being sometimes moist, but more frequently dry; sometimes without any ulcer, but at others in a part that is ulcerated;‡ he says

* "Lepra, prurigo, scabies (ψωρα), impetigines (λειχηνες), vitiligo (αλφος), et alopeciæ *ex pituitâ* oriuntur. Sunt autem ista fœditas potiùs quàm morbi. Favus (κηριον), strumæ, phlygethlæ, furunculi et carbunculus ex pituitâ oriuntur." (De Affectionibus.)

† Cœlius Aurelianus de Morbis acutis et chronicis. Amstelodami, 4to, 1755.

‡ "Porrigo est ubi inter pilos quædam quasi squammulæ sur-

that it may be attended with a bad smell, or with none at all, and that it sometimes affects the eyebrows and beard as well as the scalp. As it never makes its appearance without some antecedent constitutional disturbance, he looks upon it as being of use in affording an exit to the corrupted humours, and thus of preventing their falling upon a more noble part. In speaking of the treatment, he advises mild means, such as simple combing, to be first of all employed, but if this make the complaint more offensive, which may happen from the *excessive discharge of humour*, the head must be shaved and gentle repellents used; but he deprecates with justice the practice of employing powerful remedies of this nature when the disease is mild and recent. From this it is quite clear that Celsus did not by the term *Porrigo* merely mean pityriasis capitis, as many succeeding writers have done, but that he also employed it to designate a disease attended by a discharge of humour, which can only have been eczema of the scalp, some forms of which, as will be shown hereafter, readily pass from a moist into a dry state.

In his next chapter, Celsus speaks of Sycosis, (συκον, ficus,) so named from its resemblance to the fig; of this he recognizes two species, the one cal-

gunt, eæque in cute resolvuntur et interdum madunt, multó sæpiùs siccæ sunt, idque evenit modo sine ulcere, modo exulcerato loco. (Celsus de Re Medicâ, lib. vi. cap. i.)

lous and round, and chiefly occurring on the beard, the other moist, with much fetid discharge, on the scalp. The first of these is in all probability acne, or the sycosis of the moderns, and the other, which is described as occurring on the scalp, is without doubt a pustular affection, probably impetigo, the crusts of which, when rendered dark by neglect of cleanliness, and matted with hair, can easily be understood to bear some resemblance to a fig. He describes κηριον as a kind of abscess or ulcer, of which there were two species, that appear to have been analogous to carbuncle.*

Of Area or baldness there are, according to this author, two varieties, namely, *alopecia* (αλωπηξ, vulpes,) and *ophiasis* (ὄφις, serpens), alopecia presenting no definite form, and occurring at any age; but ophiasis being confined to infancy, and often getting well without any medicine. This disease, he says, begins at the occiput and creeps round to the ears, or even to the forehead, by two

* "Alterum est subalbidum et furunculo simile, sed majus, et cum magno dolore. Si divisum est, multó plus intus corruptum quàm in furunculo apparet, altiùs que descendit, raró fit nisi in capillis.

"Alterum est minus et super caput eminens, durum, latum, subviride, subpallidum, magis exulceratum. . . . . Si inciditur intra caro apparet. Dolor autem et inflammatio urgens est, adeo ut acutum quoque febrem movere consuerint." (Opus. cit. lib. v. cap. xxviii.)

heads, until they unite ;* he recommends that after the head has been shaved, copperas should be applied. Such is the substance of the remarks that Celsus makes upon the diseases of the scalp, in which it will be seen that he points out briefly, but succinctly, the chief affections to which this part of the body is liable, with the mode of treatment that was then considered appropriate ; he however scarcely touches upon their distinctive characters and diagnosis.

Although Pliny† does not describe any disease of the scalp, yet he gives a number of remedies that were employed by the Romans in these cases. He has left us an account of a contagious *mentagra,* differing entirely from any known affection of the present day, which was brought from Asia by a Roman knight, and soon spread by contagion in consequence of the custom, so prevalent amongst the ancients, of embracing. It first appeared about the chin, whence it spread over the face, and extended down the chest and hands even, " fœdo cutis furfure." Women, bondsmen, and the lower classes escaped this dreadful infliction, which appears to have left indelible cicatrices, and for the

* " Incipit ab occipito duorum digitorum longitudinem non excedit, ad aures duobus capitibus serpit, quibusdam etiam ad frontem donec capita sua jungantur." (Op. cit.)

† Plinii secundi Historia Mundi, fol. Lond. 1587.

cure of which caustics were the only remedies of any avail.

It will thus be seen that the more ancient writers were but very imperfectly acquainted with the diseases of the scalp, or in fact with those of the skin in general, little attention having been paid by them to the diagnosis and distinctive characters of these affections. Galen is indeed the first who has given anything like an accurate description of cutaneous diseases, which had probably become in his time of much more frequent occurrence than at any antecedent period, the sterner customs of the ancient Romans having then given way to the more luxurious habits engendered by their eastern conquests, which must necessarily have been accompanied by a number of those diseases that inevitably follow in the train of greater wealth and of a higher degree of civilization.

In his *Isagoge*,* Galen divides diseases of the skin into those that affect the body generally, and into those that are peculiar to the head.† In the "*Liber de compositione pharmacorum localium*,"

* Galeni Opera Omnia, fol. Lugduni, 1550.

† After mentioning the diseases that may occur in any part of the body, he says: "Achores, pityriasis, meliceris, atheroma, et favus. Porro eam partem quæ capillo tegetur, et mentum occupant, alopecia, ophiasis, calvities, et maderotes. Pili omnes fluunt, extenuantur, quassantur, scinduntur, squalescunt, in pulverem rediguntur, subflavescunt, canescunt." (Op. cit. Introductio seu Medicus; de Exterioribus Capitis Affectionibus.)

he speaks of alopecia, ophiasis, and calvities, giving their characters and the treatment appropriate for each; he recommends different purgatives, according as the disease arises from an excess of bilious, phlegmatic, or other humours, and adds a long list of remedies from Archigenes, Crito, Asclepiades, Cleopatra, and Soranus. In the eighth chapter of the same book he draws the following distinction between *achor* and *favus:* in the first, he says, there are small openings filled with a moderately viscid humour; in *favus*, on the contrary, the openings are larger, and contain a honey-like fluid.* In his "*Liber de Medicinis facile parabilibus*," he draws the same distinctions between achor and favus, which differ both in the size of the openings and in the nature of the fluid effused.† From this description it is quite clear that by achor must be meant eczema or impetigo eczematosa, as the terms "humorem modicè viscosum," and "hu-

* "Achores . . . . Valdè enim tenuioribus foraminibus eroditur, quæ tenuium in se humorem modicè viscosum complectuntur. Ad similitudinem vero ejus proximè accedit, alia cutis affectio, quæ favus, Græcis κηριον, vocatur; majora tantùm foramina habent, in quibus humor hymettio melli similis continetur." (Op. cit.)

† Αχωρες, id est manantia ulcera, cutis capitis vitium sunt, ab ipso sic dicto affectu, quòd cutem tenuissimis foraminibus perforent, ex quibus exit humor parumper viscosus. Huic vitio affine est, quod κηριον dicunt Græci (nos favum) in quo foramina sunt quàm in illis majora, multum continentia humorem." (Op. cit.)

mor parumper viscosus," can only be applied to a serous or at most a sero-purulent fluid. And again, κηριον or favus must correspond to our impetigo, the characters of the secretion of which perfectly agree with "humor hymettio melli similis" and "melleum humorem." By *psydracia* is doubtless meant a vesicular disease, probably eczema, for he says, "Psydracia sunt parvæ efflorationes factæ in capite, similes *vesicis* eminentibus in superficie."* He calls those people πιτυρωδες in whose heads scurf abounds.

Thus it will be seen that Galen has described (and this so accurately that their characters may be at once recognized) pityriasis, eczema (ψυδρακια or αχωρες), and impetigo of the scalp (κηριον); there is, however, no description of any disease that is analogous to our favus, but perhaps this may be included under the head of *ophiasis*, the baldness being looked upon as the disease itself, and not as a consequence of a specific affection of the scalp. In the account of his treatment he is very copious, recommending us in achor and favus to commence with purgatives so as to carry off the humours, more especially if the discharge be very thick and glutinous: if, however, the affection be mild, there is no necessity for this, and we may at once proceed to the use of local detergents and as-

* Liber de Med. facil. parab. Columna, 1446.

tringents, such as vinegar, Cimolian and Lemnian earths, &c. If there be much inflammation, he recommends, very judiciously, fomentations and cataplasms of emollient herbs.

Oribasius* follows his townsman Galen very closely, both in his descriptions of the diseases of the scalp and in the mode of treatment recommended for them: like that writer, he is wedded to the humoral doctrines. As he gives nothing new, there will be no occasion to refer more particularly to his opinions.

Ætius Amidenus† is another follower of Galen, from whom he differs but little in his account of these affections. He distinguishes between alopecia and ophiasis in the same way that Celsus does, and gives a vast number of remedies from Criton, Archigenes, &c. In his chapter "*De Achoribus et reliquis spontaneis Exanthematibus quæ circa caput contingunt*,"‡ he draws the same distinction between *achor* and *favus* that Galen does.§ In speaking of the latter complaint, he

* Oribasii Opera quæ extant omnia. 12mo, Basiliæ, 1557.

† Ætii Amideni de Re Medicâ, libri xvi in tres tomos divisi. Basiliæ, 1535.

‡ Op. cit. lib. vi. cap. 68.

§ "Quæ achores vocantur, parvæ quædam foramina in cute capitis eveniunt a quibus tenuis sanies et moderatè viscosa erumpit, simile que illi est quod cerion, id est, favus appellatur, amplioribus foraminibus humiditatem ad mellis speciem stillantibus." (Ætius Amidenus Op. cit.)

says that it has received its name as well from the shape of its openings as from the nature of the excreted fluid, "Tum foraminum figurâ, tum excreti humoris specie." In the treatment of these diseases he recommends that the humours should first be evacuated by means of bleeding, purging with colocynth and aloes, and the employment of sternutatories, and then that recourse may be had to repellents and astringents.

Alexander Trallianus * treats of more diseases of the scalp than any of the preceding writers. He mentions πιτυριασις (pityriasis capitis). Ψυδρακιον, small tumours on the scalp like pustules, Εξανθεματα, slight ulcerations of the surface of the skin; he also speaks of scabious and ichorous diseases of the head—προσ τα εν τη κεφαλη ψωρωδου και ιχωρωδου—and gives the treatment that is appropriate for small ulcers that occur in this region from which a sanies flows. In his chapter περι Αχωρων he gives the same definition as Galen of that disease, specifying the signs whereby we may recognize whether the discharge be of a bilious, pituitous or melancholic humour, and drawing the same distinctions between *kerion* and *achor* that the other Greek writers do. Upon the whole the account of the diseases of the scalp that has been transmitted to us by Alexander is more original than those of Oribasius or of Ætius,

* Medicinæ libri duodecim, Basileæ.

which are for the most part mere transcripts of the writings of Galen.

Paulus Eginetus * differs in his description of *Porrigo* (πιτυριασις) from all the preceding writers; as, according to him, it may occur over the whole of the body, and is not attended by ulcerations, † whereas Celsus and all that follow him describe *Porrigo* (pityriasis and eczema) as being confined to the head, and occasionally attended with ulceration. He describes *psydracion, achor*, and *favus* in nearly the same words as Alexander Trallianus; the latter diseases, he says, arise from a salt or pituitous humour. In his treatment he is more methodical than most of the preceding writers, and some of the rules that he lays down for the regulation of the diet in diseases of the scalp are very judicious.

As would naturally be expected we find a great advance made by the Greek writers of the second era in the study of the diseases of the skin; the symptoms of the individual affections being more carefully described, their diagnostic signs more accurately pointed out, and their treatment, although much influenced by the humoral doctrines then in vogue, and overcharged with formulæ, especially of topical applications, being in many in-

* Totius Rei Medicæ, lib. vii. Basileæ, 1556.

† "Porrigo tenuium ac furfuri similium corpusculorum ex capitis aut ex reliquâ corporis superficie eliquatio est citra exulcerationem." (Op. cit.)

stances rational and appropriate. This improvement is, however, chiefly due to Galen, for with the exception of Alexander Trallianus, the writers of this age have done little more than to transcribe and to comment upon his works, adding but few new facts of any importance.

We next come to the Arabians, who have increased but little the stock of knowledge left them by the Greeks; which, however, they have the merit of having diffused more extensively, and of having reproduced in a variety of ways.

Serapion * begins his chapter on the diseases of the head by a description of alopecia and the falling off of the hair; he then goes on to treat of the *sahafati humida*, which, he says, is a disease resembling "favositas" (κηριον), "egritudo similis favositati," with the exception that the fluid discharged from the former was more watery than that which was poured out from the latter, which resembled honey in its characters; the openings also from which the discharge escapes are smaller in the *sahafati* than in the *favositas*. From this description it is evident that the *sahafati humida* corresponds to the *achor* of the Greek writers, and to our eczema of the scalp. The rules that he lays down for the treatment of these diseases are rather copious; he begins with bleeding from the frontal

* Serapionis Opera Omnia, 4to. Lugduni, 1525.

vein or from behind the ear, and then, after purging, employs a number of topical remedies. His description of the disease called *tyria* corresponds closely to that of the *ophiasis* of the Greeks, being, like it, attended with loss of hair, assuming a serpentine form, and more difficult of cure than alopecia.

Rhazes * draws the same distinction between sahafati and the other affections of the scalp that Serapion does. In his work "*de Morbis Infantum*," he devotes a chapter to the consideration of *sahafati puerorum*, which is clearly the *crusta lactea* of later writers, the *porrigo larvalis* of Willan. His descriptions, which are for the most part taken from the Greek writers, are somewhat curtailed.

Avicenna † is rather meagre in his descriptions of cutaneous diseases, but is very diffuse and somewhat prolix in the treatment that he recommends. From his account it is evident that the thiria of the Arabians is the same as the ophiasis ‡ of the Greeks, being characterized by excoriations of the cuticle and by the circular form that it assumes ; he

* Opera Omnia, fol. Venetiis, 1542.

† Avicennæ Arabum Medicinum principis Opera, 2 tom. fol. Venetiis apud Juntas, 1608.

‡ "Et differentia quidem inter ipsam (alopeciam), et thyriam est, quòd in thyriam non tantùm cadunt pili, imò excoriatum cum ea cutis tenuis, sicut accidit serpenti, et fortasse accidit in eâ figuratio proveniens, sicut figura serpentis." (Op. cit. tome ii, pp. 233.)

attributes both it and alopecia to different kinds of humours. After having spoken of pityriasis, he proceeds to the consideration of *sahafati*, which may be either moist, when it is called *refringi*, or dry; this obviously corresponds to our eczema. He also describes crusta lactea under the title of *bothor*, which he says in some cases resembles drops of milk sprinkled upon the nose and cheeks.

Haly-Abbas*, the contemporary of Avicenna, is by far the most original of the Arabian writers on the diseases of the skin; his description of the affections of the scalp is peculiarly correct. According to him, tinea may be divided into the following species:

1. *Tinea favosa*, characterized by small openings through which a honey-like fluid exudes.

2. *Tinea ficosa*, consisting of hard round pustules, in the concavity of which there are grains like that of a fig.

3. *Tinea ameda*, having smaller openings than the *tinea favosa*, with an ichorous exudation, "carni similis."

4. *Tinea uberosa*, resembling the teat of the breast, with a watery exudation.

5. *Tinea lupinosa*, having the appearance of white lupin seeds.

* Haly, filius, Abbas. Liber totius Medicinæ necessaria continens, 8vo, Lugduni, 1523.

There can be no doubt that by *tinea favosa* is meant impetigo of the scalp; by *tinea ameda* and *uberosa*, probably different species of eczema; and by *tinea lupinosa*, the porrigo lupinosa of Willan. This division of tinea is copied by Guy de Chauliac to whom Rayer erroneously ascribes the honour of having made it. Haly-Abbas likewise treats of alopecia and of pityriasis, but his therapeutic precepts contain nothing worth recording.

Abenzoar, Mesue, Averrhoes and Albucasis have added but little if anything to the knowledge that was already possessed of the diseases of the skin, indeed their descriptions of them, more especially of those affecting the scalp, are so short and imperfect as to render it exceedingly difficult to know precisely what affection is alluded to. Abenzoar speaks of *sagrum*, translated "scabies capitis," and also of *tinea*, of *tyria*, and of *sahafati*, but gives nothing that deserves repetition.

With the exception then of Haly-Abbas, who evinces much originality in his arrangement, we are but little indebted to the Arabians for any advance in our knowledge of the diseases of the scalp; in fact their observations, which, with the exception just mentioned, possess but little originality, are for the most part mere transcripts of the Greek writers, to whose dicta they bowed with the most abject submission, and to whom they stand indebted for almost every fact of importance that they contain.

The next era to which we arrive, that extending from the 13th to the 16th century, is, if possible, more destitute of original observation and research than the last.

Actuarius, one of the lesser Greek medical writers of this age, but whose precise date is unknown, gives nothing new on the diseases of the scalp, his definitions and arrangement of them corresponding to those of Galen.

John of Gaddesden,* in his celebrated "Rosa Anglica," has left us a very correct and graphic description of *tinea*†, the contagious nature of which he recognizes; he supposes it to arise from depraved humours and bad food, or from disease on the part of the parents or nurse.

Guido de Cauliaco ‡, one of the most celebrated surgeons of the middle ages, copies Haly-Abbas in his description of tinea, dividing it with him into five species,§ to each of which he gives the same name that had previously been assigned to it by the Arabian writer. In the treatment of this affection he lays down two indications, the first being to attend to the state of the general health by consti-

* Rosa Anglica, 2 tom. 4to, Ang., Viud. 1595.

† "Tinea est scabies capitis cum squamis, crustis, pilorum evulsione, colore et odore fædo et aspectu abominabili." (Op. cit.)

‡ Chirurgia, 4to, Lugduni, 1585.

§ Tract. 6, doct. ii. cap. i.

tutional means; the second, to remedy the disease itself by local applications, which, he says, are also of two kinds, the first having for its object to correct the disease of the head, the second, to restore the hair after it had been lost.

Valescus de Taranta * adds nothing new to the history of these diseases, but lays down their treatment in a very judicious and methodical way.

The medical writers of the next age, although not entirely freed from the thraldom which their blind veneration for the old Greek physicians imposed upon them, yet exhibit a spirit of observation that was in many instances productive of the most important results. Accordingly we find that their writings, although characterized by the prevailing faults of the ancients—a too hasty generalization, frequently from isolated facts and a too rigid adherence to the humoral doctrines—yet exhibit much that is new and interesting both in the history and treatment of cutaneous diseases. The natural consequence of the great extension of the science of medicine at this period was, that some physicians, instead of attending to it as a whole, devoted themselves to the study of special departments of it; and thus, by concentrating their attention to particular classes of disease, added very greatly to the knowledge that had been transmitted

* Philonicum Pharmaceuticum, 4to, Francofurti, 1599.

to them from the ancients—this was especially the case with regard to the diseases of the skin, and indeed it was not until after the revival of letters that any monograph treatise appeared on this subject.

Ambrose Paré* reduces the five species of *tinea* as recognized by Haly-Abbas to three, namely, *tinea squamosa*, *tinea favosa*, and *tinea corrosiva*, and seems to think that the disease is so well known that it is useless to give any long account of it. Some of his rules of treatment are good, such as recommending the removal of the scabs by means of poultices before employing other topical applications. He is a strong advocate for the pitch-cap.

Forestus† has left us a number of interesting cases accompanied by scholia. In speaking of *tinea* he says that it is occasionally seen on other parts of the body besides the head; and he relates the case of a patient who was affected with this disease on his arms and legs; he also treats of *alopecia*, of *favus*, of *crusta lactea*, and of *psydracium*, giving a number of cases in illustration of these diseases, which indeed constitute the chief value of this work.

Schenckius‡ has compiled a number of cases

* Œuvres Complètes, par Malgaigne; Paris, 1840-41.

† Petri Foresti, Opera omnia, fol. Francofurti, 1634

‡ Joanni Schenckii à Graffenburg, Observat. med. rar. nov. admirab. volumen, fol.; Francofurti, 1609.

from various sources, which are frequently more remarkable for their singularity than for any practical value they may possess.

Sennertus * gives in his large work but little of importance on the diseases of the scalp in general, but he has a very long and valuable chapter on plica polonica. He states that this disease is endemic in Poland, and that it is not confined to man, but affects horses as well, in proof whereof he relates the case of a Hungarian nobleman who brought a horse labouring under it to Dresden. He does not look upon it as being a new disease, because, although not seen until lately in Italy and the west of Europe, he thinks it probable that it may always have existed in Poland unknown to the rest of mankind, as there were no physicians there to describe it. He then discusses the causes that give rise to this affection and the treatment that is necessary, which, however he does not consider to be properly understood. In his work on the diseases of women and children† he diagnosticates eczema of the scalp from impetiginous eczema of the same region.

Mercurialis ‡ was the first to whom we are in-

* Sennerti Opera, fol. Lugduni, 1650.

† D. Sennertus. Practicæ Medicinæ, liber quartus, de Morbis Mulierum et Infantum, 4to, Witeb. 1632.

‡ Hieronymus Mercurialis de Morbis Cutaneis, 4to, Venetiis, 1585.

debted for a monograph on the diseases of the skin. This treatise, which was published towards the close of the 16th century, evinces considerable merit, being both a learned and a practical work. In it cutaneous diseases are divided into those that occur on the body generally, and into those that affect the head only; the latter, according to Mercurialis being, *alopecia, ophiasis, porrigo* (pityriasis), *achor* (eczema), *favus* (impetigo), *tinea* (porrigo lupinosa Willan), *psydracion*, *exanthemata*, *helcydria*, and *sycosis*. *Psydracion*, he says, is a small ulcer, and *exanthemata* an efflorescence, such as may arise on any other part of the body. His description of tinea is very correct and practical. Upon the whole this work was a very valuable addition to the pathology of the skin, and deserves commendation on account of its very practical character.

Riolanus *, after some general preliminary observations on the diseases of the skin, proceeds to discuss them individually. He speaks of *scabies capitis* in a generic sense, and says that it may be divided into two kinds, the moist and the dry: the former including *meliceris* (impetigo) and *achor* (eczema), which are easily curable; and the latter, *tinea*, which, on the contrary, is very obstinate. He states that psydracious pustules are also sometimes formed on the head, and that they can be referred to the moist species.

* Joanni Riolani (Ambiani) Opera Omnia, fol. Parisiis, 1610.

Bonetus * gives a case of *herpes miliaris* of the scalp which proved fatal, and in which, after death, the whole of the head was found in a sphacelated condition, fetid pus flowing from the nose. Zacutus Lusitanus† relates several interesting cases, amongst others that of a noble Portuguese who was cured of an alopecia by the external use of tobacco-juice.

Felix Platerus ‡ attributes *tinea, favus* and *ulcus manans* to a salt and depraved humour, retained and putrefying in the skin of the head and about the roots of the hairs. In speaking of the cause of these affections, he says that the *ulcus manans* is contagious amongst the young, and very difficult of cure, occasioning the loss of the hair. From this description it is very probable that he confounds this disease with tinea.

No advance appears to have been made in the study of diseases of the skin from the middle of the 17th century until the work § of Turner appeared in 1714. This treatise, which is of a very practical nature, and in which every known affection that is incident to the skin is spoken of, abounds in cases, that have either fallen under the author's own observation or have been collected by him from the

* Theophilus Bonetus. Medicinæ Septentrionalis Collatitio, fol. Genevæ, 1687.

† Opera Omnia, fol. Lugduni, 1649.

‡ Praxis Medica, Basileæ, 1625.

§ Turner de Morbis Cutaneis, 8vo, Lond. 1714.

works of others. Its chief faults are the want of a proper arrangement, and the confusion that the vast number of formulæ that are given create in the mind of the reader; he attributes the occurrence of tinea to a salt humour fretting the cutaneous glandules and giving rise, according to its degeneracy and violence, either to a branny desquamation, to sycosis, or to achor and favus.

After Turner's time special treatises on the diseases of the skin became more common; amongst these the work of Lorry* stands pre-eminent for the boldness and comprehensiveness of its general views, and for the accuracy of its descriptions. It was without exception the best treatise that had hitherto appeared on this subject, and gave a great impulse to the study of cutaneous affections, serving as a basis to many subsequent works. The general views of this writer on the nature and treatment of the diseases of the skin are admirable, but he is occasionally obscure in the distinctive characters of individual affections; this is especially the case in his account of scalp diseases, which, although evincing considerable erudition, is in point of practical value far below any other part of his works. His views as to the nature of favus are singular, as he considers it to consist essentially in an overflow of osseous matter, looking upon the crusts as being composed of the same elements as bone.

* Lorry Tractatus de Morbis Cutaneis, Parisiis, 1777, 4to.

Plenck,* in his Synopsis of Cutaneous Diseases, has arranged the affections of the scalp in a very irregular and confused manner. He divides *achor vel scabies capitis* into four species, viz. *scabies capitis simplex*, *s. capitis favosa*, *s. c. ficosa*, and *s. c. lupina;* he also speaks of *crusta lactea*, which he divides into three species, and *tinea* into two, viz. *t. vera* and *t. venena*. *Porrigo* also possesses three species, viz. *p. furfuracea*, *p. lupina*, and *p. spuria*. In his treatment there is nothing worthy of notice.

At the commencement of the present century Gallot† in France, and Cooke‡ in this country, published monographs on the diseases of the scalp, which contain some interesting observations, more especially on the contagious nature of favus, to elucidate which Gallot performed a numberof experiments.

In the year 1814 a posthumous treatise of Dr. Willan's on *Porrigo* or *scald head* was edited by Mr. Ashby Smith.§ In this work, which is of a very practical nature, the author gives, with his usual precision and accuracy of description, the distinctive characters of the principal diseases of the scalp, with the treatment that is appropriate to

* Doctrina de Morbis Cutaneis, 8vo, Viennæ, 1783.

† Recherches sur la Teigne, 8vo, Paris, an. xi.

‡ On Tinea Capitis Contagiosa, 8vo, Lond. 1810.

§ Willan on Porrigo, 4to, Lond. 1814.

them. In consequence, however, of his having grouped them all under the head of *porrigo*, looking to their seat and not to the essential nature of the individual affection, considerable confusion has since arisen, as most of the succeeding writers who have adopted his classification have made some change in the *specific* names of the diseases, without altering the *generic* term. Thus, according to Willan, *porrigo favosa* corresponds to our impetigo sparsa of the scalp, whilst Cazenave, Schedel, and others have applied this term to the disease that is now generally called favus dispersus, or in other words, to the *porrigo lupinosa* of Willan. Porrigo is by him defined to be "A contagious disease, without fever, usually exhibiting an eruption of the pustules termed achores and favi," and divisible into six species, viz., *porrigo larvalis*, *p. furfurosa*, *p. lupinosa*, *p. scutulata*, *p. decalvans* and *p. favosa*, which correspond respectively to impetigo eczematosa, eczema furfuracea, favus dispersus, favus confertus, alopecia circumscripta, and impetigo sparsa. It will be seen that in this arrangement several important affections of the scalp have been omitted, such as impetigo granulata, simple acute eczema, and herpes circinnatus. In stating that all species of porrigo may arise from the same contagion * Willan makes a sweeping

* Op. cit. p. 22.

assertion with which, I think, few will agree; for, in the first place, most of the species of this disease, such as the porrigo larvalis, the p. furfurosa, and the p. favosa (Willan), have certainly not been proved to be contagious, and even if in some rare instances they are so, I am convinced that no one ever saw one or other of these or of the really contagious affections of the scalp, namely, p. lupinosa and p. scutulata, arise indiscriminately from the application of the same contagion, modified only by the circumstances in which the patient might be placed.

Alibert* has made several classifications; in his last he arranged the family of the *tineas* on the third branch of his "Arbre des Dermatoses." This family he divides into three genera, namely, *achor*, *porrigo*, and *favus*. The genera *achor* and *porrigo* comprise different species of eczema and of impetigo of the scalp, whilst to the genus *favus* belongs the porrigo lupinosa and porrigo scutulata of Willan, the *favus dispersus* and *favus confertus* of others. *Achor* is divided into two species, the *achor lactuminosus* corresponding to our pityriasis, and the *achor muciflus* to impetigo eczematosa of the scalp. *Porrigo* comprises three species, *porrigo granulata*, *p. furfuracea*, and *p. asbestina*, corresponding respectively to impetigo granulata,

* Description des Maladies de la Peau; fol. Paris, 1825. Précis théorique et pratique des Maladies de la Peau; 8vo, Paris, 1822. Monographie des Dermatoses; 8vo, Paris, 1832.

eczema furfuracea, and eczema amiantacea. The genus *favus* has two species, *favus squarrosus* and *favus urceolaris*. This classification is objectionable for the same reason as several of the preceding ones, namely, the employment of specific names for the diseases of the scalp, thereby separating them from analogous affections of other regions of the body.

Plumbe,* in the year 1821, published a treatise on the diseases of the scalp that is remarkable for the originality of its views and for its practical character. In it he makes some very just strictures on Willan for arranging all these affections under the one head of Porrigo, and shows very clearly that the *porrigo scutulata* and *porrigo favosa* of that writer differ in many points, and that by placing them together the use of classification has not been sufficiently borne in mind. He omits all consideration of the *porrigo larvalis*, which he looks upon with Bateman as differing most materially from the other species. He supposes that the *porrigo scutulata*, *p. lupinosa*, and *p. furfurosa* are the result of one specific contagion, and that the points on which they differ are of very little practical importance. He also makes some observations on the distribution of the vessels of the scalp in relation to disease of this part. In the rules he lays down for the treatment of these affections he is unbiassed by theory, and seems to have been

* Plumbe. A Treatise on Porrigo, 8vo, Lond. 1821.

guided entirely by experience; indeed the great merit of the work is its practical character.

Mahon* has published the results of his experience in the treatment of the diseases of the scalp, which is probably greater than has ever been possessed by any other man, nearly 40,000 cases having passed under his observation in little more than twenty years. The value of his work, however, which contains some practical information, is much lessened by the speculative notions with which it abounds, and by the obscurity of the style in which it is written.

The edition of Bateman's works by Dr. A. T. Thomson, the treatise of Rayer translated by Dr. Willis, the Abrégé Pratique of MM. Cazenave and Schedel, the Traité Pratique of M. Gibert, the Practical Compendium of Dr. Green, and the Atlas of Plates by Dr. Willis, may all be consulted with advantage, as they contain a summary of everything that is known on the subject of the diseases of the skin. I need not particularize them more in detail (which would be an invidious task), as they are in the hands of most medical men.

Having thus given a short, and perhaps somewhat imperfect history of the diseases of the scalp, it will be my endeavour in the following pages to

* Mahon, Recherches sur les Teignes, 8vo, Paris, 1829.

clear up the obscurity that hangs about the precise signification of the terms employed to designate them, by pointing out whence the names now given to them have been derived, and what meaning has been attached to them by different writers; on which subject much doubt and confusion has been thrown by the brief descriptions that have been left by the ancients, by the mutability of language, and the inexactness or caprice of translators.

The ancients distinguished four kinds of baldness, namely, *defluvium, calvities, alopecia,* and *ophiasis.* The last two are included by Celsus under the generic term *area.* By *defluvium* is meant the baldness that may occur at any age, in either sex and from various causes, as during the course of phthisis or after fevers; it implies rather a thinning of the hair than actual baldness. *Calvities* is the result of old age, and is chiefly confined to men; it is called by the Greeks φαλακρωσις and μαδαρωσις.

Area signifies any bare, open space. It is a generic term having two species, *alopecia** and *ophiasis.*† The former has no regular figure, may occur at any age, and is difficult of cure; the latter has a serpentine appearance, commencing at the occiput and passing forwards by two heads which

* Alopecia is derived from αλωπηξ, *vulpes,* foxes becoming bald when grown old.

† From ὀφις, a serpent, on account of its figure.

join at the forehead, is chiefly confined to childhood, and is easy of cure; it is also occasionally attended with excoriations. From this we may conclude that by *ophiasis* is meant any of those affections of the scalp that assume the form of rings or a serpentine arrangement, and which are attended by a temporary loss of hair, such as herpes circinnatus, the sequelæ of favus, &c.: in fact those diseases that by the public are included under the comprehensive term of "ringworm."

The *tyria* or *thiria* of the Arabian writers is the same as the ophiasis of the Greeks, causing like it a loss of hair and assuming a serpentine form.

The πιτυριασις of the Greeks, translated by the Latin word *porrigo*,* corresponds to our pityriasis capitis, dandriff or scurf. It is in this sense that it is employed by Galen, Paulus Eginetus, Alexander Trallianus, and many others. Celsus, however, has included several diseases of the scalp, probably eczema and pityriasis, under the name of *porrigo;* for he speaks of it as a scaly affection that is always attended by some constitutional disturbance. This double signification of the same term has given rise to very great confusion in the nomenclature of cutaneous diseases; some writers, as Mercurialis, Lorry,

* *Porrigo* appears to be derived from *porrum*, an onion, either because the skin peels off in this disease like the coats of an onion, or else, as Willan supposes, from the fancied resemblance in smell between a head affected with this complaint and that root.

and Franck, employing it as synonymous with the *pityriasis* of the Greeks, whilst others, as Willan, Bateman, and Plumbe, latinized the Greek word, and confining it to its original meaning have, with Celsus, included several totally different diseases under the term porrigo.* Nothing can, however, be more unscientific than this arrangement, which under one head confounded eczema, impetigo, favus, alopecia, and pityriasis, diseases differing as much in their causes and treatment as in their essential nature.

The ancients applied the terms *achor* or *ulcus manans*, and *kerion* or *favus*, to vesicular and pustular affections of the scalp. From the description left us by Galen, Oribasius, Alexander Trallianus, and Ætius, we may conclude that *achor* corresponded to our eczema or impetigo eczematosa of that region, the porrigo larvalis of Willan, being characterized by a thin watery or moderately viscid discharge.

* Horace speaks of porrigo as a scurfy disease:

——"caput que
Cœperis impexâ fœdum porrigine?"

Satir. lib. 2, Satir. 3, v. 126.

And Juvenal applies it to a contagious disease affecting swine:

——"dabit hanc contagio labem,
Et dabit in plures; sicut grex totus in agris
Unius scabie cadit et porrigine porci."

Juvenalis Satira 2, v. 80.

Kerion or *favus* is clearly the impetigo of the moderns, the porrigo favosa of Willan. Galen compares the discharge in this disease to Hymettian honey, and all the succeeding Greek writers follow him closely in this comparison, which is very appropriate, and which is only applicable to the thick, viscid, yellow secretion of impetigo.* Celsus appears to have comprised *achor* and *favus* under the term *meliceris*, which word is afterwards used by Ætius as synonymous with *kerion*.

The *sahafati humida* or *refringi* of the Arabians is the same as the *achor* of the Greeks, and Rhazes has described the crusta lactea of later writers by the term *sahafati puerorum*.

By *psydracion*, Galen meant eczema of the scalp, as he says that it resembles small vesicles on the summit of the head. Alexander, however, describes *psydracion* as small tubercles like pustules, probably sycosis or acne; he also speaks of *scabies capitis*, the *sagrum* of the Arabians, which is evidently a vesico-pustular disease. Besides these terms, which

* In this I differ from Biett, who looked upon the favus of the ancients as corresponding to the porrigo lupinosa and scutulata of Willan, but with all deference to so high an authority in all matters relating to the diseases of the skin, the description of *favus* as left us by Galen, Alexander, Paulus Eginetus, and others, applies only to our impetigo of the scalp, for the reason given in the text, as no viscid discharge like honey takes place in p. lupinosa or p. scutulata.

were in general use, others are occasionally met with, such as *exanthemata*, a slight efflorescence on the head, and *helcydria*, which, according to Ætius, are small, dense, red papillæ, having a mamillated appearance, and from which a thin ichor flows.

It will thus be seen that the ancients did not, as later writers have done, confound together diseases of the scalp under one generic term, but that each affection had a distinct and definite name applied to it.

The word *tinea* appears to have been first of all employed by the translators of the works of the Arabians; at least I have not been able to trace it any farther back than this, and it is certainly never made use of by the best Latin authors. Under this head were confounded together all the diseases that affect the scalp, the *achor*, *favus*, *meliceris*, *pityriasis*, &c. of the older writers.

Lorry derives this word from *alvathim*, a term employed by Avicenna, which, according to him, has been corrupted to *thim*, *thineum*, and *tineam*. But by a reference to the works of Avicenna, it will be found that by *alvathim* he does not mean a disease of the head, but merely a melancholic ulcer of the leg of the same nature as varix;* hence it is difficult to understand how the word *tinea* can be derived from this, with which it does not appear

* "Sed (alvathim) sunt ulcera melancholica quæ apparent in crure, ex eâdem materiâ ex quâ fiunt varices." (Avicenna. Op. cit. tom. 2, p. 247.)

to have any connexion. The most reasonable derivation for this term appears to be, from the resemblance that the small circular openings that occur in the cuticle in some diseases of the scalp bear to those that are made by the *tinea* or moth-worm in clothes and old books.* However this may be, it soon came into general use, and was employed by most writers until the close of the last century in the same sense as the word *porrigo* has subsequently been used by Willan and his disciples.

The species into which these Genera, whether *tinea* or *porrigo*, have been divided by the various authors that have treated of this class of diseases, have already been mentioned; it will therefore be unnecessary to recapitulate them here; but as the grouping together of a number of diseases into one Genus, whose only point of resemblance is in their situation, and which differ most materially in every other respect, is in the highest degree artificial and unscientific, it is to be hoped that all generic terms of this description will for the future be discarded, and that the diseases of the scalp will receive, as far as possible, the same names that they would were they situated on any other part of the body, being referred to those classes and orders to which they naturally belong.

* By some *tinea* is derived from *teneo*, because when this disease once affects the head, it is difficult to cure; taking firm hold of the part.

CHAPTER I.

GENERAL OBSERVATIONS.

NOTWITHSTANDING the great frequency and importance of the diseases of the skin, and the care with which they have of late years been studied by Willan, Bateman, Alibert, Biett, Thomson, Rayer, and others, there is no subject in the whole range of pathology more generally neglected and less perfectly understood than this, not only by the great mass of practitioners, but by those who deservedly stand in the foremost rank of the profession for their attainments in other departments of medicine. At first this appears the more extraordinary, as cutaneous affections are, from their seat, continually under the eyes of the most careless observer, and as there is no class of diseases, the individual species of which manifest themselves by characters that are more readily appreciable, or that can be more easily recognized if proper attention be paid to them. When, however, we take into consideration the confusion that has always existed in the nomenclature of these affections, the same

term having been employed by different authors with totally different meanings attached to it, the practice that has so generally prevailed of separating them from the range of general pathology, and the tendency there has ever been to look upon them as cases *per se*, dependent upon some special influence and not amenable to those laws that regulate morbid actions in general, we can reconcile this apparent inconsistency.

The natural consequence of the neglect with which this subject has been treated by the profession generally is, that many individuals affected with diseases of the skin, are, after a routine plan of treatment has been perhaps unsuccessfully employed by the regular practitioner, given over in too many instances to the care of empirics, who, less scrupulous in the means they adopt, and not cognizant of those sympathies that exist in the system, often effect a cure at the expense of the health of the body or mind of the unfortunate patient intrusted to their charge. Cases of this description have several times fallen under my observation, as they must have under that of most other medical men.

Whilst on this subject I cannot do better than quote some remarks that Dr. Copland makes in the article *Hearing*, in his Dictionary of Medicine, as they are singularly appropriate to the present case, "None but well-educated medical men," says he,

"pursuing other branches of practice should undertake the management of these disorders, for they only are capable of ascertaining the various pathological conditions of which *they* are either an immediate or remote and indirect consequence, and of appropriately prescribing means of cure." If these remarks are applicable to affections of the skin in general they are so with increased force to those of the scalp, than which no class of diseases has been more generally misunderstood; for under the names of *scald head*, of *tinea*, or of *porrigo*, how many different diseases have there not been included? Diseases, such as impetigo, eczema, pityriasis, and favus, differing entirely in their nature, causes, effects, and treatment, and agreeing only in the part affected, have all been confounded together under one or other of these unfortunate terms. It certainly appears preposterous that a disease should go by a different name when it occurs on one region of the body than when it is situated in another. As well might eczema of the leg have a name to distinguish it from eczema of the arm, as from the same disease when affecting the scalp. It will however be in vain that we shall look for any change in this respect, until the diagnosis of these affections shall have been more carefully studied; as the practice of indiscriminately confounding together all scalp diseases under one general name is attended with so much convenience, by doing away with the

trouble of making a more correct diagnosis, that it will not be relinquished until their distinctive characters have been placed in a clearer light than they at present occupy.

Impressed with a conviction of the confusion that an adherence to the system of grouping together diseases of the scalp under one generic term, whether *tinea* or *porrigo*, would perpetuate, I have in the present treatise classed them according to the orders into which they are arranged by their elementary characters, as being, at present, the most natural and best ascertained basis for a classification. For although it would, without doubt, be more correct to group them according to their anatomical seat, yet we are still not sufficiently well acquainted with this to warrant us in doing so.

Scalp diseases arrange themselves naturally into the orders, *vesiculæ*, *pustulæ*, *tuberculæ*, and *squamæ*.

But two genera of the order vesiculæ, Eczema and Herpes, affect the scalp. The former of these is divisible into *acute* and *chronic eczema*, *eczema furfuracea* and *e. amiantacea*.

The genus *Herpes* includes *h. circinnatus* and *h. zoster*.

Impetigo is the only pustular disease that ordinarily affects the scalp. When occurring in this region it is divisible into three species, viz., *impetigo eczematosa*, the impetigo or porrigo larvalis of others;

impetigo granulata, the porrigo or tinea granulata ; and *impetigo sparsa*, the porrigo favosa of Willan.

For reasons to be afterwards explained, I have thought that *Favus* could with more propriety be considered a tubercular than a pustular affection, meaning by *tubercular* not a disease, like lupus, characterized by the presence of small tumours, but one in which true tubercle is deposited; I have therefore removed it from the order pustulæ, and have placed it by itself.

The only squamous disease that commonly occurs on the scalp is Pityriasis. Lepra and psoriasis are also occasionally, though rarely, seen in this region.

Although these orders are for the most part well marked and readily distinguishable by characters that are broadly defined, yet in some instances two of them will be found gradually to run into one another, certain species of each partaking somewhat of the characteristics of both, and serving as links to bind them together. Thus, although a vesicle and a pustule are in general perfectly distinct, and do not pass into one another, yet the orders characterized by these elements are blended together in one species, viz., *impetigo eczematosa*, which partakes to a certain degree of the peculiarities of both. And again, *eczema furfuracea* and *eczema amiantacea* may be said to form the point of junction of the squamous and vesicular diseases, the other affections of these orders being very

widely separated. These remarks, of course, do not refer to diseases of the scalp merely, but are applicable to cutaneous affections generally, most of the orders into which they are divided being found to coalesce at certain points. Thus papular diseases run into those of an erythematous form in *strophulus confertus* and *erythema papulatum;* the erythematous into the vesicular and bullous in *erysipelas*, more especially in those species denominated e. miliaris, and e. phlyctinodes. The vesicular affections again into the squamous in the instances that have been referred to, and into the pustular diseases in *eczema impetiginodes* or *impetigo eczematosa.* It will thus be seen that the broad distinguishing characters of the different orders gradually fade away at their extreme points, where they become insensibly blended with those to which they are allied, and may indeed in this respect be likened to the primitive rays of the spectrum, which are well defined in their centres, but which gradually melt into one another at their extremities. This is but in accordance with the universal law of nature, that there are no abrupt terminations or limitations to species or to diseases, which pass insensibly and by gradual degrees into one another, and only present very marked differences where they are the farthest removed.

Besides the diseases above enumerated, many others, such as lichen, prurigo, erysipelas, rupia, ecthyma, acne, sycosis, lepra, and the syphilides,

may occur upon the scalp, but as they only do so in consequence of a more or less general affection of the integuments of the body, and are seldom, if ever, with the exception of erysipelas, confined to this region, I have omitted all consideration of them, as they would necessarily embrace nearly the whole circle of the cutaneous affections, and have confined myself almost entirely to the "porrigos" of other writers.

Various opinions have been entertained at different periods concerning the remote causes of the diseases of the scalp. The ancients for the most part looked upon them, as upon those of the skin generally, as dependent upon some local change in the humours of the body, unconnected with any morbid condition of the constitution of the individual. This theory, varied slightly according to the opinion of the sect that might for the time be prevalent, continued in force until Lorry, towards the close of the last century, divided cutaneous affections into those that were connected with some internal derangement of the general system, those that were dependent upon disorder of a special organ, and those that were local in their origin. It is, however, impossible in practice to make this distinction, the more so as we find that the same disease arises, in some cases, from strictly local causes, although in others it may have a constitutional origin. Thus favus, when transmitted by contact is certainly strictly a local disease, uninflu-

enced, in all probability, by any particular condition of the system, whilst, on the other hand, when it arises in a scrofulous individual from neglect of the non-naturals, or from exposure to circumstances that deteriorate the constitution, it can only be looked upon as the local manifestation of a general cause.

That the diseases of the scalp, as those of the skin generally, are predisposed to by some peculiar morbid state of the system is undoubted, but how this condition is excited it is exceedingly difficult, in the present state of our knowledge, to say. Unquestionably, in many instances, it is attributable to a disordered state of the digestive organs, to the irritation of dentition or to those changes that are induced by age, yet in other cases it is exceedingly obscure as to its origin, and only appreciable by its effects.

The local condition to which this general cause gives rise is, in the greater number of cases, inflammatory. There can be no doubt that the majority of the diseases of the scalp, as of those of the skin in general, are, in their chronic as well as in their acute stages, of an inflammatory nature. The local symptoms of inflammation, such as an increase in the temperature, with more or less redness, some tumefaction and a modification of the natural sensibility of the part, whether indicated by tension, itching, or pain, being present in most of them. Their products also, whether consisting in the exhalation of a serous or in the secretion of a puru-

lent fluid, are such as are the usual consequences of inflammation when affecting other organs or tissues; besides, when the local disease is sufficiently extensive, pyrexia is also most frequently present to a greater or less degree, at least in the earlier stages.

To this general rule, however, favus forms an exception, as it certainly does not, in any part of its progress, present the characters of an inflammatory disease, except such as may have been excited secondarily by the irritation of the crusts.

The *predisposing* and *exciting* causes of the diseases of the scalp may be arranged in two classes, namely, those that act locally, and those that exert their influence through the medium of the constitution.

The *local* causes are but few in number, and of comparatively trivial importance, appearing to be but rarely able of themselves to set up any affection of the scalp, unless that part has been already predisposed to the occurrence of disease by a general morbid state of the constitution.

One of the most common of this class of causes is a want of cleanliness, which may of itself originally excite a vesicular or pustular disease of the scalp, but more frequently exercises a prejudicial action by favouring the persistence of any existing affection, or by occasioning relapses when it has once been set up. The direct application of the sun's rays during the hot season of the year may readily

excite these diseases in a person already predisposed to them. I have seen this occur in a case of eczema of the scalp, which was clearly occasioned by the action of a powerful autumnal sun upon the head of a delicate boy about eight years of age. Blows upon the head are said by Mahon and others to have given rise to favus; this, however, is very questionable; in all probability they have been supposed to have done so by the patient, as we know the tendency that there exists in the public to assign every disease to some appreciable cause.

The anatomical characters of the scalp render it peculiarly subject to the occurrence of certain diseases; thus, owing to its great vascularity, it will, *cæteris paribus,* be more liable to inflammatory affections, such as eczema and impetigo, than any other part of the body; and the multitude of large hair-follicles with which it is covered, causes it to be frequently affected with favus, which has its seat exclusively in those organs.

General Causes. The opinion so long prevalent in the schools, that cutaneous diseases were dependent upon a too acrid or saline state of the humours of the body, is entirely hypothetical. That the blood is buffed in many cases of inflammatory disease of the skin it would be impossible to deny, but it would be going too far to assert that it is to this or any similar condition of the vital fluid that the morbid affection of the skin is owing; it is much

more reasonable to suppose that they are both dependent upon the same general cause. For whatever may be the condition that sets up an active inflammation in any tissue of the body, it usually at the same time gives rise to an increase in the quantity of fibrine in the blood generally. We cannot, therefore, with any show of reason, assert, that because an inflammatory affection of the skin, whether eczema or impetigo, be attended by a buffed condition of the blood, that it is in consequence of the change that has taken place in this fluid that the disease has occurred.

There can be but little doubt that the diseases of the scalp are frequently dependent upon a disordered state of the *primæ viæ*, more especially upon habitual constipation of the bowels. There has certainly been too great a stress laid by some writers upon what has been considered to be a sympathetic connexion between the digestive organs, more particularly the liver, and the skin. But although we may question whether this connexion exists to the extent that has been supposed, still it would be unwise to reject it altogether, as we continually meet with instances in which one of the first indications of a derangement of these organs is an eruption of acne, of herpes, or of impetigo, especially about the face, which has been immediately removed on a restoration of the normal action of these viscera.

Some diseases of the scalp occur chiefly in ruddy, healthy, stout children, in whom the humours appear to abound; this is especially the case with impetigo eczematosa and impetigo sparsa. Others, again, such as impetigo granulata and favus, are commonly the consequence of misery and its accompaniments, want of food and neglect of personal cleanliness, and are usually indicative of an unhealthy, debilitated constitution.

Diet is known to every one to exert a considerable influence on the occurrence of some of these maladies. It is a very prevalent notion with the public that they are frequently occasioned by the bad quality of the nurse's milk, and there can be no doubt that it may be sometimes changed or the child weaned with advantage. In more advanced life, salted or highly-spiced articles of food and an habitual indulgence in spirituous liquors commonly predispose to them, more particularly when the individual is at the same time living in a close and confined situation, and neglects to take proper exercise.

The occurrence of some diseases, such as small-pox, fever, measles, scarlatina, and hooping-cough, are common predisposing causes to affections of the scalp, which when so excited are not usually very chronic or rebellious in their characters.

The season of the year influences very considerably the occurrence of these diseases, the eczema-

tous and impetiginous affections of the scalp being much more frequent during the spring and autumn months than at any other period, appearing often to be cured in the winter only to break out with renewed violence on the approach of warm weather. This, which is no doubt in a great measure attributable to the increased activity of the cutaneous circulation at these seasons, may also perhaps partly be owing to those derangements of the digestive organs which are then, especially in autumn, so very common, in consequence of the ingestion of large quantities of, frequently unripe, fruit.

Although scalp diseases are usually looked upon by the public as being contagious, but few in reality are of this nature. Of the ready transmission of favus by contact there can be no question; for notwithstanding the opinion of Alibert, that English physicians had been too hasty in admitting this, it is now most satisfactorily proved by numberless cases, some remarkable examples of which I shall have occasion to mention in a subsequent part of this work. Eczema seems also, in some instances and under peculiar circumstances, to be contagious.* Cases have fallen under my observation

* Pujol relates a remarkable instance of this: A dentist labouring under acute eczema of the hands, infected in one day the faces of a number of pupils at the military academy of Sorèze. (Rayer.)

in which eczema of the lips appears to have been communicated by kissing, and I have also seen examples of eczema of the scalp in children of the same family, in whom it was difficult to explain its occurrence except by direct contact. However, as the collateral circumstances which might predispose to or excite this disease are so many, in children who are exposed to the same constitutional and dietetic causes, we must be careful in drawing deductions from isolated facts of this description.

Individuals of a scrofulous diathesis are peculiarly liable to most of the diseases of the scalp, but more especially to favus, simple chronic eczema, impetigo eczematosa, and impetigo sparsa. By far the majority of children labouring under these affections will be found to present what are usually considered to be marks of a scrofulous habit of body, at least the fair variety of it; that form of it characterized by a dark, sallow complexion, predisposing them rather to impetigo granulata. As diathesis is so intimately connected with the hereditary transmission of disease, we should expect that in many cases there would be an hereditary predisposition to affections of the scalp, parents transmitting to their offspring the diathesis, and consequently the disposition that it gives to particular classes of disease. It is said that favus has been in some rare instances found to be congenital, but this is doubtful, and requires confirmation.

The frequency of the occurrence of the diseases of the scalp, and the kind of disease that is likely to occur, their absolute and relative frequency, is much influenced by age; the earlier years, especially the period of the first and second dentitions, being by far more subject to these affections than any subsequent age, although they are occasionally met with after puberty, and even in advanced life. The nature also of the affection that will probably manifest itself is much influenced by the age of the individual; thus impetigo eczematosa is most frequently met with before the third year, whilst impetigo granulata is rarely seen until after that period. At the early age at which scalp diseases usually occur, sex appears to influence the constitution but little, and consequently does not, as in after life, predispose to any particular affection.

Eczema amiantacea seems to be the only one of these diseases that is under the influence of moral causes. How these, more particularly the depressing passions, act in giving rise to this affection is uncertain, but that they do so is established beyond a doubt by the concurrent testimony of all those who have had an opportunity of studying this complaint.

Prognosis. The duration of the diseases of the scalp varies from a few weeks to months, and even years. In giving an opinion on this point it is

necessary to take into account the length of time the affection in question may have existed already, as well as its precise nature, the age, temperament and habits of the patient, and to bear in mind that many of these diseases, apparently very trifling in themselves, may be of a most rebellious nature, resisting, for a great length of time, the best directed means of cure, and having, even when apparently well, a very great tendency to relapse.

Although baldness is a common consequence of these complaints, it is in most instances merely temporary, the loss of hair being only permanent in cases of favus. In eczema and impetigo, it is often altered in its characters for a time, being rendered thin, woolly, and of a lighter colour than natural, but it soon recovers its usual appearance on a cure being effected. The general health sometimes suffers in consequence of the irritation and discharge that attends some of these diseases, but very seldom, even in young children, to such an extent as to cause any fears for the safety of the patient. In fact so rarely is this the case, that diseases of the scalp have been looked upon by many as being of a salutary nature, acting as derivatives, and not to be cured too rapidly lest some internal affection be excited. When there is any fear of such an occurrence, it is perhaps the better plan to allow the disease to take its own course, the patient attending only to

the rules of cleanliness, and if a cure become necessary, to effect this as slowly and by as mild means as possible.

The *diagnosis* of the diseases of the scalp is a subject of the very utmost importance, and one that it is absolutely necessary to have correctly established before any plan of treatment can be adopted with success. To those who are not content with looking upon these affections, merely as different forms of porrigo or of tinea, but who are desirous of ascertaining their true nature, it offers considerable difficulties, and requires a very careful observation of their elementary and secondary characters, together, frequently, with a just appreciation of many collateral circumstances, such as the age, habit of body, and temperament of the individual affected, in order to establish it. As it is from a want of proper principles to guide him in this respect, that the practitioner is so constantly at a loss in the treatment of these diseases, it is of the greatest consequence that a fixed and rational plan should be laid down, by which he may be directed in his examination into this, the most important of all the subjects connected with them, and the one which more than any other deserves his careful and attentive study. As, however, it cannot be properly understood until after their individual characters have been described, it will be omitted for the

present, and a chapter in a subsequent part of the work devoted to its consideration.

The *treatment* of the diseases of the scalp is too frequently conducted empirically, without due attention being paid to those indications that naturally present themselves. Irritating ointments, washes, and specific remedies, being employed in order, to use a popular expression, "to kill" the disease, without sufficient regard being shown to the removal of its proximate or predisposing causes, a proper attention to which can be the only basis for a speedy and certain cure.

The treatment of these affections may, with advantage, be considered under two heads, as it is *local* or *general.* The first having for its object, merely to remedy the local mischief by means of topical applications, and the second, to influence it through the medium of the constitution.

The local treatment, which is perhaps the most important, and that on which we must chiefly rely, presents four indications:

1st. To prepare the scalp for the application of topical remedies, by the removal of the hair and scabs.

2d. To lessen any irritation, or inflammatory excitement that may exist.

3d. To excite the part to a new action by the employment of proper local means.

4th. To continue the use of the remedies for some time after the disease has been, to all appearance, cured.

1. In the treatment of every disease of the scalp the first thing to be done is the removal of the hair; for unless this be accomplished, none of those applications that are necessary can be made; and besides, as long as it is allowed to remain on the head, the discharges and scabs by accumulating in it will produce a mass of filth, which, by keeping up a degree of irritation in the scalp, may of itself prevent the cure of the very disease that has engendered it. If possible, the head should be shaved; but when this is not practicable, on account of the irritation and pain that would be occasioned by the passage of the razor over the inflamed surface, we must content ourselves with clipping the hair as short as possible with a pair of curved blunt-pointed scissors, by which it may very readily be removed without any pain to the patient. In the majority of cases it suffices to shave the head, or to cut the hair short, but in some affections, as in favus, the hairs act as foreign bodies in the diseased follicles, and it therefore becomes necessary to remove them from their attachment to the bulbs. This used to be effected by means of that barbarous application, the pitch cap, and more recently by the equally cruel one, of pincers; but both these methods may be entirely superseded by the use of gentle depilatories, which

effect the same purpose without pain or trouble. The most useful of these are alkaline ointments and lotions, which if applied every evening, or morning and evening, will in the course of a very short time cause the hairs to be sufficiently loosened, to be removed by means of a small-toothed comb passed repeatedly and lightly through them, after they have been cut to the length of an inch or an inch and a half.

The hair having been removed by one or other of these means, it becomes necessary to get rid of all incrustations and scabs that may have formed, and which would, if allowed to remain, offer an effectual barrier to the application of topical remedies to the diseased surfaces, as well as have an injurious effect by the mechanical irritation they would occasion. This object is most readily accomplished by the application of a large bread and water poultice, which should be covered with a piece of muslin or of gauze, so as to prevent the crumbs from adhering to any hairs that may have been left. Linseed-meal poultices are objectionable, as they sometimes set up a considerable degree of irritation, giving rise even, in some tender scalps, to an eczematous eruption. Fomentations may be employed for the same purpose, but unless much inflammation be present they are not so serviceable as poultices, with the use of which however they may frequently be alternated with advantage. Ointments are often

had recourse to with the same view, but they are, in the greater number of cases, productive of more harm than good; for if they have been kept for any length of time, the lard which enters into their composition is apt to become rancid and irritating, and instances are very common in which the employment of simple ointment even, has been followed by a great increase in the inflammation that already existed.

The use of poultices and fomentations, one or both, should be persevered in until all the inflammation that accompanies the onset of eczematous and impetiginous affections of the scalp has been subdued, and as long as this state continues no other local means should be resorted to; stimulating applications of all kinds being especially avoided, as they cannot possibly be of any service, and are constantly productive of the most mischievous effects; keeping up for weeks, and months even, a disease that, under rational treatment, would subside in the course of a few days.

2. The second indication that presents itself in the local treatment of these affections—that of lessening irritation and inflammation—is usually fulfilled by the same measures that are taken for the removal of scabs, namely, the application of poultices and the employment of emollient fomentations. It is very rarely indeed that the inflammation runs so high as to require the application of leeches;

should this, however, be the case, they may be applied with most benefit either behind the ear, or else, as near as possible to the affected part. General bloodletting is never requisite. Counter-irritation, whether by blister, issue, or seton, has been recommended by many, but it will rarely be found to be of any service in hastening the cure of these affections, and is often positively injurious by increasing the irritation in the skin. In general, therefore, it will be better not to have recourse to these means, although they may doubtless be of use, in some cases, by preventing bad consequences ensuing on the too sudden suppression of these diseases.

3. The hair having been removed, the scabs separated, and all inflammation subdued, recourse may be had to such treatment as shall set up a new action in the diseased scalp, and modify, if possible, that chronic morbid condition which the skin is apt to assume in these affections. It would be as tedious as useless to enumerate the various remedies that have been employed or recommended by different persons in order to accomplish this, as the list would include nearly every mineral and many of the vegetable substances that have been used in medicine; I shall therefore content myself with a few observations on those that are really of value, and which will be found equal to every purpose that can be required of them.

The alkalies and their carbonates, more especi-

ally the preparations of potass, exert a very beneficial influence on many of the more chronic diseases to which the scalp is liable. It will be found, that during their use in the chronic forms of eczema and of pityriasis, the scalp will very quickly be freed from the scurf and scales, which in these affections, cover it to a considerable extent, and that the skin will very soon assume a clean, smooth, healthy appearance, these preparations appearing both to act chemically upon the epidermis, and to stimulate the cutis to a more healthy action. In the form of ointment they are very useful in the treatment of favus.

The alkaline sulphurets are equally serviceable, and in the treatment of scalp diseases supply the place of sulphureous baths. The sulphuret of potassium, in the proportion of one or two drachms to a pint of water, will be found more generally useful than any other local application in those chronic cases of eczema or of impetigo in which there is but little inflammatory action going on, and which are attended by no discharge. As these preparations are powerful stimulants, exciting the vessels of the skin to an increased activity, their use is contra-indicated as long as any active inflammation exists, as it would infallibly be augmented by them.

Lotions containing the metallic salts, such as the sulphates of copper or of zinc, or the nitrate of

silver, may be employed with marked benefit in those cases of eczema which are attended by a considerable oozing of serous fluid from a multitude of small openings, without the formation of any fresh vesicles. In some very chronic and indolent cases of this description, the strength of the solution of the nitrate of silver may be increased to ten or fifteen grains, or even to a scruple of the salt to an ounce of water, with marked advantage. A lotion of this strength sets up an active inflammation in the part to which it is applied, that appears to destroy or to modify favorably, the chronic action that is going on; for when the artificial inflammation is subdued, the scalp will in general be found to revert to a healthy condition without any recurrence of the disease. The inflammation being however, for the time, greatly increased, some alarm is apt to be excited in the mind of the patient, who imagines that the means adopted for his cure are only augmenting the severity of his disease; it therefore becomes necessary to put him upon his guard in this respect. When these lotions are employed of a milder strength they appear to arrest the discharge by constringing the vessels of the scalp, and thereby removing that passive, atonic state which is so common a consequence of chronic inflammations, especially in scrofulous, lymphatic subjects.

Various ointments are employed in the treatment of these diseases; they should, however, be dis-

pensed with as much as possible, as the application of a greasy substance, which is frequently rancid, very commonly increases any inflammation that may already exist. I have certainly seen more harm than good result from the use of these preparations in eczema and impetigo of the scalp, in which diseases lotions may be substituted with advantage, as they are less likely to irritate the skin, besides having the additional recommendation of being much more cleanly and agreeable to the patient. In cutaneous affections, ointments should only be employed for the purpose of stimulation; a "soothing" ointment is a misnomer, for as the grease, which necessarily enters into its composition, is always an excitant to the skin, no substance with which it can be combined can exert a soothing or sedative influence upon that tissue, whatever it may upon the system generally. Of the ointments of the Pharmacopœia, those of the nitrate of mercury, of the nitric oxide, and of the ammonio-chloride of the same metal, will be found to be the most useful, and, according to the degree of stimulus required, to answer every purpose. As has already been stated, the carbonate of potass, when made into an ointment, is an excellent depilatory. The preparations of iodine, such as the iodides of sulphur, mercury, lead, and arsenic, may also be employed in a similar form with marked benefit. The iodide of sulphur, in the proportion of from twelve grains to half a drachm, to an ounce

of lard, exerts a most beneficial and energetic action in chronic cases of favus, more particularly when it is combined with the occasional use of alkaline lotions. It is to Biett that we owe the introduction of this preparation in the treatment of the diseases of the skin, and it certainly has proved to be a most useful auxiliary to the means we already possessed.

4. The disease having been to all appearance cured, the practitioner should bear in mind that the means by which this successful result has been accomplished should be persevered in for some time, so as to prevent, as much as possible, any chance of a return of the affection.

General treatment. Although the topical means that have been enumerated may of themselves, in some cases, effect a cure, yet in the majority of instances it becomes necessary to have recourse to some general treatment, as these diseases are most frequently dependent for their origin upon constitutional causes, which it would be necessary to modify or to remove, and which, as long as they are allowed to remain, would constantly frustrate the, otherwise, best-directed efforts. The ancients attached considerable importance to the preparatory measures that were to be adopted in the treatment of these affections; and although their practice in this respect, based upon an incorrect hypothesis, was

frequently carried to an absurd extreme, yet it was upon the whole perhaps less prejudicial to the patient, than the system which too frequently prevails at the present day of attacking these diseases at once with powerful topical applications without having previously adopted any internal treatment. Either extreme should be avoided, and although some of the precautions that the older physicians took may appear, to say the least, useless, yet it would be wiser to adopt them than to neglect all general means in the treatment of diseases frequently depending upon constitutional causes, and the too sudden cure of which is often productive of the most injurious effects.

The general treatment of the diseases of the scalp, which is strictly rational, presents the following four indications:

1st. Lessen or subdue any excitement or inflammatory action that may be going on.

2d. Modify or remove the morbid action set up in the economy, on which the local disease is dependent.

3d. Lessen irritation.

4th. Support the powers of the system when they have suffered in consequence of the profuseness of the discharge, or of the irritation produced by the disease.

In the fulfilment of the first indication in the constitutional treatment of the diseases of the scalp,

it will never be found necessary to have recourse to general bloodletting, as milder measures will always suffice in removing any inflammatory action that may be going on.

Purgatives are especially indicated in the treatment of these affections, more particularly in their earlier stages, when there is much local excitement present. In all cases the employment of any other means that we may adopt, should be preceded by the administration of a dose of a mercurial combined with some purgative extract, of which the aqueous extract of aloes will be found one of the most useful and certain in its action; this should be followed by a saline aperient, so as to unload the liver and to stimulate the whole length of the intestinal canal. These means may be repeated with advantage on every second or third day during the treatment, in order to set up a continued derivative influence on the mucous lining of the intestines. This is more particularly of use in acute cases of impetigo or of eczema occurring in fat, ruddy, full-blooded children, in whom it should never be neglected, as it will materially hasten the cure. The popular remedy of sulphur and treacle is often one of the best that can be employed in these cases when they occur in young children. If there should be more than ordinary vascular excitement in their earlier stages, small doses of the nitrate of potass, or of the tartrate of antimony, combined with

diuretics or sudorifics, may be administered with advantage in conjunction with the purgative, so as to determine to the kidneys and skin.

2. When, after all inflammatory action has been subdued, and the disease appears to be connected with, or dependent upon a morbid state of the system generally, recourse may be had to that valuable class of remedies, the alteratives; and of these none will be found more useful than the preparations of iodine.

The iodide of iron, in doses of a quarter of a grain to two grains three times a day, will be found to be of essential service in cachectic or scrofulous habits, appearing to conjoin the advantages of a tonic with those of an alterative. When given in combination with those bitter infusions with which it is compatible, it is a most valuable adjunct means in the treatment of those cases of favus and of eczema that occur in scrofulous subjects. Its administration requires however, some little care, as it is apt to excite the system; it should therefore be omitted whenever any febrile disturbance is manifested, and a few doses of rhubarb and magnesia, or of hydrarg. cum cretâ given, until the excitement be subdued.

Mercurials exert no specific beneficial action on scalp diseases; they may however, as has already been stated, be administered with great advantage as purgatives in their earlier stages, and also as

alteratives, with a view of correcting the biliary secretion when that is at fault.

Sulphur, the internal use of which was at one time so common and so much vaunted in the treatment of all the diseases of the skin, seems when uncombined to possess no specific effect upon them; acting, when given in sufficient doses, merely as a mild laxative, and as such it is certainly highly useful for children, for which purpose it is much in vogue with the public. When in combination however with potassium it forms a very active preparation, which may be employed with advantage, instead of the Harrowgate or other sulphureous waters, in doses of from five to fifteen grains in a glass of water. The bowels should at the same time be kept gently open with small doses of some saline aperient, such as the tartrate of potass or the sulphate of magnesia, as otherwise the sulphuret of potassium is apt to stimulate the system too powerfully. The chief objections to its internal use are its nauseous taste and odour.

The preparations of arsenic and of cantharides, which possess such remarkable powers in some affections of the skin, are certainly of but trifling service in the diseases of the scalp, and although there is little fear of these remedies exciting bad consequences when they are carefully employed, yet when the same effect can be produced by milder means, it is without doubt more prudent to discard

their use, as there is always the possibility of deleterious results following their administration; the patient, in the desire of effecting a speedy cure, frequently disregarding the cautions and injunctions of his medical attendant, and increasing their dose to a dangerous extent.

3. For the accomplishment of the third indication, that of allaying irritation, we must have recourse to narcotics and sedatives, more particularly in cases of eczema and impetigo. Of these preparations the tincture or extract of hyoscyamus and the diluted hydrocyanic acid, in doses proportioned to the age of the patient, will be found the most serviceable.

The mineral acids are also of great use in allaying the itching and tingling that so commonly occur in the impetiginous and eczematous affections of the scalp. The diluted nitric acid may be given with this view in doses of from ten minims to half a drachm, and the diluted hydrochloric acid in doses of from twenty minims to a drachm, in a glass of barley-water, or with a little syrup of capillaire, or of orange-peel, twice a day. After they have been continued for some time, their employment must be intermitted for a few days, as otherwise they are very apt to give rise to some irritation of the digestive organs, as indicated by uneasy sensations at the epigastrium, and by the tip and sides of the tongue becoming red.

4. In those cases of eczema and of impetigo of

the scalp in which the powers of the system have been reduced by the long continuance of much irritation and discharge, tonics will be absolutely required. Quinine, in combination with sulphuric acid in some bitter vegetable decoction or infusion, as of calumbo, cinchona, cascarilla, or chiraytum, will be found of signal service in these cases, more particularly when occurring in scrofulous or lymphatic subjects, to whom also the milder preparations of iron may be administered with advantage. During the employment of a tonic, an aperient should be from time to time exhibited, so as to prevent too stimulating and exciting an effect being produced.

Before concluding this chapter it will be necessary to say a few words as to the kind of diet to be adopted by those labouring under disease of the scalp, as the cure will be greatly accelerated or materially retarded according as this is attended to or not. The importance of a due regulation of diet as a preventive means has long been recognized, and is too obvious to require comment; many of these affections being, without doubt, either primarily occasioned or re-excited by errors in this respect.

As by far the greater number of cases, even of chronic diseases of the scalp, are of an inflammatory nature, it becomes necessary that the patient should be restricted to mild unirritating nourishment;

there is in general no occasion for him to be kept low, but all stimulant and indigestible articles of food, such as pastry, cheese, raw vegetables, &c., should be carefully avoided. Children may with great advantage be restricted to a milk diet; this, which is by far the most natural and wholesome of all food for them, will usually be found to agree peculiarly well in the impetiginous and eczematous affections of the scalp, influencing in a remarkable degree the rapidity of cure. Several cases have fallen under my observation in which these affections have been kept up for a great length of time, and have been probably originally excited, by the parents being unwilling to deprive their children of solid animal food, the disease, which had previously been very obstinate, yielding at once when this was taken away. In more advanced life it will be sufficient for the patient to abstain from all stimulants, such as coffee, beer, wine, spirits, and spices, and to confine himself, as much as possible, to a diet composed of the more easily digestible meats, cooked in the simplest manner, avoiding carefully all made dishes and pastry.

When these diseases occur in an infant that is being suckled, it will be the most prudent plan to change the nurse or to wean the child, as there is always a possibility of their being occasioned by the quality of the milk, although it may be difficult to determine this positively.

Some diseases of the scalp, such as impetigo granulata and favus, occurring, as they most frequently do, in a constitution weakened by misery and want, or by previous ill-health, require a very opposite plan of regimen to this. The same is also the case with patients whose strength has been greatly reduced by the long continuance of some of the other affections of the scalp, such as eczema and impetigo eczematosa; in these instances it is necessary that a nourishing, though unstimulating, diet should be prescribed.

CHAPTER II.

VESICULAR DISEASES.

The only genera of the order Vesiculæ that affect the scalp are Eczema and Herpes.

Both these diseases are characterized in their earlier stages by small elevations of the epidermis, which contain a fluid, at first perfectly clear and transparent, and in general of a yellowish tinge, but which soon becomes milky and opalescent, and, in some instances even, puriform. After a time, which varies according to the circumstances of the case, this fluid may be either effused, forming a small thin crust, or it may be reabsorbed, giving rise merely to an exfoliation of that minute portion of the cuticle that has been raised up by it.

The vesicles in these diseases vary considerably in size, shape, and arrangement. In eczema they are usually at first small and somewhat pointed, but after a time they attain, frequently by the fusion of several into one, a larger size and a more rounded and fuller appearance. In herpes they are

from the very first perfectly globular, and although still small, are usually somewhat larger than those of eczema; in which disease also they are irregularly dispersed in patches of various extent, whilst in herpes, on the contrary, they appear in clusters, which have in one species of it, herpes circinnatus, a tendency to assume a circular or oval figure: a mode of arrangement with the causes of which we are altogether unacquainted, but which probably depends upon some peculiarity in the structure of the skin. The vesicles of herpes also differ from those of eczema in having their base inflamed to a greater extent, although in some chronic cases of the latter disease the inflammation is spread over a large extent of surface.

The vesicles themselves are always acute in their duration, seldom existing as such longer than from three to four days, but the disease, of which they are but a symptom, may be of a very chronic nature, as is the case so frequently with eczema, in which affection crop after crop of them may continue to form for a great length of time. In some instances, however, although the disease persists, no fresh eruption of vesicles appears, but a serous fluid is poured out from a number of openings that have been left in the site of the old ones.

With the precise anatomical seat of the vesicles we are unacquainted. By some, they have been supposed to be formed over the mouths of the

sudoriferous ducts, probably for no other reason than that they contain a fluid resembling perspirable matter. Others, amongst whom is Rayer, imagine that the vesicles of eczema have their seat in the sebaceous follicles of the skin, as they most generally occur where these organs are most numerous; but they are also seen in situations where these follicles have not been proved to exist, as the points of the fingers for instance, and over the elbow and knee; and if the disease can occur where these organs are wanting, it is evident that it cannot be an affection of them, but must be situated in some other structure of the skin. Biett accordingly regards the vascular layer of Eichorn as the seat of the vesicles of eczema. These opinions as to the seat of vesicles are for the most part hypothetical; and indeed it is exceedingly difficult to determine the precise pathological condition of the skin in any of its diseases; for although there can be no doubt, on reasoning from analogy, that each individual affection must have its seat primarily in some special part of that tissue, yet from the extreme minuteness and close proximity of the organs that enter into its composition, several of them must very soon become implicated in any morbid action that may in the first instance affect but one.

The scabs that are formed in these diseases by the drying of the effused fluid vary considerably in their characters, being in some cases thin, like the

scales of pityriasis, and in others thick, like the crusts of impetigo, from which, however, they may be distinguished by always being lamellated, and by having a less unctuous appearance. In falling off, they usually leave the skin underneath smooth, shining, and red, appearing in some instances to be perforated by a number of small pores from which an ichorous fluid continues to drain.

The vesicular diseases that affect the scalp are not contagious in the majority of cases, although eczema certainly appears occasionally to be communicable by contact; at all events it is very difficult to explain its occurrence in some instances unless we have recourse to this supposition, in support of which, however, it is difficult to adduce satisfactory evidence.

In their duration these diseases differ very considerably: eczema may last but for a few weeks, or it may continue for months and even years, whilst herpes is always acute in its course.

The prognosis is favorable, as they are not in themselves dangerous, and eczema can only become so by the irritation that may be set up by its long continuance.

The treatment of these diseases is rational in their acute stages, but when eczema assumes a chronic form it frequently requires empirical means, which succeed at times when a more rational mode of treatment would fail.

ECZEMA.

With the exception of impetigo, there is no disease that affects the scalp more frequently than eczema, and there is none that assumes, according to its duration, extent, and other modifying circumstances, a greater variety of appearance. Hence different species of it have been described, even by late writers, as distinct diseases, the *porrigo furfurosa* of Willan, the *porrigo furfuracea*, *achor lactuminosus* and *amiantus* of Alibert, being merely species of eczema. As the multiplication of these terms serves no useful purpose, but only adds to the confusion that already exists with regard to the diseases of the scalp, I shall discard them altogether, and follow Biett in dividing eczematous affections into *acute* and *chronic*, the latter comprising *simple chronic eczema*, *eczema furfuracea*, and *eczema amiantacea*. This division is certainly the most simple and practical, as the chief indications in the treatment of this disease vary according as it is acute and active, or chronic and passive, in its nature.

Characters. Eczema is characterized by an eruption of small vesicles, which are generally very numerous, occupying irregular patches of a greater or less extent. Their appearance is usually pre-

ceded by a degree of itching or tingling and some redness; they contain a fluid which is always at first clear and sometimes straw-coloured, but which soon becomes opaline, and even puriform in its aspect, and which, when effused, forms scabs or scales that vary in thickness and colour according to its density and opacity.

Acute Eczema. *Symptoms.* The appearance of any eruption in this disease is always preceded by a sensation of heat and tension in the scalp with some itching and tingling; if the part be now examined a red blush will be observed upon it, and its temperature will be found to be sensibly augmented. This exanthematous blush, which always precedes acute eczema, frequently escapes attention in the first attack of the disease, but it may be observed to be of constant occurrence in those cases that supervene upon a chronic form of it. After it has continued for a few hours, an eruption of small vesicles makes its appearance, and the nature of the affection is at once recognizable. These vesicles, which are at first very small, gradually enlarge until they attain the size of a pin's head. On their appearance the pruritus and tingling is usually somewhat lessened, but this is not always the case. They are for the most part evolved in patches, each of which contains a number of them very closely set together, but sometimes they occur

in large clusters. The fluid contained in them is at first clear, limpid, and either colourless or else of a slightly yellow tint; it soon, however, becomes turbid and milky in appearance, and if the vesicle remain two or three days without breaking, or being ruptured by the patient scratching the part, it will be found to have assumed a puriform aspect.

The vesicles are at first always somewhat pointed in figure, but as they become larger they may assume a spherical or globular form; they are situated between the hairs, which consequently do not traverse them, although this appears occasionally to be the case when two or three of them have run together inclosing a hair, as it were, in their centre. Sometimes the fluid contained in them appears to be reabsorbed, leaving merely thin, white, scaly incrustations on the surface of the scalp, which, from their close resemblance to, have often been mistaken for the scales of pityriasis. More commonly, however, on the second or third day, the vesicles give way, and their contents being effused, form, on drying, small, rather thin, yellowish-white or grayish scabs, which mat and bind the hairs together. If the disease be not arrested in this early stage, a thin semi-transparent fluid, having some resemblance to lymph will continue to exude, frequently without the formation of any new vesicles, from numberless small openings left in the site of the old ones. This fluid, if in large quantity and

not very viscid, soaks the hair and forms it, especially about the roots, into small bundles, which are soft, moist, and of a dirty yellowish-gray colour. If the quantity of secretion be not quite so great as this, it drys into scabs, which, by being constantly added to the former ones, gradually cause them to acquire considerable thickness and size. The growth of the hairs, that are entangled in these scabs, gradually separates them from the scalp. This process is rather curious, the scabs being always lifted off in the direction of the growth of the hair; thus those that are situated on the fore part of the head are first raised off at their anterior part, whilst those, on the contrary, on the occipital region are first of all loosened at their lower aspect. When the scab is completely separated from the skin, it becomes dry, assuming a white pulverulent appearance, gradually crumbling and breaking away.

Eczema of the ears, which is a frequent complication of acute eczema of the scalp, is a very obstinate, troublesome, and painful affection, and one that is very apt to pass into a chronic state. The ears, when affected by this disease, become exceedingly red, tense, hot, and shining; a number of small vesicles then appear, which contain a clear serum of a reddish or yellowish colour; when these give way the fluid that is effused forms thin scales or scabs, which are cracked in all directions. The pinna attains a very large size in this disease, be-

coming hypertrophied and often fissured; sometimes indeed the swelling takes place to such an extent as to block up the meatus auditorius externus, giving rise to temporary deafness.

When acute eczema has arrived at the stage above described, it may either pass into a chronic form, continuing for an indefinite period, or else, if proper means be adopted, it may be cut short and very speedily get well.

When the disease is on the decline, all fresh eruption of vesicles ceases, the discharge gradually lessens, the scabs which are formed fall off, and are either replaced by some that are thinner, more scaly and lamellated, or else are not reproduced at all, leaving the cutis exposed, red and glistening, on which thin scales of epidermis are gradually deposited, and which in time acquires a natural appearance.

Chronic Eczema. Eczema of the scalp, however, passes most frequently into a chronic state, and may then last for an almost indefinite period, being kept up in all probability, in many cases, by a peculiar diathesis or disposition of the constitution, with the precise nature of which we are unacquainted.

Although chronic eczema assumes a variety of forms, which it might at first sight appear impossible to arrange under one common head, as they seem to differ more from one another than some of

them do from other diseases of the scalp, which belong to entirely different orders; yet, however dissimilar they may be in their secondary characters, they all agree in having the eczematous vesicle for their elementary form, and can therefore only be classed in the genus Eczema. Indeed this dissimilarity in their secondary characters has caused many writers on the diseases of the skin to overlook their common vesicular origin, and to describe them as peculiar diseases under the titles of *tinea amiantacea, porrigo furfuracea,* &c.

Chronic eczema of the scalp seems to resolve itself naturally into the three following species:

1st. *Simple chronic eczema,* which may be either moist or dry.

2d. *Eczema furfuracea,* corresponding to the *porrigo furfurosa* of Willan, the *tinea furfuracea* of others, and the *achor lactuminosus* of Alibert.

3d. *Eczema amiantacea.* The *teigne amiantacée* or *porrigo asbestina* of Alibert, who was the first to describe this form of the disease.

These species of eczema are not necessarily preceded by an acute attack; on the contrary, the two latter frequently show themselves at once in their peculiar characters, or one species may succeed to another; in this case they would not of course be, strictly speaking, chronic diseases, but as they present from the commencement the usual characters of chronic affections of the skin, I have thought it

better, in order to avoid all confusion, to arrange them under the head of chronic eczema.

SIMPLE CHRONIC ECZEMA may then, as has already been said, assume either a moist or a dry form.

In the *moist* variety of the disease there is always a very copious discharge of a thin serous fluid from a number of small openings in the scalp, which are usually very closely set together and very numerous. This discharge, which is frequently of an acrid and irritating nature, is apt to increase the inflammation in that part of the skin on which it is allowed to remain, or over which it flows. If it be very abundant, the hair looks as if it had been soaked in a thin solution of gum arabic, being matted together in locks, which have a dirty yellowish-gray moist appearance, and between and under which, the inflamed scalp may be seen to be perforated by a number of minute openings, which pour forth the discharge. As it lessens in quantity soft yellowish-gray scabs will be formed, which gradually loosing their moist appearance, will be found to resemble those that characterize the dry variety of the disease. In the midst of this, acute attacks of eczema, attended by a fresh evolution of vesicles, by increased heat and redness of the scalp, frequently occur, adding very greatly to the severity and obstinacy of the disease. A peculiar pungent acid odour, somewhat resembling that of the fumes

of acetic acid, is at the same time evolved from the head, and the distress of the patient is often greatly increased by a chronic inflammation of the eyes and ears, which is very apt to occur in this form of eczema. As the discharge lessens, the moist, in many cases, gradually passes into the dry variety of the disease.

The extent of the portion of the scalp that is affected varies very considerably in cases of *dry* chronic eczema: there may be only a few scabs on one or more points, or the whole head may be thickly coated with them.

This disease is characterized by scales or scabs of a yellowish-white, yellowish-gray, or yellowish-green colour, which are darker in their centre than at the circumference; they are usually of an irregular figure, but some of them frequently assume a rhomboidal or diamond shape, being separated from one another by cracks and fissures, at the bottom of which may be seen the inflamed scalp covered by a mealy powder, the detritus of the scabs; they are always more or less lamellated, and are usually about a line or two in thickness, being thinner at the circumference than at the centre, which is the part that is last of all separated from the scalp. They are loosened from the skin by being gradually pushed up by the growth of the hairs, the part that is farthest from the vertex being that which is first of all raised up,

as has already been stated; the sides are then separated, and when the upper and middle parts are detached, the scab falls off, leaving the subjacent skin dry, glazed, and of a bright red colour. They occasionally present a depressed appearance in the centre, from their sides being curled up, but this is very different from the cupped shape of the crusts of favus. They are usually most numerous about the vertex, on the sides of the head, and about the ears. The hair, which is commonly dry, thin, and brittle, readily breaks off, but as it returns to its original strength and beauty when the disease is cured, no permanent baldness is left.

Although the two varieties of form in which simple chronic eczema occurs are, in some instances, separated by characters as well and as clearly defined as those above mentioned, yet this is only in extreme cases, for in general they run insensibly into one another, varying according to the state of the general health of the patient, or as any cause may occur to increase or to diminish the inflammatory action going on in the scalp. The moist, indeed, has a tendency, in all cases in its progress towards a cure, to pass into the dry form of the disease, and this again into another species, to be hereafter described, eczema furfuracea; we must therefore in nature expect to find the appearances above described as characterizing the two varieties of simple chronic eczema combined, as it were, in

various proportions, which it would be impossible to detail here, and the exact characters of which can only be learnt by actual and repeated observation of the disease itself.

As *eczema furfuracea* and *eczema amiantacea* differ so remarkably from the simple chronic form of this disease in several very important respects, their consideration will be deferred until after the causes, prognosis, diagnosis, and treatment of acute and simple chronic eczema have been described.

Causes. The *local* causes of eczema of the scalp are but few in number, the disease depending, in the majority of cases, upon some constitutional disposition, which is often of itself sufficient to excite it, and without which no local action could exert any influence.

The application of too stimulating lotions or ointments in the treatment of other diseases of the scalp may bring on an attack of acute eczema, thus complicating the original affection, and sometimes rendering it more severe, as happened in a case of favus that was under my care last summer, in which the iodide of sulphur ointment brought on an eruption of eczematous vesicles, although it eventually cured the disease for which it was employed. The direct rays of the sun may also excite it. A case in which this occurred fell under my notice last August: a child, who had before laboured under eczema of the scalp,

being attacked by this disease after having been exposed to the action of the sun's rays on a very hot day: a true case of *eczema solare* of the scalp.

Although eczema does not in general appear to be of a contagious nature, yet an exception to this rule seems occasionally to occur: at least, cases have come under my observation in which it has appeared to have been transmitted by direct contact. There are, however, so many collateral circumstances to be taken into account before we can satisfactorily determine the contagiousness of a disease, that it becomes exceedingly difficult to satisfy ourselves whether this one is really so or not; at all events it frequently makes its appearance in a way that renders the supposition of its being of this nature exceedingly probable.

The constitutional causes of eczema of the scalp are by far the most important, as it will be found, in the great majority of cases, to be dependent upon or connected with some affection of the general health of the patient, which it will be absolutely necessary to remove before a cure can be effected. This class of causes resolves itself into two divisions,—those that act by debilitating the system or lowering its tone, and those that stimulate and over-excite it.

Amongst those causes that act by lessening the tone of the system, that state of debility which follows severe general diseases, such as fever, scarla-

tina, or measles, will be found to be one of the most frequent. Nothing is more common than to see children, when convalescent from one or other of these affections, become attacked by eczema of the scalp, more especially if they have ever before suffered from any disease of this region. The scrofulous diathesis is without doubt another very frequent predisposing cause to this disease, the greater number of cases occurring in fair children with thin skins, light hair and eyes, somewhat swollen features, and those other signs which are usually looked upon as indicative of this peculiar constitution. The action of this cause is greatly accelerated or augmented by misery and privation, which may of themselves excite the disease, either by lowering the powers of the system or by the filthy habits that they engender.

The irritation of teething is one of the commonest of those causes that act by exciting the system; hence the frequency of eczema of the scalp during the earlier years of life, more particularly about the periods of the first and second dentition. It also is frequently occasioned by an habitually constipated state of the bowels, and it is not unfrequently met with amongst women, about the critical period, from the cessation of the menses. The habitual indulgence in highly-spiced or salted articles of food commonly excites and keeps up this disease. The season of the year also exercises a

considerable influence upon its occurrence; as it usually makes its appearance or is most severe during the spring and summer months, declining in the winter, only to break out afresh on the return of the warm weather. Although in the majority of instances we may trace the disease to one or other of the above-mentioned causes, yet there are many cases for the occurrence of which we are at a loss to account, as they depend probably upon some peculiar state of the economy which has as yet escaped attention. Relapses are very common in this disease, very slight causes, such as a sudden change of temperature, errors of diet, or a costive state of the bowels, being sufficient to bring it back when it has once occurred.

The duration of this affection varies very considerably in different cases; it may last for a few weeks only, or may continue for several years, the chronic form of it being not only very difficult to cure, but very apt to return after it has to all appearance been entirely got rid of.

Diagnosis. As eczema of the scalp is of such frequent occurrence, it becomes highly important to distinguish it from all other affections of this region with which it might be confounded; this, however, is not a very easy task, more especially when it assumes a chronic form.

Impetigo is the disease with which, of all others,

there is most probability of acute eczema of the scalp being confounded, but the vesicular element of the latter affection will at once serve as a diagnostic mark, and although the contents of the vesicles may very soon assume an opaline or milky aspect, yet they never become converted into true pus. There is one species in particular, the *impetigo eczematosa,* which may readily be mistaken for acute eczema in its earlier stages; but from this even, the diagnosis may be effected without much difficulty, provided due care be taken, for although there are usually some vesicles evolved in this form of impetigo, yet the greater part of the eruption is decidedly pustular, the fluid effused being true pus, and not, as in eczema, either of a serous, or at most of a sero-puriform nature. In the later stages of the disease, the scabs of eczema will be observed to be of a lighter colour, being yellowish-white or yellowish-gray, and more lamellated than those of impetigo, which are thicker, of an irregular shape, and of a yellowish-brown colour, presenting somewhat of a varnished or glazed appearance, and having a tendency to agglomerate in masses, whilst those of eczema appear rather to be spread out in layers, and are more friable and opaque. In addition to these characters which serve to distinguish eczema from *impetigo eczematosa* and *i. sparsa,* it may be remarked that the scabs which are pushed up by the growth of the hair in the

former disease differ from those of *impetigo granulata*, which adhere to the hairs, by being thin, lamellated, and friable, whilst in the latter affection they are irregular, rugged, hard, and rough. Dry chronic eczema may be distinguished from *pityriasis* by its scabs being larger and coarser than the scales which characterize this disease. The moist form of chronic eczema bears a great resemblance to some of those cases of impetigo that are attended by much secretion; but the fluid poured out is thinner, less viscid, and not so glutinous in the former, as it is in the latter affection, in which the hairs appear to be soaked by it; whilst in impetigo, on the contrary, the secretion, owing to its viscidity, merely collects about their roots in drops, and does not moisten the stem.

From *herpes circinnatus*, eczema may be at once distinguished by the oval or circular figure which the patches assume in the former disease. There is but little danger of confounding the scabs of eczema with the crusts of *favus*, the sulphur-yellow colour, central depression, and circular outline of which serve to make the diagnosis easy.

Treatment. The acute form of eczema requires but a very simple mode of treatment; cleanliness and mild antiphlogistic means being all that are necessary. The hair should not be shaved, on account of the irritation that would thereby be oc-

casioned, but it must be cut, as close to the head as possible, by means of a pair of curved scissors, so as to prevent the discharge from accumulating in it, and thus becoming an additional source of irritation to a scalp that is already inflamed. Warm poppy-head fomentations, applied by means of a large soft sponge, or an emollient bread and water poultice, may then be employed with advantage in order to allay the inflammation and irritation that exist. The poultice should be covered with a piece of muslin, so as to prevent the bread-crumbs of which it is composed from adhering to the hair. All greasy applications must be most carefully avoided, as they will to a certainty, by heating and stimulating the part to which they are applied, increase the inflammation that is present. Leeches are very rarely necessary, although if there be much redness and tension of the scalp in a ruddy full-blooded child, a few may, with advantage, be applied as near to the seat of disease as possible. Counter-irritation, by means of setons or blisters, will be found to be productive of much more harm than good. In fact, the milder the treatment that is adopted in this stage of this disease, the more likely is it to be attended with success, as meddlesome means too frequently increase the severity or prolong the duration of an affection, which at first perhaps was but of a trivial character, but which may have been rendered rebellious and obstinate by the em-

ployment of those very means that were adopted for its relief.

When eczema occurs about the period of dentition, the gums should be well lanced, so as to remove all chance of irritation from that source.

In all cases, the bowels must be kept gently acted upon by means of saline purgatives, with the occasional exhibition of a dose of calomel, or of hydrarg. c. creta and rhubarb.

The diet should be mild and unstimulating in quality, and moderate in quantity, meat being carefully abstained from, as well as malt liquors, wines, and spirits of any kind, the patient confining himself to a broth or milk diet, and taking lemonade, barley, soda, or seltzer waters, for his habitual beverages. It must be borne in mind that no *specific* remedies, such as sulphur or arsenic, are of any service in this stage, when their employment would probably tend to increase, rather than to diminish the severity of the disease.

Chronic eczema of the scalp is a disease that is often most rebellious and difficult to cure, and one in which a more energetic plan of treatment must be adopted; the scalp, in many cases, appearing to be passively inflamed, and to have acquired a habit of secreting a serous fluid; which condition and habit can only be destroyed by altering the vitality of the part by means of stimulating and astringent lotions, the same mode of treatment that is adopted

with such signal success in some forms of passive imflammation of the mucous membranes; this is more particularly applicable in the moist chronic form of eczema, in which the scalp, with but little, if any, inflammation, becomes swollen, and pours out a quantity of fluid from a number of small openings. But however useful and necessary an active local treatment may be, it will certainly, in the majority of cases, fail, if the state of the patient's general health be not carefully attended to, and any morbid condition that may exist be modified or removed; for it is evident that if the disease be dependent upon any constitutional derangement, it must remain unchanged by any means that do not immediately and directly remedy this.

In the treatment of the chronic form of eczema of the scalp, poultices and fomentations are of comparatively little service, being only necessary in the earlier stages of the disease for the removal of any scabs, which, if allowed to remain, would form a mechanical impediment to the application of those other means that may be judged necessary. If there be much discharge, they will be found to be injurious, for by relaxing the vessels of the skin they will keep up and increase the secretions from them.

A vast number of stimulating and astringent substances have been employed in the treatment of this disease, for the purpose of eradicating or destroying the local mischief; and their incautious and inju-

dicious use with this view has often been productive of the worst consequences; which may, however, always be avoided if it be borne in mind that there is no *local vice* or *humour* to be removed, but that all we can expect from topical excitants is to modify the actions of the part by gently stimulating and constringing its vessels. For this purpose we may either employ the alkaline carbonates, or sulphurets, or lotions and ointments containing metallic preparations; the former sufficing in the milder cases, the latter being required when the disease has become more obstinate, in consequence of neglect or of injudicious treatment.

Lotions, containing either the pure alkalies, or their carbonates and sulphurets, will be found to be especially useful in cases of dry chronic eczema, after the scabs have been removed by poulticing, and the surface of the scalp been thoroughly cleansed. The quantity of the liquor potassæ, carbonate of potassa, or sulphuret of potassium, used, should vary from one to three drachms to a pint of water. If any inflammation be excited during the employment of these preparations, they must be discontinued until this be subdued.

If, however, the disease prove to be more rebellious, and especially if it be the moist chronic form of eczema, we must either substitute for, or alternate with the employment of these means, an ointment made with some of the metallic preparations, such

as the nitrate of silver, the iodide of sulphur, the bichloride, nitrate, or ammonio-chloride of mercury, or the sulphate of zinc, according to the degree of stimulation that the scalp will bear. The mode of employing these, that I have found to be most beneficial, is to apply the ointment, that we determine upon using, at night, ordering the patient to wash it off in the morning with a lotion composed of the sulphuret of potassium, then to reapply the ointment, and in the course of six or eight hours to wash it off again; thus alternately reapplying and washing off the ointment at stated intervals during the four and twenty hours. This alternation of stimulus will prove to be exceedingly useful; but it will in general be found that, any one local application which, at first appears to be of great service, will, after a time, lose its effect and necessitate the employment of some other.

The oiled-skin cap, which is, for the purpose of cleanliness, so commonly worn in cases of moist eczema, is, in my opinion, a most injurious covering for the head, as, by confining the perspiration and discharge, it keeps the scalp in a constant vapour bath, by which means the skin is soddened, and that state of passive congestion, which it is our object to get rid of, increased. A thin linen cap, which should be changed as often as it is soiled, will be found to be by far the cleanest and best covering for the head.

The constitutional treatment necessarily varies according to the nature of the cause that excited the disease. If it arise as a consequence of that debilitated condition of the system that follows fevers, and some other similar affections, it will be necessary to administer tonics, and to allow the patient a nourishing but an unstimulating diet. The vegetable tonic infusions, such as those of cinchona or of cascarilla, in combination with alkalies, will be found to be very serviceable; if however there be a disposition to scrofula, we may have recourse to some of the preparations of iron; of these the ioduret, in doses of from half a grain to two grains twice a day, is certainly the most useful. At the same time that tonics are being exhibited the bowels should be kept gently acted upon by means of salines, together with small doses of rhubarb and blue-pill, or of mercury with chalk.

When, on the other hand, there is any cause in existence that keeps up an inflammatory condition of the system, this must be removed by means adapted to its nature. Thus, if the bowels be habitually confined, their regular action must be obtained, if the catamenia be deficient in quantity or irregular in their periods, we must endeavour to reestablish them in their normal condition, or if there be much constitutional irritation from teething the gums must be lanced. Should the disease occur in a full-blooded individual, who is otherwise healthy, without any very obvious cause, it must be

treated by mild antiphlogistic measures, the patient being freely purged with hydragogue cathartics, and all stimulating or indigestible articles of food, together with wine, beer, or spirits, being carefully abstained from.

In some obstinate cases which resist the means above mentioned, the sulphureous waters, either natural, such as those of Harrowgate, or artificial, produced by the solution of sulphuret of potassium, may be employed with success, appearing to exert a peculiar specific action upon the disease which it is difficult to explain.

The pruritus and tingling, which are in some cases very great, may more effectually be allayed by the exhibition of small doses of the diluted nitric or muriatic acids, and by the external use of a lotion containing the oxide of zinc or hydrocyanic acid, than by any other means.

However obstinate and intractable this disease may appear to be, it will rarely, if ever, be found necessary to employ the more powerful remedies, such as the preparations of arsenic and the tincture of cantharides, which are of such essential service in chronic eczema of other parts of the body, as it will generally yield to the judicious employment of the means above indicated; and such being the case, it is certainly wiser not to have recourse to remedies, the incautious or long-continued use of which may be productive of permanently injurious effects.

Eczema of the ears is to be treated in the same way as when affecting the scalp; if, however, the meatus auditorius externus be blocked up by the swelling, it may be necessary to introduce a tent of prepared sponge in order to prevent its complete closure. If the edges of the eyelids be at the same time chronically inflamed, they should be well fomented, and a little of the ung. hydrargyri nitratis diluted with four times its weight of ung. ceræ albæ, applied every night.

ECZEMA FURFURACEA is characterized by a number of thin scales, which vary very considerably in size, and are either moist, adhering to the hairs, or dry and loose, according to the presence or absence of an ichorous fluid.

Symptoms. This disease presents considerable variety of appearance, according to its extent and intensity. When slight and of but trivial extent, it appears in the form of a few thin scales of a yellowish-white or yellowish-gray colour, which are the remains of vesicles that have either shrunk without effusing their contents, or else have contained such a minute quantity of thin serum, that when it has dried up it has been insufficient to form a scab. These scales are sometimes placed upon the summits of small papillæ, the tops of which occasionally present a black appearance, in conse-

quence of the drying of a minute quantity of blood that has been effused by the patient scratching himself. When the disease assumes this slight form, it would scarcely merit the attention of a medical man were it not frequently the forerunner of a more serious attack.

The more severe forms of the disease are usually preceded by a considerable degree of pruritus, with some tension and heat about the scalp; the epidermis then appears to separate itself into detached scales, which are often loosened by the patient scratching himself; after which a few small vesicles arise, from which a thin, serous, but rather glutinous fluid exudes, forming the scales into masses, and agglutinating them and the hairs together. These masses of scales and hair give a soft, yielding sensation to the finger when they are pressed upon, and if they be removed, we shall find the cutis underneath to be exposed and inflamed.

These scales vary in colour from nearly a pure white to an ash-gray, yellowish-gray, yellowish-brown, and brown, presenting, when of the latter hue, a very close resemblance to bran. The depth of colour depends more upon the quantity of fluid with which they are impregnated than on any other cause, as the same scales which are dark when moist, become light coloured when dry.

This disease may be confined to patches on the scalp, or it may extend over the whole of the head,

and even down upon the forehead; when extensive and of old standing, the head evolves a disagreeable cheese-like odour. The hairs are never lost, but occasionally become thinner and lighter in colour. As the disease declines, the discharge dries up, and the scales fall off, separating in large quantities when the patient shakes or scratches his head, so that it is impossible for him to keep his clothes free from them, the pruritus ceases, the scalp gradually assuming its natural appearance.

ECZEMA AMIANTACEA. This disease, which is a frequent consequence of the preceding one, is characterized by a mass of white, pearly scales, of different sizes, which adhere to and surround the roots of the hairs, matting them into locks, and giving to the head a white, striated, glistening appearance, which makes it resemble sufficiently closely dirty coarse amianthus or asbestus.

The symptoms of this disease vary according as to whether it comes on after an attack of the preceding affection, or whether it occurs in an acute form, presenting from the very onset its asbestiform appearance.

In the former case, the scales of eczema furfuracea gradually become more numerous, and are collected into thicker masses, which by drying on the surface present that peculiar gray, pearly appearance which is so characteristic of the disease,

the deeper layers however retaining their soft, glutinous feel. In the mass which is thus formed by an agglomeration of hairs, of serous discharge, and of scales, the individual hairs cannot be discerned, as they are collected into bundles, which may again be subdivided into smaller ones, but which it is impossible to resolve into the separate hairs that compose them. When these locks are cut off, and the scales removed by poulticing, the scalp will be seen to be of a vivid red, and to pour out the serous discharge that binds the hairs together.

Sometimes, but very rarely, this disease assumes an acute form, no instance of which, however, has ever fallen under my observation; but Alibert and Mahon describe it as being preceded by considerable constitutional disturbance for two or three days, after which the scalp throbs, and becomes hot, swollen, red, and exquisitely tender; a number of vesicles then make their appearance, which soon give way and allow a serous fluid to escape, which rapidly dries. The inflammatory symptoms, which are evidently those of an acute attack of eczema, gradually subside, and a less active disease is established in the scalp, which assumes those characters of eczema amiantacea that have been given above.

Nature. Eczema furfuracea and eczema amiantacea are diseases essentially of the same nature,

differing rather in degree than in kind; this is proved by the readiness with which the former passes into the latter affection, which in fact appears but to be an exaggerated condition of it. They both consist in an eruption of the vesicles of eczema, the contents of which become mixed up with a number of scales that result from a morbidly increased secretion of the epidermis. Thus it will be seen that these diseases are not purely vesicular, but partake somewhat of a mixed character, being partly squamous as well, the vesicular element however being the preponderating one. It is this mixture of serous exudation with scales of epidermis that gives rise to the very singular appearance which is so characteristic of eczema amiantacea. It is, however, difficult to account for the pearly aspect that this disease presents, except on the supposition that the scales of epidermis undergo some change, which, as is the case in lepra, gives them a white, glistening appearance. Mahon proposes an explanation of the nature of this disease which, in the present state of our knowledge either of the anatomy or pathology of the scalp and its appendages, is scarcely admissible. He considers it to be a prolongation of a membranous investment with which he supposes the sides of the hair-follicles to be lined; this membrane he compares to the pellicle that surrounds the young feathers in birds, but as its existence has not been

demonstrated in a normal condition of the hair-follicles in man, we must hesitate before admitting this theory as to the nature of a disease which seems to be nothing more than the mixture of a number of scales of epidermis, morbidly secreted and somewhat altered in their characters, with a serous fluid.

Causes. Eczema furfuracea occasionally occurs without any very obvious cause, but most frequently it appears to be predisposed to by the occurrence of some other form of eczema, or of impetigo of the scalp, of which in many cases it appears to be a sequela; as if the cutis had not as yet acquired the power of secreting a healthy epidermis, or lost the disposition to form vesicles. It may occur at any age, but is more frequent amongst children and in the earlier years of life than at a more advanced period, although it is by no means rarely met with in adults. Willan states that it is most commonly seen in women, in whom it is apt to make the hair thin and to cause it to lose its colour. It appears in some instances to be hereditary, occurring in children whose parents were the subjects of it. Mahon relates the cases of two women who became affected with this disease during their pregnancy, and in whose children it made its appearance a few days after birth.

There can be but little doubt that moral causes

exercise a considerable influence upon the occurrence of this disease. Mahon gives the particulars of two cases that illustrate this point very strikingly. The first is that of a labouring woman about fifty-five years of age, who had never been subject to any disease of the scalp. On going to the wedding of one of her friends, she fell down a precipice, without however doing herself much bodily injury; but in consequence of the violent fright thereby occasioned, eczema furfuracea made its appearance on her head, covering the whole of the scalp and extending down the forehead to the eyelids. The other case was that of a woman who was attacked by this disease in consequence of falling into the Seine whilst passing across a board to a washing-boat. The mode in which moral causes act upon the economy, in order to produce changes of this description, is very obscure: in all probability it is in a manner somewhat analogous to that which occasions the hair at times to become gray or to fall off, under the influence of the same causes, which however is giving no explanation of a phenomenon that appears to be inexplicable.

As eczema amiantacea seems to be but a higher degree of eczema furfuracea, the causes that give rise to the one no doubt exert a considerable influence on the production of the other, eczema furfuracea being set up when they are less active in

their operation, but when they are more violent and of longer continuance eczema amiantacea is the consequence, the former affection becoming indeed in many instances converted into the latter disease.

Moral causes exert the same influence on the production of eczema amiantacea as they do on that of eczema furfuracea. Mahon relates the case of a Greek, aged thirty-one, who was suddenly attacked by this disease in consequence of the mental emotion excited by the horrors of a massacre in which he saw all his friends put to death, and from which he himself escaped by accident; and also the particulars of a woman who was affected by this disease after having been much alarmed by an insurrection of workmen at Rouen. Both Alibert and Mahon agree that in the majority of cases this complaint arises from violent mental emotion, and that, in those instances in which it does not appear to have these for a cause, it is accompanied by an extraordinary degree of melancholy. The passions of the mind that excite it are usually of a depressing kind, and appear to be more violent in their operation and of longer continuance than those that give rise to eczema furfuracea.

Diagnosis. The only disease with which there is any likelihood of eczema furfuracea being con-

founded is *pityriasis* of the scalp; from this, however, it may be distinguished in its earlier stages by the presence of vesicles, and at a more advanced period, by its scales being glued together by a viscid fluid, and being larger, coarser, and thicker than those that characterize the squamous affection. It is impossible that eczema amiantacea can be mistaken for any other disease, being at once most readily distinguishable by the white striated appearance that the scalp presents.

The duration of these diseases varies from a few weeks to years. When eczema furfuracea commences in infancy, it usually disappears about the period of puberty, but it may continue after that time of life; when this is the case it assumes a very obstinate character. Eczema amiantacea is always a very chronic complaint, and one that is with difficulty influenced by any mode of treatment.

Treatment. The chief indication to be fulfilled in the treatment of these very rebellious affections, is to change, if possible, the vitality of the skin, and to endeavour to induce it to assume a new and more healthy action. For this purpose, stimulating lotions and ointments should be employed, such as a lotion composed of the sulphuret of potassium, of the sulphate of copper, or of the nitrate of silver; the latter especially, in the proportion of a scruple or half a

drachm to the ounce of water, pencilled over the scalp, every second day, will be found to be of service, as it stimulates the skin very powerfully, exciting it to a healthier kind of inflammation. Ointments composed of the bichloride of mercury, or of the nitrate of the same metal, may be employed with a similar view, although not with the same advantage as the lotions. Dr. Willan recommends, on the authority of Dr. Hamilton, the *cocculus indicus* as an external application, in the form of ointment: of this I have had no experience. These diseases will be found, under any mode of treatment, to be exceedingly rebellious and difficult of cure, frequently persisting for a great length of time under the most judiciously directed means, and appearing at length to have ceased spontaneously rather than to have yielded to art.

HERPES.

Two species of herpes only, viz., herpes circinnatus and herpes zoster, ever affect the scalp, and these are but rarely met with in this region. The chief importance therefore that attaches to this disease is its diagnosis from those other affections that may occur on this part of the body.

By herpes is understood an acute non-contagious disease, characterized by an eruption of vesicles

which are grouped upon an inflamed base in distinct circumscribed patches, having intervals of healthy skin between them. It is in general a trifling affection, and usually arises without any very evident cause. Its appearance is in most cases preceded by some slight symptoms of constitutional disturbance, such as a loss of appetite, depression of spirits, and some feverishness. The treatment required is invariably rational and simple.

HERPES CIRCINNATUS. This disease, which is the "ringworm" of the public, if not of medical men, is of very common occurrence about the face, neck, shoulders, arms, and chest of fair children, and of females with thin, delicate skins; it occasionally also shows itself upon the scalp, but not so frequently as upon other parts of the body.

It is characterized by circular patches of various sizes, the circumference of which is inflamed and covered by groups of small vesicles, which are succeeded by thin yellowish or brownish scales; the centre of the patch appearing to be either perfectly healthy or somewhat scurfy.

Symptoms. The appearance of the vesicles in this disease is preceded by an inflammatory blush which assumes a perfectly circular or oval form, and is usually from half an inch to an inch, or even two inches, in diameter. It is accompanied by a con-

siderable degree of itching and tingling. The redness, which is most vivid at the circumference, gradually fades towards the centre of the ring, where, if it be a very large one, the skin may preserve its natural colour. A number of small, clear, pellucid spherical vesicles, about half the size of millet seeds, then make their appearance on the circumference, but never in the centre, of the patch; their contents, which are at first perfectly transparent, soon assume a turbid and opaque appearance, and about the third or fourth day are in general effused, forming small, thin, yellowish-brown scales. In some cases, however, the vesicles do not give way, the fluid being reabsorbed. About the tenth or twelfth day the scales fall off, and the disease declines, the cuticle of the part affected presenting for some time a wrinkled appearance, and always exfoliating in the form of small branny scales. This is the usual course of a single ring of herpes circinnatus; in some instances, however, the disease goes on spreading, new crops of vesicles being formed on the circumference of the patch, which thus gradually extends itself, or else new rings may form in succession, thus keeping up the disease for some length of time.

Causes. This disease is not contagious, nor is it communicable by inoculation. Its causes are for the most part exceedingly obscure, appearing to

depend upon some constitutional derangement of the nature of which we are not cognizant. Dr. Copland supposes it to be connected with a morbid condition of the digestive canal; this is no doubt occasionally the case, but we should do wrong in attributing every instance of the disease to a deranged state of the digestive organs. It most frequently occurs in children and young females, more especially in those who have a fine delicate skin, in whom there may be often noticed one or more herpetic rings on the neck or cheek. It appears occasionally to be caused by cold, or rather the sudden transition from a heated to a colder atmosphere.

Diagnosis. It is of some importance to be able to distinguish this disease at once and unequivocally, as by doing so we shall often be able to quiet the alarm that its presence in families is apt to excite, on account of its reputed contagiousness, by assuring the friends of the patient that there is no ground for any fear on this account.

This disease then may be distinguished from all other affections of the scalp by the circular or oval figure that its patches assume, and by the vesicles being placed exclusively on the circumference of the ring, leaving the centre free. These characters will prevent its being confounded with *eczema*, which disease never appears in patches of an oval or circular form.

From *favus*, the true ringworm of the scalp, there can be no difficulty in distinguishing this disease at a glance. For although they both assume a circular form, yet herpes circinnatus is a vesicular disease, with thin small scales, and without any tendency to occasion a permanent loss of hair; whilst favus, on the other hand, is a tubercular affection, with yellowish-gray crusts, and is usually attended or followed by a permanent destruction of the hair-bulbs, being altogether a much more severe disease. Its vesicular characters are sufficient to prevent its being mistaken for any of the *impetiginous* affections of the scalp. *Lepra*, in its decline, might at first be confounded with it, but this is a squamous disease, and moreover, seldom, if ever, occurs in single patches, so that any doubt that might arise from the appearance of one circle, might easily be cleared up by seeing others in different stages on other parts of the body.

Prognosis. Herpes circinnatus is a very trifling affection, and one that is never attended by permanent loss of hair, or bad consequences. Its duration seldom exceeds three or four weeks.

Treatment. Very mild and simple means usually suffice for the cure of this disease. Alkaline lotions, or those of the sulphate of zinc, in the proportion of two grains to the ounce of water, are usually all

that will be required. If it be however a little more obstinate, a slight cauterization with the nitrate of silver will in general succeed in curing it. Constitutional treatment, beyond a simple saline aperient, is seldom necessary.

HERPES ZOSTER. Herpes zoster is very rarely seen on the hairy scalp, and it is merely mentioned here as a disease that has occasionally been found to occur in this region. Bergius, Franck, Cazenave, and Rayer have each published cases of this description. The following, which is transcribed from Rayer, will be found to illustrate perfectly the symptoms of this disease:

"A. B., ætat. 47, on the the 27th of October 1827, felt a severe smarting pain in the left eye and eyebrow, which soon spread to the forehead and cranium of the same side, without extending downwards to the face. Twelve hours after the commencement of the pain, vesicles, disposed in clusters, began to appear on the eyelids of the affected side, which were closed, and from between which a serous fluid kept distilling. Next day the left side of the forehead and head generally, as far as the lambdoidal suture, was covered with small clusters of vesicles similar to those on the eyelids, some of which passed the median line to touch upon the opposite side. On the 30th, the small clusters scattered over the forehead and hairy

scalp presented the following appearances: the vesicles that had been formed most recently were not larger than the head of a pin, and contained a very transparent and limpid yellow fluid, others were primarily of a larger size, or had become so by the fusion of several smaller ones; lastly, those that had been earliest evolved were completely dried up, and covered by a small black scab, set as it were within the substances of the skin around. All the remaining clusters dried up, as they do after their development on other parts of the body."

The diagnosis of a case like this can present no difficulties: the acuteness of the attack, the occurrence of the vesicles in clusters seated on an inflamed base, and their restriction to one side of the body, being sufficient to mark it. The occurrence of herpes zoster on one side of the body only, and its abrupt termination at the median line, can, I think, only be explained on the supposition that the nerves of the region affected exert a direct influence upon the disease. In support of this opinion it will be found that herpes zoster always follows the course of the nerves of the part on which it occurs; thus, when it is seated on the trunk, it almost invariably curves downwards and forwards in the very direction of the intercostal nerves, and several cases have fallen under my observation in which it has occurred in the precise course of the sciatic nerve. This view of the nature of the disease

is strengthened, when we take into consideration the severe neuralgic pain that is so commonly left on its disappearance, and which clearly indicates some local morbid condition of the functions of the nerves. Its abrupt cessation at the median line also resembles what takes place in some nervous diseases, as hemicrania for instance. On taking all these circumstances into consideration, it is, I think, impossible not to come to the conclusion that herpes zoster is essentially connected with some local derangement of the nerves of the part affected.

The treatment required is very simple : a mild saline laxative, with Plummer's pill, and a warm lead lotion with some laudanum in it, to allay the pain, being all that would be requisite.

CHAPTER III.

PUSTULAR DISEASES.

The only pustular disease that commonly affects the scalp is Impetigo. Favus, the *porrigo lupinosa* and *porrigo scutulata* of Willan, is also arranged under this head by most writers, but for reasons to be hereafter given, I have thought that it could with more propriety be considered as belonging to a different order.

A pustule may be defined to be a small circumscribed tumour, formed by an effusion of pus upon, or within, the cutis and under the cuticle, which it raises up.

Two distinct forms of pustule occur in impetigo, viz. the *psydracia* and the *achores*.

The psydracium is a pustule that is usually small and irregularly circumscribed, without much inflammation about the base, terminating in scabs that vary considerably in size and figure. It characterizes impetigo sparsa.

The achores are larger, more superficial and confluent, with a more extensive inflammation about the base; when they give way, yellow or brown-coloured scabs result, which however are not so thick or so dark as those that characterize the psydracia. This form of pustule occurs in impetigo eczematosa and impetigo granulata.

As only one affection of the scalp, Impetigo, is included in the Pustulæ, it would be a useless repetition were the symptoms, causes, diagnosis, and treatment of this class of diseases to be now given, as they must necessarily be again referred to when that disease is described.

IMPETIGO.

Impetigo is, on account of the frequency of its occurrence, one of the most important of the diseases that are met with on the scalp, and its study is peculiarly interesting, as it will be found that, not even excepting eczema, it more commonly occurs on this part of the body than any other affection.

It is characterized by an eruption of psydracious or achorous pustules, the contents of which are in the course of from two to four days effused, giving rise to thick scabs usually of an irregular figure and of a yellowish-green or yellowish-brown colour.

Impetigo of the scalp comprises three species, viz. impetigo sparsa (the *porrigo favosa* of Willan); impetigo granulata (the *tinea* or *porrigo granulata*); and impetigo eczematosa (the *porrigo* or *impetigo larvalis*): the first being characterized by *psydracious*, the last two by *achorous* pustules, and differing besides from one another in some very important respects that will be mentioned when these affections are treated of individually.

Impetigo sparsa. This disease is characterized by an eruption of psydracious pustules scattered irregularly over the scalp and surrounded by an inflamed areola, forming, when they give way, large, thick, honey-like scabs, of a yellowish-brown colour.

Symptoms. The appearance of pustules in this disease is preceded by an erythematous blush and by a considerable degree of tingling and itching, which is sometimes very intense and distressing to the patient. After the lapse of a few hours a number of elevated points appear on the inflamed skin; these, which are at first very smooth and shining, soon become converted into pustules, which may be either scattered singly upon the scalp or distributed here and there in small groups. These pustules vary considerably in size, from that of a millet-seed to a split-pea, partaking in the

latter case of the characters of phlyzacia; but in general they are small, and appear seated in the structure of the cutis, and not upon it; they are usually most numerous about the posterior part of the head and vertex. The itching and tingling are but little if at all diminished on their evolution, in fact, in some cases, they appear to be increased, and the erythematous blush that preceded them continues of the same intensity as before.

In from forty-eight to sixty hours after their formation, these pustules give way and shed their contents upon the surface of the scalp, where, concreting rapidly, they form thick, irregular scabs, of a yellowish-green or yellowish-brown colour, semi-transparent, and having a varnished, glistening surface, which causes them to resemble very closely masses of impure gum-arabic or of dried honey. As the oozing of pus continues, these scabs increase in thickness and gradually acquire a rounded, mamillated, or stalactitical form. They are adherent to the scalp, and are usually traversed by several hairs that have been entangled in them. After a time they crack, becoming dry and friable at the edges, where they assume a light yellowish-gray colour and an opaque appearance, and gradually crumble away. By the continuance of the discharge and the rapid concretion of the effused fluid, large masses of them soon form, which,

uniting together, give rise to continuous incrustations, around which, pustules may frequently be observed in all the stages of their progress.

The inflammation surrounding the pustules sometimes extends more deeply, giving rise to effusions of serum into the subcutaneous cellular tissue, which occasionally go on to the formation of circumscribed abscess. In consequence of the irritation in the scalp, the cervical and occipital lymphatic glands frequently enlarge, becoming inflamed, and sometimes, though rarely even in unhealthy subjects, suppurating. There is a gland behind each mastoid process that very commonly becomes affected in this, as in many other diseases of the scalp. If the patient be uncleanly in his habits, the head will be found to exhale a very disagreeable sour smell, and to swarm with pediculi.

In most cases the constitutional disturbance that either precedes or accompanies this disease is but trifling, unless when it affects other regions of the body as well as the scalp.

When impetigo sparsa is on the decline, the formation of pustules ceases, the scabs already formed separate in an irregular manner, and are either not reproduced at all, or if so, not to the same extent as before. The surface, that is exposed by their falling off, will be seen to be red and shining, deprived more or less of hair, and covered by

a thin glistening cuticle, which soon, however, becomes thicker and stronger. Any baldness that may be left by this disease is only temporary, the hair reappearing, with its former vigour, as soon as the affection ceases.

Diagnosis. In its earlier stages, impetigo sparsa may be distinguished from *eczema* and *herpes* by the presence of psydracious pustules; and, at a more advanced period, by the characters of the scabs, which, instead of being thin, light coloured, opaque, and lamellated, are thick, semi-transparent, of a brownish colour, and have rather a glistening surface.

From *favus* the diagnosis is also easy: the elementary form of impetigo sparsa being a psydracious pustule, surrounded by a slightly inflamed areola, whilst that of favus is a small, dry, cup-shaped tubercle without any inflammation. In a more advanced stage, the scabs of the former disease will be found to present the characters that have been given above, whilst the crusts of the latter affection are dry, round, of a bright yellow or yellowish-gray colour, invariably depressed in the centre, and appearing to be seated in the skin and not upon it; being also in favus confertus arranged in a circular form. The sequelæ of the diseases likewise differ, the baldness being, if it occur at all, temporary in the one, but permanent in the other.

IMPETIGO GRANULATA is characterized by the presence of scabs, of a yellowish-gray, yellowish-brown, or brown colour, some of which are firmly adherent to the scalp, giving it a rough feel, whilst others, of an irregular size and shape, are attached to the hairs upon which they appear to be strung These scabs, which are dry, and of a hardness sometimes almost approaching to that of stone, are the produce of achorous pustules, which are usually scattered in an irregular manner upon the scalp.

Symptoms. After some itching and redness of the part about to be affected, impetigo granulata makes its appearance by the eruption of a number of small, isolated, achorous pustules, of a light yellow colour, which are usually scattered irregularly upon the surface of the scalp, and not congregated in clusters; each pustule being traversed by one or two hairs. The fluid contained in them is not thick and glutinous, but, on the contrary, is rather thin and light coloured, drying with great rapidity; in these respects it differs very materially from the discharge of impetigo sparsa, which is thick and viscid, solidifying very slowly, and having all the characters of laudable pus. By its desiccation it gives rise to irregularly shaped, hard scabs, each of which is traversed by a hair: these, which are at first small, give a rough and rugged feel to the part of the scalp affected, but they quickly increase in

size by the additions they receive from below. When once formed, they soon become detached, and are lifted off the scalp by the growth of the hairs which pass through them, and to which they are firmly adherent, appearing as it were strung upon them; they then dry, and sometimes become excessively hard, like grains of sand. The same process taking place again and again, each hair will be found to have several small scabs fixed upon it, at intervals of a line or two from one another. The colour of these scabs, which is a dirty grayish-white, passing into yellowish-gray and grayish-brown, has caused them to be compared, not inaptly, to pieces of old mortar, or of dirtied plaster; some of them also resemble, very closely, dried crumbs of bread. They are very irregular in their shape, but usually approach to a round or square figure.

The hair sometimes becomes light coloured, coarse, and woolly, on the affected parts; as the bulbs however are not implicated, this change is not permanent.

The odour that is exhaled from the heads of those labouring under this disease, and who neglect personal cleanliness, is disgusting in the extreme, resembling somewhat rancid grease, but having besides a peculiar nauseating smell, which it is impossible to describe. Pediculi also swarm to an amazing extent amongst and around the scabs, and in fact constitute a remarkable feature in the disease, as

their numbers can scarcely be accounted for merely by want of cleanliness in the patient, but seems to be in some way connected with the causes of this form of impetigo.

Diagnosis. In a well-marked case of impetigo granulata, the diagnosis would present but few difficulties, the appearance of the small, rugged, irregular scabs, some adherent to the hairs and others to the scalp, and their dirty gray or brownish colour, being sufficient to distinguish it from all other affections.

In its earlier stages it bears a close resemblance to, and is indeed almost identical with, *impetigo sparsa,* in which disease, however, the fluid effused is thicker, more viscid, and of a richer yellow than that which is the product of impetigo granulata; the scabs are also in larger masses, of a darker colour, and not so dry and hard as in the latter affection.

From *eczema* this disease differs in the first place in its elementary characters, the former being a vesicular, the latter a pustular, affection; at a more advanced period it would be difficult to confound the irregular, hard, dirty gray or brownish scales of impetigo granulata with the larger, thinner, and lighter-coloured crusts of eczema, which usually present somewhat of a lamellated form.

From *favus dispersus* it may readily be distinguished by the sulphur-yellow colour, circular form,

and depressed centre of the crusts of that disease; but there is more danger of confounding it with *favus confertus*, from which, indeed, its diagnosis is at times by no means easy. It may, however, be effected with a little care, if it be borne in mind that impetigo granulata is a pustular affection attended by a considerable degree of inflammation, and by the effusion of a purulent fluid in its earlier stages, which is never the case with favus confertus; and that at a later period the affected patches do not assume that circular outline, or its scales the dry, cupped shape that characterize those of the latter disease. Favus also is contagious, and is frequently followed by permanent baldness.

Impetigo Eczematosa. This disease is characterized by an eruption of achorous pustules on the scalp, forehead, temples, or cheeks, followed, on the effusion and drying of their contents, by scabs of a yellowish-green, yellowish-brown, or brown colour, which are usually thin and lamellated, though sometimes rugged and thick.

Symptoms. The evolution of pustules in this form of impetigo is preceded by considerable tension, redness, and swelling of the part about to become their seat, the patient at the same time experiencing a violent itching and tingling in it, which, in some instances, amount to positive pain,

causing him to tear the scalp violently with his nails. A number of achorous pustules, of a yellowish-white colour, and closely set together, then make their appearance; they are usually intermixed with a few vesicles, the contents of which however soon become opalescent and milky, and, in the course of twenty-four hours, purulent; but some of them occasionally remain unchanged until they are either ruptured by the patient scratching himself, or give way naturally. The eruption may occur in any part of the scalp, but its seat of election appears most frequently to be about the fore part of the head and temples.

The fluid that is effused on the rupture of these pustules is thick, viscid, and of a yellow or yellowish-green colour, very tenacious, glueing the hair together into masses, which have a soft, moist appearance, as they do not dry perfectly. When the pustules have once given way, small deep depressions are left, from which a viscid, semitransparent secretion continues to ooze, without, however, the evolution of any fresh eruption; sometimes when this is very abundant it appears amongst the hairs in the form of drops, somewhat resembling impure honey.

Scabs are first formed on those parts of the head that are not covered by hair, as the forehead and temples, whence they may gradually extend themselves over the whole of the scalp or a great part of

the face. These which are, in their earlier stages, thin and somewhat lamellar, soon acquire, from the constant additions they receive from the discharge that drains from a number of points, a thick and rugged appearance, and being of a yellow or yellowish-brown colour, semitransparent and shining on the surface, they resemble, sufficiently closely, dried honey, or pieces of yellow wax. If the patient be neglectful of personal cleanliness, pediculi will, as in impetigo granulata, rapidly form, although not to the same extent as in that disease. The hair is never permanently lost in this affection, although if the scabs be allowed to remain for any great length of time upon the head, they may, by their pressure, excite some inflammation in the hair-bulbs, which may induce a temporary and partial baldness, that will cease, however, as soon as the disease is cured.

Abscesses frequently form in the subcutaneous cellular tissue of the scalp, in consequence of the extension of the inflammation; they are usually small and circumscribed, but seldom disperse without being opened. The lymphatic glands in the neck and under the angle of the jaw, also frequently enlarge and become indurated, but very rarely advance to suppuration, except in scrofulous unhealthy children, in whom this termination occasionally occurs.

The pruritus attending this disease is greater

than that which occurs in any other affection of the scalp, children being exceedingly distressed and irritated by it, rolling and rubbing their heads against the pillow, or the nurse's shoulder, in order to obtain some relief to their sufferings.

When the child is very young, impetigo eczematosa is frequently not so severe as has been described above, but consists merely in a number of small yellowish-white pustules, scattered irregularly over the forehead, temples, and scalp, which form, when ruptured, small thin yellowish-gray scabs.

At the same time that the scalp is attacked by this disease, the ears, forehead, and face are in general more or less affected by it; and it is to this form of it that the names of impetigo larvalis or of crusta lactea have been more especially applied: the first, because the features are *masked,* as it were, by scabs, and the other, because it has been supposed to arise in children from some defect in the quality of the nurse's milk.

When impetigo eczematosa occurs on the face, it commences with an erythematous blush, which is soon followed by some swelling and induration of the skin and subcutaneous cellular tissue, and is accompanied by considerable tingling and itching about the forehead and cheeks. A number of small pustules and of vesicles, which very quickly assume a pustular character, then make their appearance, and if they be not torn by the nails of

the patient, usually give way about the third or fourth day after their formation. The viscid yellow-coloured fluid that is contained within them is then effused, and quickly drying, forms crusts, which are at first rather thin and lamellar, but which, by the continual additions they receive, soon become thick and irregular in shape. These scabs, which are semitransparent and soft, are usually of a yellowish-green colour, passing into yellowish-gray and brown. Fresh crops of pustules then succeed to the first, forming another layer of scabs, and extending the disease, which, if attention be not paid to it, will soon spread over the greater part of the face and forehead, enveloping the features in a case of scabs, from which however the nose and eyelids are always free. The itching continues, and is frequently accompanied by a considerable degree of pain, for whenever the child laughs or cries, cracks and fissures form in the skin. When the scabs have been removed from the face by means of emollient poultices, a raw, inflamed surface will be exposed, on which a considerable quantity of fluid is poured forth from a number of openings; this discharge, according to its degree of viscidity, concretes more or less quickly into scabs, which soon cover the exposed surface and protect it from the action of the air.

The scabs that form around the mouth are usually

of a dark brown colour, being tinged by the admixture of a small quantity of blood that exudes from the cracks that take place in the skin whenever the lips are moved. Occasionally the inflammation extends into the nares, giving rise to a profuse flow of mucus and to a considerable swelling and thickening of the membrane of the nose. In like manner, when the forehead and cheeks are affected, conjunctivitis frequently occurs. Psorophthalmia is also a common consequence of this disease.

When impetigo eczematosa is on the decline, the pustules will be found to form less frequently; the discharge diminishes in quantity and becomes thinner, the scabs gradually fall off, leaving in their site a very thin, delicate cuticle, which is a long time before it loses its pink colour, and which then usually becomes covered with some small scales of epidermis that give it a rough, coarse appearance; but however violent the inflammation may have been, however thick the scabs and profuse the discharge, there will be no permanent cicatrices left, except such as may have been produced in consequence of the patient scratching himself.

The constitutional disturbance that occurs in this disease is usually trifling, amounting in the majority of instances merely to a little feverishness. In some cases, however, that have been allowed to become very chronic, the irritation that is kept up reduces the patient's health very considerably, inducing a

state approaching to hectic; but this is of rare occurrence.

Diagnosis. From *impetigo sparsa* this disease may be distinguished in its earlier stages by the different character of its pustules, which are of the achorous and not of the psydracious kind, by their being clustered together, and not scattered irregularly and singly upon the scalp, and by the intermixture of a few vesicles which are usually pretty distinct. The scabs in impetigo eczematosa will likewise be found to be thinner, more laminated, and not so dark-coloured or rugged as those of impetigo sparsa, partaking in fact in some degree of the characters of those of eczema. The discharge also is more copious, and the tingling and itching greater.

It is exceedingly difficult to distinguish impetigo eczematosa in its earlier stages from *impetigo granulata,* as the character of the pustule is the same in both diseases, the only difference being the occurrence of a few vesicles in impetigo eczematosa, which is not the case in the other affection. At a more advanced period the diagnosis presents fewer difficulties, the thin, soft, laminated, yellowish-gray or yellowish-brown semitransparent scabs of impetigo eczematosa being easily distinguishable from the small, dirty gray or brownish irregular incrustations of impetigo granulata.

Eczema can scarcely be confounded with this disease in its earlier stages, the one having a vesicle, the other a pustule, for its elementary character; at a more advanced period the thin, laminated, light-coloured scabs of the former will be found to differ remarkably from the thicker, darker, and richer-looking ones of the latter affection.

The distinctive characters between impetigo eczematosa and *favus* are very broadly marked; the inflammation of the scalp, the pustular element, the laminated yellowish-brown moist scabs of the one, being distinguishable at a glance from the circular, dry, cup-shaped crusts of the other.

Causes of impetigo of the scalp. Local actions seem to exert little or no influence on the production of impetigo of the scalp, although irritation in a variety of forms may excite it in other parts of the body. None of the species of this disease are contagious, and although it may occur at the same time in several children in the same family, yet this is probably merely from their having been exposed to the same general or constitutional causes, whatever they may be, and not from any propagation of it by contact.

Age exercises considerable influence not only upon the occurrence of impetigo of the scalp generally, but upon the particular form that the disease

may assume. Thus, although all the species of this affection are most common in the earlier years of life, yet impetigo eczematosa is more generally met with before the second or third year than at any subsequent period, whilst impetigo granulata and impetigo sparsa almost always occur after that age, namely, between the fourth and the seventh or eighth years, but rarely later than this. It will thus be seen that the periods, at which this disease most commonly occurs, are those of the first and second dentition, the irritation of which no doubt predisposes to it at these particular ages.

The influence of temperament and of habit of body upon the species of impetigo of the scalp that is likely to occur is very marked. Thus impetigo eczematosa and impetigo sparsa are most commonly met with in children of a lymphatic, lymphatico-sanguine, or sanguine temperament, who are frequently remarkable for their beauty, and otherwise healthy appearance, having thin, delicate, fair skins, light hair, blue or gray eyes, and a ruddy complexion; whilst impetigo granulata, on the contrary, is most frequently seen in subjects of a melancholic or melancholico-nervous temperament, with dark complexion, hair, and eyes, and of a spare conformation.

Cases of impetigo of the scalp are more numerous during the warm season of the year than at

any other period, occasionally getting well during the winter months to break out afresh on the return of spring or summer; when once however they have become very chronic, they do not seem any longer to be influenced by season.

Although misery and the bad quality or deficient quantity of the food may in some instances predispose to this affection, yet in the majority of cases it does not seem to be produced by any of these causes. This is more especially the case with impetigo eczematosa, which, although it may sometimes no doubt be seen in weakly, ill-fed children, yet most generally occurs in those who are to all appearance in perfect health, and who have good food in abundance. Indeed there can be little doubt that it more frequently arises from a very opposite cause, being, in many instances, excited by that system of over-feeding children which is so common and so much to be deprecated, more especially during teething, when there is already a tendency to excitement in the habit. It is a popular opinion that this disease is in many cases owing to some morbid matter taken in with the milk; this is supposed more especially to be the case if the child be suckled by a wet-nurse. Whether it has any foundation or not I do not know; but it would be interesting, for those who have the opportunity, to compare the proportionate number of cases that

occur in children who suckle their mothers, and in those that receive their nourishment from wet-nurses.

The occurrence of other eruptive diseases, such as measles, small-pox, and scarlatina, seem sometimes to predispose to this affection; but we meet with many cases of impetigo of the scalp with the precise cause of which we are unacquainted, and which, like eczema, probably depend upon some constitutional derangement the nature of which is not at present understood.

Prognosis. Although impetigo of the scalp is attended by considerable inconvenience and annoyance to the patient, yet it can scarcely ever be said to be a dangerous disease: in fact it has been looked upon by many as an affection that was rather to be coveted than avoided. Underwood says, that he never saw a child much loaded with *crusta lactea*, impetigo eczematosa, that did not cut its teeth well and that was not healthy. If, however, it occur in a scrofulous or debilitated subject, it may set up considerable constitutional disturbance by the constant irritation and discharge attending it.

In its duration it may vary from weeks to months, and even years, impetigo granulata being by far its most rebellious form. When it has once occurred it is very liable to relapses from trivial

causes. No cicatrices or permanent baldness are ever left by it.

Treatment. When this disease assumes a mild form and occurs in very young children, it becomes a question whether we should not rather leave it to nature, attending merely to cleanliness and making use of such simple palliatives as may be necessary to lessen irritation, than employ any very active means for its cure. This more particularly applies to impetigo eczematosa, on the appearance and during the continuance of which affection we often see that the general health of the patient, if it be not much benefited, at all events does not in any way suffer; whilst if the disease be suddenly checked, the child will become low-spirited, feverish, and irritable, evidently suffering in health and spirits. Billard states, that he has always found that those children, who were allowed to get well of this affection slowly and naturally, had a fine clear complexion and were remarkable for their healthy appearance, and that, on the contrary, the sudden cure of it was very frequently attended by evident derangement of the health of the child, who, whilst the disease was upon him, was lively and in good spirits, but as soon as it got well became melancholy and morose. In mild cases then of impetigo of the scalp occurring in young children, the safer

plan will be merely to foment the part affected several times a day, or, as Cazenave and Schedel recommend, to let the nurse sprinkle some of her own milk upon it, contenting ourselves with the occasional administration of a few grains of rhubarb and magnesia.

When, however, it is more severe, occurring in an older child, and is attended by more general constitutional disturbance, we must adopt a more active plan of treatment.

The first thing to be done is to remove the hair, which, as in eczema, may be accomplished more easily and with less irritation by means of a pair of curved blunt-pointed scissors than with a razor. A large emollient warm bread and water poultice may then be applied, so as to lessen the irritation, subdue the inflammation, and soften and remove any scabs that may have formed. For the same purpose emollient fomentations of poppy-heads, of quince-seeds, or of bran, may be advantageously employed.

If there be much inflammation attending this disease in its earlier stages, and especially if the face be at the same time affected, recourse may be had, except in the case of very young children, to local bloodletting. For this purpose, four, six, or eight leeches, according to the severity of the disease and the age of the patient, may be applied behind the ears or below the angle of the jaw. It

will never be necessary to employ general bleeding, leeches sufficing for every case.

If the child be cutting its teeth, the gums must be lanced, in order to remove all cause of irritation in that quarter. In this stage, which is a purely inflammatory one, all stimulating applications, whether in the form of ointment or of lotion, must be strictly avoided, as they will, to a certainty, increase the severity of the complaint.

The general treatment required at this period is simple and rational, consisting chiefly in the administration of saline laxatives, and mild aperients, such as the sulphate of magnesia, tartrate of potass, or sulphate of soda, with rhubarb or jalap in combination occasionally with a few grains of hydrarg. cum cretâ or of calomel. If the child be still suckling, and there is reason to believe that the disease is connected with the quality of the nurse's milk, it should be weaned or the nurse changed.

In the acute stage of impetigo of the scalp all specific remedies are perfectly useless, and indeed are frequently positively injurious, and it cannot be impressed too strongly that the only mode of treatment, whether topical or general, that is likely to benefit the patient is one conducted upon mild antiphlogistic principles.

When the acute stage has passed, and the disease has assumed more of a chronic character, it becomes necessary to have recourse to means calcu-

lated to alter the vitality of the skin, and to set up a new and healthier action in the part affected. In order that this may be properly accomplished, and that the action of the topical remedies may be insured, it will be necessary to clear the scalp thoroughly of all scabs, so that there may be no obstacle to their direct application to the diseased surface.

It is at this period that sulphureous lotions are of such essential service. The sulphuret of potassium in the proportion of from one to three drachms to a pint of water, applied four or five times a day, will be found most useful in giving a more healthy tone to the diseased cutis, being, without doubt, the most serviceable of all the remedies that are employed in the treatment of the chronic form of this disease, more particularly of impetigo granulata. At the same time that this lotion is applied externally, the sulphureous waters, either natural, as those of Harrowgate, or artificial, may be administered internally with good effect.

Ioduretted sulphureous lotions have been recommended by Alibert in those cases of impetigo of the scalp that occur in scrofulous subjects; as I have had no experience in their employment, I cannot vouch for their good effects.

Lotions of alum, of the sulphates of copper, or of zinc, of the nitrate of silver, or of the bichloride of mercury, have been employed with the view of

stimulating the skin to a healthier action, but, in this respect, they are all much inferior to that of the sulphuret of potassium.

There is but little occasion for the use of ointments in cases of impetigo of the scalp, as, in the majority of cases, every good purpose can be served by lotions. In some instances however the ointment of the nitrate of mercury, or of the peroxide of the same metal, may be employed with advantage when a stronger stimulus than usual is required.

Setons, and counter-irritation by means of blisters, are never necessary for the prevention of bad consequences to internal organs on the cure of impetigo of the scalp, and are indeed often productive of more harm than good, as they are very apt to set up such a degree of irritation in the skin of the part to which they are applied as to give rise to another attack of the disease.

If the itching be very violent, it may most effectually be allayed by a lotion consisting of the oxide of zinc suspended in rose water, to which a few drops of hydrocyanic acid have been added.

During the administration of these topical means, the bowels must be kept gently acted upon by mild purgatives, and all extraneous causes of irritation must be removed.

The diluted nitric or nitromuriatic acids in doses of from two drachms to half an ounce in the course

of the day, will be found of much service in the treatment of this disease, being more especially of use in allaying the pruritus. They may be given in barley water or gruel, or in the form of a sherbet, with sugar or some agreeable syrup, as that of orange-peel. If during their employment the digestive organs, as often happens, should become disordered, they must be discontinued for a few days, when their use may in general be resumed.

The diet of patients labouring under impetigo of the scalp should be as mild and unirritating as possible, spirits, wines, malt liquor, and coffee, being strictly interdicted. Children should even be debarred the use of meat, and be confined entirely to a milk diet, with as much bland farinaceous food as possible.

I have never met with any cases of impetigo of the scalp that did not yield to the judicious employment of the above plan of treatment, or that necessitated the use of arsenical preparations, or of those remedies that are usually looked upon as *specifics* in the treatment of the diseases of the skin.

CHAPTER IV.

FAVUS.

This genus includes two species, the *favus dispersus* (porrigo lupinosa) and the *favus confertus* (porrigo scutulata), which, although agreeing with one another in most of their characters, yet differ in several very important respects.

Favus is characterized by an eruption of small tubercles, followed by crusts, the form of which is very remarkable and peculiar. These tubercles are small round bodies, at first exceedingly minute, but after a time attaining a larger size by the continual addition of favous matter, until they may acquire a diameter of half an inch or more; but of whatever size they may become, they will invariably be found to preserve their circular outline more or less perfectly, and to present, from the very first, a distinct depression in the centre, which is always traversed by a hair: their colour varies from sulphur-yellow to yellowish-gray and yellowish-white, and they are perfectly dry. The crusts that characterize this

disease are only tubercles of a larger growth, presenting the same marked appearance that they do when smaller and less fully developed.

Favus usually occurs on those parts of the body where the skin is thickest and the hair most abundant, its most common seat being the scalp, whence it may extend to the nape of the neck, the temples, back, trunk, and extremities. It occasionally, though very rarely, is met with on the trunk or extremities alone, without having made its appearance on the head; but when this happens it is generally, if not always, from direct contagion. Of this I saw an instance about three years ago in Paris at the Hôpital St. Louis, in a patient under the care of Cazenave, in whom the disease occurred on the back of the left shoulder only.

Favus dispersus is of more frequent occurrence than favus confertus. Both these affections may occur at any age, and in either sex, but they are most common in young subjects. Their duration appears to be almost indefinite; for if left to nature, they would not wear themselves out until after the destruction of the hair-bulbs, thus entailing a permanent baldness upon the patient.

As favus is a contagious disease, its diagnosis is highly important, and deserves to be especially attended to, it being necessary to separate children affected by it from their companions. Besides being frequently propagated in this way, it may

arise spontaneously in consequence of neglect of cleanliness, or from misery and destitution; hence it is most generally met with amongst the lower classes, seldom occurring in children of the higher orders except from direct contagion. It attacks in preference those of an unhealthy or scrofulous habit, in whom alone it occurs spontaneously, never being seen in healthy subjects unless when communicated by the contact of one already labouring under the disease.

The *seat* of favus has been a fertile field for discussion amongst writers on the diseases of the skin, and owing to the minuteness of the parts concerned and the imperfect way in which their anatomy has, until lately, been described, considerable confusion has crept into most of the attempts made to determine it.

Duncan supposed that the bulb of the hair was the seat of this disease; Underwood imagined that it was seated in the "small glands at the roots of the hairs," probably meaning thereby the sebaceous glands. This opinion coincides with that of Sauvages and of Murray, both of whom looked upon the sebaceous glands as the true seat of favus. More lately Mahon has revived this theory; he has dwelt upon it at great length, and has brought forward many ingenious arguments to its support. He however seems to have had some confused notions

about the anatomy of the parts concerned, as he evidently looks upon the sebaceous glands and the hair-follicles as being identical; for he says that every hair passes obliquely out of the orifice of the gland or follicle, and that occasionally two hairs pass through the same opening. He supposes that in consequence of a degree of inflammation taking place at the orifice of the follicle, the sebaceous matter is either prevented from escaping, or else, losing its natural fluidity, it cannot be poured out; the secretion of it, however, continuing, and all outlet being prevented, the walls of the follicle become distended and a small tumour forms, which must, from its seat, necessarily be circular, and which presents the characteristic central depression that is nothing more than the orifice of the follicle made apparent. The follicle giving way in consequence of its overdistension, the favous matter is effused upon the scalp, where it gradually increases in quantity by successive additions from below; this goes on until the destruction of the hair-bulb is completed, when the follicle and its contents being totally destroyed, the disease wears itself out and disappears. Mahon considers favous matter to be merely an altered state of the sebaceous secretion.

According to Gallot, favus is seated in the "reticular tissue" of the scalp, which, he says, is an interlacement of small vessels containing different fluids, and ramifying on the surface of the chorion.

Cooke looks upon the secreting capsule of the hair as the seat of this disease, but his description of it is very confused.

Baudelocque (I quote from Rayer, as I have not been able to procure the journal in which his observations are contained) supposes, from the frequency of the occurrence of favus in those parts of the body where hair abounds, especially the scalp, and from the presence of hairs in each crust, that this disease has its seat in the "piliferous bulbs." The favous matter, according to him, is poured out into the cavity of the follicle; this it gradually distends, and then extends into its neck, whence, however, it is prevented from escaping by a reflection of the epidermis; it then dries into a scab of a conical form, which, becoming broader by degrees, is changed into a cylindrical body and then into a slightly convex crust, in proportion as the orifice, by being enlarged and everted as it were, approaches to the bottom of the follicle, which it thus converts into a superficial excavation. The neck and orifice of the follicle then increasing in size, the skin surrounding them is pressed back in all directions, becoming slightly thickened. According to this author, the central depression arises:

"1st, from the presence of a central cylindrical nucleus confined by the cuticle, with which it is connected exteriorly in such a way as not to be capable of being elevated.

"2d. The forcible distension of the favous secretion in the space around the central nucleus, the sides of the follicle, and the epidermis.

"Lastly. A gradual elevation of the detached epidermis, and consequent increase of height in the interval within which the favous fluid is confined."

In order to support this theory, M. Baudelocque has assumed what is by no means proved, and what is contrary to the opinion of most anatomists, namely, that the epidermis, instead of penetrating into the interior of the hair-follicle as far as the bulb, is reflected upon the hair near the orifice of the follicle. Lauth, on the other hand, states that the continuation of the epidermis into the follicle as far as the bulb of the hair is very distinct, and the preparations left by Hunter show, that the internal sheath, which is continuous with the cuticle, lines the follicle as far as the point of attachment of the bulb of the hair.*

Rayer adopts Baudelocque's theory, with the modification that the favous matter is deposited between the hair and that portion of the cuticle reflected into the hair-follicle, and not, as Baudelocque supposed, *under* the cuticle. After a time, however, according to Rayer, it penetrates the cuticle and becomes effused between it and the cutis, around the orifice of the follicle. He says further,

* Müller's Physiology by Baly, vol. i. p. 388.

that from the presence of hairs in these collections, from their seat, their form, and their size, he is induced to believe that the favous matter is deposited in the "dilated cavities of the cuticular conduits of the hairs." At the same time, he says, that the very slender and finely-tapering form of the deep extremities of the deposit leads him to suppose that the greatest quantity of the matter is deposited in the substance of the skin and of the cellular membrane, and is not contained in the proper cavity of the hair-follicle.

I agree fully, in the main, with Rayer, and I think there can be no doubt in the mind of any one who has examined this disease attentively, that the favous matter is deposited *within* the follicle, but *upon* the cuticle lining it. The following is, I think, the correct explanation of the mode of formation of the crust: A drop of favous matter is effused within the follicle; this concretes around the neck of the hair and fixes it firmly to the opposite cuticle, thus blocking up the orifice of the follicle; fresh matter being then poured out, its cavity becomes distended, by which means the cutis surrounding it is pushed back, thus giving rise to those painful sensations that are so common in this disease, and which are no doubt produced by the pressure of the concrete favous matter upon the cutis, and by the traction that it must necessarily, as it increases in quantity, exert upon

the hairs. The first deposit of favus being thus firmly connected to the hair, and all subsequent additions being incorporated with it, the scabs, as they enlarge and rise, as it were, by a gradual increase from below, must draw up the hairs very forcibly, which being thus loosened from the bulb, at length fall off. At the same time the downward pressure that must be exerted upon the bulb causes, if sufficiently long continued, atrophy, and at last ulcerative absorption of this organ, thus giving rise to that incurable baldness which is so common a feature of the disease.

The depression in the crust is produced by a central nucleus of hardened favous matter, which is so firmly connected to the hair as to be incapable of being raised, whilst at the same time it plugs up the orifice of the follicle. The favous secretion being then poured into and detained in the space between the central nucleus, the sides of the follicle, and the portion of the scab that blocks up its orifice, a forcible pressure is exerted upwards and outwards, and thus a crust is formed having its margins more elevated than the centre, which is confined by the hair to the bottom of the follicle, and is thus, as it were, tied down, being prevented from rising with the rest of it until the hair falls out, when the central depression usually becomes more or less effaced; and indeed in favus confertus, in which the hairs fall out very readily and early, it is frequently absent.

It will be seen that the chief difference between this explanation and that proposed by Baudelocque is, that I consider the favous matter to be deposited *upon* the cuticle lining the hair-follicle; whilst he, on the contrary, assumes that the cuticle being reflected from the summit of the follicle upon the hair, the favous matter is effused *beneath* it: an assumption that anatomy does not warrant.

No evidence whatever is brought forward in support of the theory that favus is seated in the hair-bulbs, which appears to be a mere hypothesis. As to the supposition that it is seated in the sebaceous glands, this opinion will be enquired into when the nature of this disease is treated of.

We may, I think, therefore conclude with Rayer that the favous matter is deposited in "the dilated cavities of the cuticular conduits of the hairs;" in other words, *within* the hair-follicles, but *upon* the cuticle lining them.

Nature of favus. Various opinions as to the nature of this disease, as to what favous matter really is, have been entertained at different times and by different persons. By far the greater number of writers on the diseases of the skin, amongst whom I may mention Willan and Bateman, Biett, Rayer, Thomson, Cazenave and Schedel, and Green, look upon it as a pustular disease. Mahon considers it to be a morbid secretion of the sebaceous

follicles; and others, again, suppose it to be of a parasitical nature, resembling certain fungi, or those vegetable productions that appear in some fermented liquids. I hope to be able to show that all these opinions are incorrect, and that the matter of favus is a modification of tubercle, that it is a tubercular disease of the skin. By *tubercular* I do not mean a disease like lupus, characterized by small firm tumours, but one the essential nature of which consists in the deposition of that heterologous formation called *tubercle*.

And first, as to the pustular nature of favus. A pustule may be best defined in the words of Biett, who says that it is a small circumscribed tumour, formed by the effusion of a purulent fluid on the surface of or within the cutis, and raising up the cuticle. Now if this definition be conceded (and it is in substance that which is adopted by all modern writers on the skin), it will be seen that it does not in any way agree with the elementary form of favus; for in this disease the morbid matter is not poured out *between* the cutis and cuticle, or *within* the substance of the former, but it is deposited *upon* the surface of that prolongation of the epidermis which lines the hair-follicle, and it would be effused at once upon the surface of the scalp, were it not confined by the constricted neck of the follicle. It is the tumour that is thus formed by the distended follicle that has been taken for a pustule, and which thus has erroneously been supposed to arise from a

collection of favous matter between the cutis and the cuticle, whereas it is produced by the presence of this matter *upon* the cuticle but *within* the follicle, the walls of which, by confining it, cause it to assume somewhat the appearance of a pustule.

Besides this, there is another character in which this disease differs most remarkably from pustule. The favous tubercle frequently exists for a length of time in the substance of the skin before it arrives at maturity, remaining as it were dormant by the pressure which the fully-formed crusts exert upon it. In the post-mortem examinations of cases of favus it is usually found that in the inner aspect of the scalp there are a number of small, yellowish-white, solid deposits, which are perfectly identical with those that compose the scabs. These deposits are confined and prevented from attaining a larger size, by the pressure of the already existing crust. But when this is removed by poulticing or other means, a number of them will in many cases be seen on the exposed surface, where, by increasing in size and coalescing, they will quickly form a fresh coating of scab.

Now this is never the case with pustular diseases. I am not acquainted with any example of a pustule existing in an undeveloped or dormant state for any length of time, for when it has once formed it runs a certain course, which is always completed in a few days.

But this disease differs from pustule fully as

much in the nature and qualities of the fluid effused as it does in its anatomical characters.

Pus is a homogeneous, yellow fluid, which, although it may quickly dry, and form scabs when exposed to the air, yet, until it is so exposed, will remain fluid—solidifying, in fact, because the watery parts evaporate, leaving the solid residue behind; a true process of desiccation. This, however, is very different from what takes place with favous matter, which, almost from the very first, at all events whilst it is yet contained within the follicle, and before it has been exposed to the air, will be found to have become solid. No doubt it is first deposited in a fluid state, as we cannot suppose a solid to be secreted from the blood-vessels as such; but, I believe, that fluid favous matter has very rarely, if ever been seen, as it solidifies before it leaves the follicle, and appears from the first in a concrete form. It is true that the crusts on a head affected by favus confertus (porrigo scutulata) are often found to be moistened with an ichorous pus; but this, which is merely produced by the irritation set up in the scalp, and is generally secreted from those small ulcers that form in chronic cases of this disease, is entirely distinct from and must not be confounded with true favous matter, which can be best examined in a head affected with favus dispersus (porrigo lupinosa). Favous matter does not therefore, like pus, solidify merely because it is exposed to the air, drying like any other fluid might;

but it appears from its constitution to become solid almost at the moment of its formation, or at all events very shortly after.

In its chemical composition, also, favous differs very materially from purulent matter, as it contains a much larger proportion of earthy salts. The following is its analysis by Thénard:

Phosphate of lime . . .	5
Gelatine	17
Coagulated albumen . .	70
Water and loss . . .	8
	100

Andral states that Schwilgué found pus to be composed of albumen in a peculiar state: extractive and fatty matters, with a small quantity of soda, muriate of soda, phosphate of lime, and water.*

Favus, then, differs from the pustular diseases,

* The following is an analysis of pus by Gueterbock:

1. Water	86·1
2. Fat only soluble in boiling alcohol . .	1·6
3. Matters (fat and osmazome) soluble in cold alcohol	4·3
4. Matter soluble neither in hot nor in cold alcohol (albumen, pyine, pus-corpuscules, and granules)	7·4
Loss	0·6
	100·

The salts in 100 parts of pus amount to 0·8.

(Gerber's General Anatomy by Gulliver, p. 98.)

both in its elementary form and in the qualities of the matter secreted. As to the elementary form, it differs from pustule:

1st. In the favous matter being poured out upon a free surface, and not upon or within the cutis and under the cuticle, as is always the case with the fluid contained in a pustule.

2d. The favous tubercle is frequently chronic, existing in an imperfectly developed state for a length of time; this is never the case with a pustule, which always runs its course in a given time, usually a few days.

Favous matter differs from pus:

1st. In concreting very quickly after it is poured out, even before exposure to the air; whereas pus only dries after exposure, and does not solidify, like favus, in consequence of its composition.

2d. In its chemical constitution; favous matter containing much more earthy salts and coagulated albumen than pus does.

It is more difficult to answer the question as to whether or not favus is a morbid secretion of the sebaceous glands: it is difficult to disprove that it is so, but it is equally difficult to prove the assertion, which rests entirely upon negative evidence. It differs, however, entirely in its chemical composition from the sebaceous fluid, nor is it ever seen in the sebaceous glands, but always makes its first appearance in the hair-follicles; whether the favous matter be secreted by their sides, or is

poured out from the glands into the follicles, is a question that it will be impossible to answer satisfactorily. And in the absence of all proof to the contrary, we may fairly assume that it is thrown out by the lining membrane of the hair-follicles, as it is first seen there; and as it differs so remarkably from the sebaceous secretion in not containing any oily matters, there is little probability of it being merely a modified state of that fluid. No satisfactory evidence, it is certain, can be adduced either directly or from analogy, in favour of the supposition of its being so.

Within the last few years, another theory of the nature of favus, which has already found many supporters, has been propounded; viz., that it is a parasitical growth, analogous to fungi, or to those vegetable productions that form in some fermented liquids. Unger * appears to have been the first to suppose that certain diseases of the skin were analogous to, what he termed, the *Exanthemata* of plants. After him, Schönlein traced a resemblance between the so-called pustules of favus and vegetable fungi.† He was followed by M. Gruby, a

* Unger, Die Exantheme der Pflanzen pathogenetisch und nosorgraphisch dargestellt. Vien, 1833.

† On the Pathology of the different sorts of Impetigo; by Professor Schönlein. Extract from a letter to the editor:

"You are undoubtedly acquainted with the interesting discovery of Bassi, on the true character of *muscardine*." (This is a disease apparently very infectious, which destroys great numbers of silkworms. Vide Ann. des Sciences Naturelles, t. v. p. 314;

Hungarian physician, who read a paper at the Academy of Sciences in Paris,* on the existence of vegetations in favus. According to this observer, these vegetations resemble those that are formed during fermentation, each vegetation appearing like a small snuff-box, and when opened its cavity will be found filled with granules. These vegetations, he says, completely resemble those that are found in some cases of saccharine urine; and he considers them to belong to the group of *Mycodermata.*

M. Prosper Meynier,† likewise, supposes several

Müller's Archiv, Jahresberichte, 1838, p. 75.) "The facts he has discovered appear to me of the highest interest, although I am not aware that any medical observer has thought them worthy his notice. Having obtained a great number of silkworms affected with this disease, I have been able fully to verify the observations of Bassi and Audouin, and have also obtained some further results, which are not devoid of interest. These researches recalled to my recollection my views on the vegetable nature of many sorts of impetigo, which have received a strong confirmation through Unger's interesting researches on vegetable exanthemata. As I was fortunate enough to have at this time some cases of porrigo lupinosa (Willan) in the hospital, I proceeded to investigate them, and my researches left not the slightest doubt on my mind as to the fungous nature of the so-called pustules. With this I send you the microscopical appearance of a portion of a pustule [a plate of which is given]. I have also forwarded you some porrigo pustules, which are readily obtained from the surface of the scalp. I am now occupied with further researches on this subject, which I hope soon to publish." (Müller's Archiv, 1839, p. 82.)

* Gazette Médicale, July 17, 1841.

† Ibid. Aug. 7, 1841.

diseases of the skin and mucous membranes to be owing to a development of cryptogamous plants and lichens, and M. Gibert countenances the opinion of Schönlein as to the identity of favus with vegetable fungi.

This view as to the nature of favus—which is one of great importance to general pathology, and which appears to be intimately connected with the theory of the epizootic origin of tubercles, and of other heterologous formations—requires more positive proof before its correctness can be established; and surely, before adopting an opinion so entirely at variance with all that we know of pathology, as the growth of true vegetations on the human body, we must look for some more definite and satisfactory evidence than mere external resemblance, however great. The chemical composition of favus appears also to be an argument against the supposition of its being a vegetable product, no lichen or fungus being composed of animal gelatine and coagulated albumen.

The question, however, as to what favus really is, remains as yet undecided. It has been shown that it is not a pustular disease, and that proof is wanting of its being either a morbid secretion of the sebaceous glands or a vegetable fungus. What, then, is favus? It will be found, I think, on a closer examination, that there are so many points of resemblance between this disease and tubercle, as

it occurs in other organs, that in fact the essential and distinctive characters of both are the same, that it is difficult not to come to the conclusion that favus is, in reality, a true tubercle of the skin.

It has already been shown, that the seat of favous matter is the lining membrane of the hair-follicles. Tubercle may be deposited in any elementary tissue, although, as Dr. Carswell has fully proved, its seat of election is on the mucous and serous surfaces, including cellular tissue under the latter head. Now the analogy between skin and mucous membrane is very great; the former passes so readily and so constantly into the latter, when it is continued into hollow organs or into any excretory duct, that we may safely conclude that the lining membrane of the hair-follicles partakes in a great measure of the characters of mucous tissue; that the epidermis, on entering them, becomes converted into a species of epithelium; and that therefore, as we find the mucous surface of the bronchi, of the air-cells, of the intestinal glands, so frequently the seat of tubercular deposition, we are justified, by analogy, in supposing that the hair-follicles may be likewise so affected. But even if it be denied that the lining membrane of these follicles partakes of the nature of mucous tissue, still there is no reason why tubercle should not be deposited on the skin, and that this, of all others, should be the only tissue exempt from the disease. So that although the seat of

favus may be no argument in favour of its tubercular nature, yet it does not militate against that supposition.

The manner in which favous matter is deposited resembles most closely that in which tubercle is formed, both being at first, without doubt, eliminated in a fluid state, but solidifying very quickly, either in consequence of the watery parts being absorbed, or from their composition.

The mode of growth, too, is the same in both, being by eccentric deposition, and not by any increase from within.

In form they also resemble one another, tubercle having always a tendency to assume a round or ovoid shape; and this is remarkably the case with favus, which invariably assumes a circular form; in fact this is one of its characteristic distinctions.

The colour of favus resembles that of tubercle, being usually of a yellowish opaque white, with a tinge frequently of gray; even the sulphur-yellow colour, which the crusts of favus dispersus (porrigo lupinosa) occasionally present, has its analogy in tnbercle in other organs, for Lugol states that he has found tubercular deposits of a bright yellow along the course of the larger vessels.

In chemical composition the similarity between tubercle and favus is very great, both being composed of coagulated albumen, gelatine, and earthy salts in considerable quantity, the proportion of the

latter being however somewhat greater in favus than it is in tubercle.

The causes of favus are also such as dispose and give rise to tubercle in other organs; like tubercle, it frequently arises from misery, bad living, and neglect of the non-naturals; and it is particularly liable to occur in persons of a scrofulous habit of body, in fact, those who are most liable to the occurrence of tubercle generally, being never seen in individuals of a healthy constitution, unless when it arises from contagion.

The age at which favus usually manifests itself is also one at which scrofulous or tubercular diseases are peculiarly liable to occur; namely, the end of the first and beginning of the second septenary period of life.

The colour of the cicatrices that are left after the cure of old standing cases of favus, is the same as that which is so universally seen after the cure of a scrofulous ulcer; the skin presenting a peculiar coppery, violet, or purple tinge, which remains for a considerable length of time.

In recapitulation then, tubercle and favus agree in their seat, in the manner of their formation, in their mode of growth, in form, in colour, in chemical composition, in most of the causes that predispose to or excite them, in the age at which they most frequently occur, and in the colour of the cicatrices that are left.

It may, however, be objected that favus is contagious, whereas tubercle is not, or at all events has not been proved to be so; but this, which at first appears to be a very forcible argument against the identity of these diseases, is not so in reality, for we find that the same heterologous formation may be contagious in one instance, and, from some difference in its constitution that we are unable to appreciate, not so in another. Thus no one would think of asserting that the fluid which is contained in the pustules of smallpox, or that is excreted from the urethra in gonorrhea, was not real pus, or of denying its identity with that poured out by the mucous membrane of the bronchi or intestines in some diseases, or from an ulcer of the leg, merely because it possessed, in addition to the properties that it shares in common with these, that of being contagious. So is it with favus, the identity of which disease with tubercle we are not justified in denying, merely because one is contagious and the other not; as this property may, as is the case with pus, be acquired by it in certain diseases from some peculiarity, probably in its ultimate constitution with which we are unacquainted, and which does not alter the physical, although it may affect the vital qualities of the fluid.

It will thus, I think, be seen that the points of resemblance between tubercle as it affects other organs, and favus, are sufficiently strongly marked

to warrant us in concluding that the latter is but a peculiar local variety of the former disease, the distinctive and essential characters being the same, although, from its seat and mode of formation, it may differ in some of the less important respects.

The treatment of favus has always been a favorite subject with empirics; and probably there is no affection for the cure of which a greater number of nostrums and quack remedies have been vaunted than for this. The success attending any plan of treatment, however judiciously it may be conducted, will depend in a great measure upon the circumstances of the case. If the disease occur from contagion in an otherwise healthy individual, it will readily yield to topical remedies; whilst on the contrary, if it arise spontaneously in a broken down constitution, more especially in a scrofulous habit of body, it may, for a length of time, resist the best directed means of cure, both general and local.

FAVUS DISPERSUS.

Characters. This disease is characterized by the eruption of a number of small, circular, distinct tubercles, of a yellow or yellowish-gray colour, each of which is depressed in the centre, and traversed by a hair. These tubercles, by enlarging, form crusts, which resemble them in colour and

shape, always presenting the circular outline and depressed centre. The hair soon falls off the affected parts, and a permanent baldness is left.

Symptoms. As this disease is not preceded by any redness, itching, or tingling of the skin, we do not become aware of its presence until a small circular tubercle, flat, with the exception of a depression in the centre, is formed upon the head. This tubercle, which is of a yellow or yellowish-gray colour, always surrounds the root of a hair, which consequently passes through its centre. It appears as if seated *in* the substance of the skin, and not *upon* it, as it does not at first rise above the level of the cuticle. It is, from its very commencement, perfectly dry, at least I have never seen it in a fluid state, although there can be no doubt that it must be deposited in a fluid form; but it only retains this condition whilst it is as yet within the hair-follicle, and before any symptom has occurred to attract attention to the part.

As the tubercles increase in size scabs form, which preserve in a great measure their peculiar character, being, when isolated and unconfined in their extension, perfectly circular, depressed in the centre, inserted as it were into the cutis, and not placed upon it, as is the case with the scabs of almost all other diseases; of a yellowish-white or yellowish-gray colour, and traversed by a hair—presenting,

indeed, a very close resemblance to those lichens that abound on the bark of some trees. They usually attain, in the course of eight or ten days, a diameter of from three to four lines, rarely exceeding this size. When large, and of old standing, the central depression becomes in a great measure obliterated, and filled up with a whitish-gray dust, the debris of scabs that have crumbled away.

When two or more scabs are situated near one another, they sometimes join together by their free borders, thus losing to a certain degree that circular outline which is so characteristic; but they will always continue to present the rudiments of those circles that they would have formed had they been separate. Those large sized crusts that are occasionally met with, from half an inch to an inch in diameter, are probably formed in this way, by the union of a number of smaller ones, which, by pressing together to a common point, retain their circular outline at the circumference, but become broken up in their centre.

These scabs, whatever superficial size they may attain, do not extend to any great depth, and, when removed carefully by poulticing or otherwise, will be seen to have formed a small depression in the cutis, to which they adhere very strongly, and which will be left raw and deprived of its epidermis. The odour exhaled by a head affected with favus is very peculiar, resembling somewhat that of the

urine of a cat, or the smell left by mice; this is more particularly the case when the crusts have been moistened by poultices, when it is sometimes so disgusting as to be nauseating to the patients themselves. After the disease has existed for some length of time, pediculi usually form in great numbers, which, by the itching they occasion, add greatly to the sufferings of the patient. The sensation that patients affected with this disease complain of in the scalp, is not altogether of an itching or tingling nature, but it is one that appears to be deeply seated, and to relieve themselves of which they will often strike or press their heads forcibly with the hand or against the bed. It is probably occasioned by the pressure which the crusts, as they are extending themselves, exert upon the scalp; for as they are firmly fixed by their sides, and as all additions are made from below, the downward pressure against the scalp must be very great, thus giving rise to this peculiar sensation, which is very loudly complained of, and which appears to be a combination of itching and tearing.

When the scabs are removed by means of poultices, a raw depressed surface will be left, which in most cases becomes very quickly covered again by a fresh incrustation; another evolution of tubercles, that may sometimes be seen ready formed under the old scab, taking place. If, however, no fresh tubercles, and consequently no new scabs are formed,

the skin will be found to recover its natural thickness, and the cuticle to be reproduced with great rapidity. Rayer describes the under surface of the scab that is removed as presenting a nipple-like projection, which corresponds to a small, smooth depression in the centre; and he states that the depression in the upper surface of the scab corresponds to this convexity in its lower aspect, and that, under the larger incrustations of favus, the skin presents a number of small, lenticular, superficial depressions, separated by minute elevations, which correspond to the depressions on the under surface of the crust. Under these depressions the cutis is often reduced very considerably in thickness, and in some old cases becomes softened, and acquires a violet, red, or purple colour.

The portions of scalp that are unaffected by this disease usually present nothing very remarkable, but in some instances they are covered by a number of thin scales of epidermis, somewhat resembling those of pityriasis.

When the disease has been much neglected, and has been allowed to take its own course for years, a chronic inflammation will be set up in the scalp, in consequence of the irritation of the scabs continued for so long a period. This inflammation is frequently communicated to the subcutaneous cellular tissue, giving rise to circumscribed abscess of it; and in some cases, it is said, that the pericra-

nium, and even the cranium itself, have been affected. In consequence, however, of the inflammation that takes place in the scalp, small ulcers frequently form under the scabs, from which a thin ichorous pus or sanies is discharged, that adds very greatly to the noisome character of the disease.

As the seat of this affection is in the hair-follicles, it would naturally be expected that the hairs themselves would suffer very considerably by it, and that, according to the severity and duration of the disease, a permanent baldness, to a greater or less extent, would be the result. We accordingly find that the hair always becomes thin, dry, brittle, and frequently changed in colour, assuming a lighter hue than natural; but that when the disease has not existed sufficiently long to destroy the bulbs, it will acquire its natural appearance and strength on a cure being effected; in some instances, however, the colour will be entirely lost, the hair becoming gray, and remaining so during the remainder of life. When the disease has gone on to the destruction of the bulbs, the hairs are of course never reproduced; the scalp therefore remains smooth, white, shining, and dry, and the part that is thus deprived of hair, will for ever afterwards be free from the disease itself, as with the destruction of the follicle, the seat of the affection, the disease itself must necessarily cease. The baldness varies very considerably in extent, according to the space

that the disease has occupied; thus it may be confined to one spot, or be universal. Occasionally it will be found that in the midst of a bald patch a few hair-bulbs will have escaped destruction, and in this case the hairs produced by them will be coarser and thicker than natural. As the baldness, that is the result of this disease, is produced by a total destruction of the hair-bulbs, and not, as in some other affections, by merely a kind of atony of them, it is incurable; as it would be useless to attempt to regenerate the hairs, when their secreting organs are destroyed.

The lymphatic glands of the neck are always more or less enlarged and indurated in favus dispersus, and frequently suppurate, forming a chain of deep sinuous ulcers, with unhealthy callous margins, which extends along the ramus and under the angle of the jaw, and in the course of the sterno-mastoid muscle. This enlargement of the glands, which is no doubt, in many cases, of a scrofulous nature, may of course occur independently of the disease itself; but, in the majority of instances, it certainly is a consequence of the irritation of the affection of the scalp, and adds greatly to the misery and distress of the patient.

The extent that this disease may occupy varies considerably; it may be confined to a single spot on the head, where it may remain fixed for months,

or it may extend over the whole of the scalp and body.

Although it most frequently makes its appearance on the head, in consequence of the greater number of hair-follicles here than elsewhere, yet it may and does occur on other parts of the body; thus it has been met with on the face, on the nape of the neck, shoulders, extremities, and hands. I saw at the Hôpital St. Louis, in Paris, about three years ago, an interesting case of favus dispersus, affecting the shoulder. In this instance, as in most others where it occurs about the body and extremities, it arose from contagion, the man having carried a child, that was labouring under favus of the head, on his naked shoulder, and thus inoculated himself. It occasionally spreads over the greater part of the body, but of this I never saw an instance. Dr. Carswell, however, has taken a drawing of a person, the whole of whose body was affected by this disease; and Mahon relates the case of a young man, who, having laboured under favus of the head from infancy, became, at the age of seventeen, affected by it over the whole of the body. In these cases of universal favus the nails undergo remarkable changes, becoming very thick, rugged, and branched at the extremities, and assuming a yellowish-brown tinge. This may, perhaps, arise from the matrix becoming inoculated by the patient scratching himself.

There are some parts of the body, such as the armpits and pubes, which, however general the disease may be, never become affected by it. This is the more remarkable, when we consider the analogy that these regions offer to the scalp, from the quantity of hair that grows upon them. The reason of this singular exception is not well understood. Mahon accounts for it, by stating that moisture always destroys the favous principle, and that the constant state of humidity in which these parts are kept by the perspirable matters, preserves their immunity from contagion; however this may be, the fact appears well established, that these regions generally escape.

This disease is not so obstinate when it affects any particular part of the trunk or extremities, as when it occurs on the scalp.

FAVUS CONFERTUS. No essential difference can be established between this species of favus and the one that has just been described; the difference that exists being merely one of form, arrangement, and degree, but not of nature.

This disease is characterized by the appearance of oval or round bald patches, of variable extent, covered, more especially at the circumference, by crusts of a yellowish-gray colour, which present here and there the characteristic circular outline and central depression.

Like favus dispersus, it most commonly attacks the hairy scalp.

Symptoms. Favus confertus appears in the form of red circular patches, studded with a number of small yellow tubercles, which are, as in favus dispersus, depressed in the centre, and implanted as it were in the cutis. These, which are more numerous about the circumference of the patch than in its centre, are soon succeeded by crusts, which, although at first separate, and presenting the characteristic cupped shape, and circular outline, soon become confluent, and lose, to a certain degree, these characters, although they always retain a more or less round or oval form. They are always dry and friable, and at first of a yellowish colour, but this soon becomes grayish-yellow, and at last a dirty grayish-white, causing them to resemble, as Rayer justly observes, the crumbling mortar of a wall that is going to decay from age and moisture. When these scabs fall off, or are separated by poulticing, the skin under them will be seen to be red and shining, and fresh tubercles being speedily developed, a new succession of crusts takes place.

Favus confertus may spread in two ways. Either by the patches gradually extending their circumference by fresh evolutions of tubercles, which are succeeded by scabs, or else by new patches being formed, either by the patient, in scratching himself,

inoculating other follicles with the favous matter, or else by the debris of the old scabs falling upon new places, and thus giving rise to a fresh eruption of the disease.

The hair is very extensively affected in this disease; it may be observed, from the very commencement, to be thin, weak, and dry; either falling out upon the least traction being exerted, or else breaking off at a short distance from the scalp, showing that the bulbs are more or less implicated. As the disease continues, the part attacked becomes perfectly bald and devoid of hair; which baldness is very apt to be permanent, as it is owing to a total destruction of the hair-bulbs.

The clusters of this disease, increasing in size and number, soon unite by their margins, thus giving rise to large irregular patches, which sometimes occupy the whole of the vertex and fore-part of the scalp, usually leaving, however, as Willan observes, a border of hair round the head, unimpaired. When it has acquired this extent, the patient presents a remarkable appearance, the head being covered with a thick coating, as it were, of a dirty yellowish-gray or whitish plaster, which has entirely lost the cupped shape of the individual crusts, only retaining round its borders remains of its circular outline, in the form of segments of circles, of a greater or less extent, which are usually well marked, and have a bold, sweeping appear-

ance. When the scabs fall off, the subjacent cutis will, at some points, be seen to be red, shining, and inflamed, whilst at others there will be bald, naked patches left, the hairs having been destroyed never to be reproduced.

In severe and chronic cases of the disease, the crusts will appear to be of a dirty white or grayish colour, friable, breaking readily into powder, with cracks and fissures in different directions, through which a thin, ichorous, fetid pus is exhaled, which is, however, perfectly distinct from favous matter, and is merely the produce of the inflamed skin. What little hair may still remain on the head will be thin, light-coloured, and woolly. It is in such cases as these that the odour is so noisome and disgusting, so much so indeed as to give rise occasionally, according to Mahon, to vomiting in the patients themselves, and that pediculi swarm in such immense numbers around and under the crusts.

Those who are affected by the disease to this extent will always be found to be decrepit, miserable, scrofulous-looking subjects, some of whom appear to have made but one step from youth into old age. The glands in the neck usually enlarge, and frequently suppurate, giving rise to extensive, unhealthy, scrofulous ulcers, with thin, blue, undermined edges, in which no process of reparation goes on. There are also most generally signs of

tubercles in other parts of the body, and according to Bayle, the mesenteric glands frequently become diseased. Chronic scrofulous ophthalmia and psor-ophthalmia are common complications of this disease, and the nails frequently present those appearances that have been already described as occurring in favus dispersus.

Causes. Favus is the only true and real contagious disease of the scalp; for although eczema may in some instances appear to be communicated by contact, yet, even if this take place, it is under the operation of several peculiar circumstances of the precise nature of which we are ignorant, but the simultaneous occurrence of which seems to be essential for this result to be effected.

Although Alibert denied the contagious nature of this disease, there can be not the least doubt that it is one that is very frequently and very readily communicated by contact; and examples of its inoculation even are not wanting. Of this Mahon relates a remarkable instance in the person of his brother-in-law, who, whilst making a drawing of a case of favus, allowed some of the debris of the crusts to fall upon the little finger of the left hand, where, after some pruritus and an erythematous blush, an eruption of some small yellow tubercles, presenting the characteristic central depression and circular form, made their appearance

on the eighteenth or twentieth day; these being destroyed, others again soon formed. The same author relates another instance, in which he purposely inoculated a patient labouring under a severe chronic eczema of the scalp with the matter of favus, which produced the characteristic eruption. These cases, and others of a similar kind that might be related, prove satisfactorily that this disease is inoculable, and that the reason why so many have failed in their endeavours to transmit it by this means has been, that proper precautions have not been taken in the experiments that have been instituted for this purpose. Two modes have usually been put in practice, some attempting to transmit it by applying a poultice to the head of a person affected with this disease, and then, after it has remained on a sufficient length of time, placing it in contact with the scalp of a healthy child. But this method has usually failed in procuring the transmission, as the moisture, and perhaps the acid matters, contained in the bread or linseed of which the poultices are composed, have in all probability diluted or decomposed the favous matter, and thus prevented its application in such a form as to ensure inoculation. Another plan has been to inoculate the discharge, that is sometimes seen on a favous head, upon a healthy scalp by means of a lancet; but this means of transmission has not been attended with better success than the

former one, as the discharge is not true favous matter, but merely an adventitious ichorous secretion set up by the irritation of the scabs. Those who take any interest in this matter may be referred to the works of Mahon and of Gallot, who have taken the trouble to collect many instances illustrative of the contagious nature of favus. The former author states that, owing to its ready transmission by contact, this disease is held sufficient cause for exemption from military duty in France.

Contagion is then one of the commonest sources of this disease, and indeed the only one when it occurs in healthy subjects. The use of the same comb, brush, towel, or hat, which is so common amongst children, seem to propagate it in schools and in other large establishments. Willan states that he has seen one boy infect, in the course of a month, fifty others in the same school. It is only when the disease occurs in this way that it is of frequent occurrence, being otherwise but rarely met with in this country.

Mahon supposes favus to be not only contagious, but also infectious, being communicable by means of the atmosphere when many persons affected by it are assembled together ; but it is so evident that it is quite possible, under these circumstances, that the favous matter may be communicated in substance, that little reliance can be placed on this opinion.

As the hair must naturally form the chief obstacle to the ready application of the favous matter to the scalp, and its easy communication by contact, we should expect that those who have thin hair must be more liable to be affected by this disease than those who have a thick and bushy head of hair; and this is said to be generally the case.

Age exerts a considerable influence upon the occurrence of this disease, and not only upon its frequency but also upon its seat. It is most commonly met with about the end of the first and the beginning of the second septenary period of life, the ages of seven, eight, and nine appearing to be peculiarly liable to it, and it is at these ages that it is most frequently seen upon the scalp. In after-life and in old age it is very rarely met with, and, when it does occur, most generally affects the extremities or trunk, and arises from direct contagion; for as the hair-follicles have in a great measure, in advanced age, ceased to perform their functions, they are less liable than at an earlier period to be attacked by this disease.

It is supposed by Mahon that this affection may be congenital, the child being in some, though very rare instances born with the seeds of the disease upon him, which manifests itself two or three days after birth; this opinion, however, requires confirmation.

The hereditary nature of favus, or rather of that habit of body that peculiarly disposes to it, is, like that of many other cutaneous affections, established beyond a doubt, numerous examples occurring of children being affected whose parents, when young, had laboured under it. In some families, indeed, it appears to have been hereditary for many generations.

The season of the year does not exert so much influence upon it as it does on many other diseases of the scalp. Perhaps it is more liable to be communicated in summer than at any other period, the follicles being then open and a greater activity prevailing in the scalp as well as in the cutaneous system generally.

Boys appear to be rather more subject to this disease than girls; but this may be accounted for by their being more frequently exposed to its contagion by wearing one another's caps at schools.

Favus never arises spontaneously in healthy individuals, but only in those that are disposed to its occurrence by being exposed to the depressing causes of disease, more especially if of a scrofulous habit of body. Misery, filth, and want of cleanliness about the head favour very greatly the origin and propagation of this affection; hence it is so much more frequent amongst the children of the poorer than amongst those of the richer classes, in whom it is but comparatively rarely seen except as

the consequence of contagion. Poverty or want of food, a residence in damp, unhealthy situations, and neglect of the non-naturals, seem of themselves to be sufficient to give rise to this disease in particular constitutions; hence it is most common in the inhabitants of prisons or workhouses and amongst the lower classes, in whom these causes are in constant operation.

The scrofulous diathesis is a common predisposing cause of favus. In all those cases in which it occurs spontaneously, it does so in persons of a strumous temperament; in those, in fact, who are disposed to the occurrence of tubercle in other parts of the body. Most of the children affected by it will have evident marks of this disposition about them, presenting the pale, pasty complexion, thick lips and nose, light hair and eyes, that mark one form of it, or the dark, sallow skin, dark, coarse hair, and gray eyes, that indicate the other, it being very rarely seen in those of a sanguine or nervous temperament, and when it does occur in them it is always from direct contagion, and not from any spontaneous evolution of the favous tubercle. It also occasionally attacks scrofulous children, in consequence of the state of debility that frequently supervenes on the cure of some severe diseases, such as measles, scarlatina, smallpox, or fever.

The causes, then, that have been given predispose to or excite its occurrence generally; but be-

sides these, there are particular parts of the body that are, by their anatomical structure, more disposed to it than other regions. For, as it is a disease of the hair-follicles, it must necessarily occur with the greatest frequency on the parts where these organs are the most numerous; and this, with the exception of the axillæ and pubes, will be found to be the case. Hence it is most frequently met with upon the scalp, where the hair-follicles abound, and it is never seen on such parts as are destitute of them; the palms of the hands and soles of the feet, for instance. And for the same reason, in old age it occurs more commonly upon the extremities than upon the scalp, where the follicles are then closed and do not perform their functions properly.

Diagnosis. It will be better, in order to avoid all unnecessary repetition, to give the diagnosis of the two varieties of favus, the *dispersus* and *confertus*, from the other diseases of the scalp, under one head; for as there is no essential difference between them, but one rather of extent and of degree, than of kind, the same remarks will, in a great measure, apply to both.

There is no disease of the scalp the diagnosis of which is more important, or more readily effected, in the majority of cases, than that of favus; it being distinguished from all others by its small yellow

tubercles, by its circular, dry, cup-shaped crusts, by the baldness that it occasions, and by its contagious nature.

Favus dispersus, and favus confertus, present precisely the same elementary characters, but they differ in the mode in which their tubercles are arranged; being, in the former, scattered singly here and there upon the surface of the scalp, and not affecting any regular form; whereas in the latter, they are grouped together in clusters, which always assume a circular or oval figure.

The crusts also present very different appearances in the two diseases. In favus dispersus they will be found, in most instances, to be of a light sulphur-yellow colour, of a regular form, with a well-marked, central, cup-shaped depression, which is usually traversed by one or more hairs; and when agglomerated together, they do not present the sweeping circular outline that is so marked in favus confertus, but the mass appears rather, at its circumference, to be made up of segments of small circles. In favus confertus, on the other hand, the crusts will in general be found to be much larger, and of a dirty yellowish-white or gray, instead of a sulphur colour. The central depression will also, in many cases, be obliterated, appearing to be filled up by a quantity of a whitish-gray powder, the debris of the scabs, causing them to resemble dirty plaster, or the mortar of old walls that has been

broken down. The patches of this disease, also, will never fail to present a regular circular outline, which character is always present, however much the others may be changed.

From *eczema*, and its varieties, there can be but little difficulty in distinguishing favus. The vesicular element, the thin, lamellated, irregular-shaped, moist scabs of the former disease having no analogy with the small depressed tubercles, and the dry circular or cup-shaped crusts of the latter affection. The loss of hair, also, which is so marked a character of favus, is not seen at all, or at all events not to any great extent in *eczema*.

With some forms of *impetigo* there is more likelihood of confounding favus, more especially favus confertus.

In the earlier stages, the small, dry, circular, depressed tubercle of favus may be readily distinguished from the fully distended pustules of *impetigo sparsa*, in which the pus usually remains liquid for some days, and when effused, concretes in the form of large irregular scabs, which are rather moist, and have a glazed appearance. Besides, in *impetigo*, the cupped centre, the circular outline, and the baldness which is so common an accompaniment of favus, is wanting. These characters will also serve to establish the diagnosis between *impetigo eczematosa* and favus.

It is somewhat more difficult to distinguish favus from *impetigo granulata,* more especially when that disease has assumed a chronic character. When, however, it is borne in mind that the elementary form of this species of impetigo is a distinct pustule with an inflamed base, remaining as such for several days before any scabs are formed,—whereas that of favus is a small, dry, yellow tubercle, set, as it were, in the cutis and not upon it, depressed in the centre, and traversed by a hair, with no inflammatory areola about it,—the diagnosis will be much simplified. In the more advanced stages of *impetigo granulata,* it will be found that the scabs are of an irregular shape, usually somewhat square; that they are strung upon the hairs, being lifted off the surface of the scalp by their growth, and never present, in any masses that they may form, the regular circular outline and the other characters that have been already several times given as distinctive of favus. Besides, it may be remarked that when the scabs of *impetigo* fall off, they are usually reproduced, not by an evolution of the elementary pustule, but by the drying of the seropurulent secretion: this is never the case with favus, any fresh crust of which is always preceded by the formation of a new tubercle. *Impetigo* is moreover attended by a considerable secretion, which gives the scalp a moist appearance, whilst favus is always a dry disease, not being attended

by any discharge, except such as may be produced, in old cases, by ulceration taking place under the crusts, in consequence of the pressure exerted by them. Favus also is contagious, and causes the permanent loss of the hair; besides this, it rarely is seen anywhere except on the scalp, whereas *impetigo* frequently affects the trunk, extremities, or face at the same time that it attacks the head. Thus it is by an assemblage of characters, rather than by any one sign, that these two diseases may be readily distinguished from each other, which it is the more important to do, as a totally different plan of treatment will be called for, according as the one or the other comes under our care.

From *herpes* the diagnosis is easy, the progress of this disease, its vesicular origin, and the character of its scabs, being sufficient to establish it at once.

It is said that *lepra* of the scalp has been mistaken for favus. It is difficult to conceive how such an error could have been fallen into, the two diseases presenting such opposite characters, and more especially as *lepra* rarely occurs on the scalp without making its appearance on other parts of the body at the same time, where its diagnosis could be attended with no difficulty whatever.

In conclusion, I may state with confidence, that any one who will take the trouble to bear in mind the characters of favus, and who has ever seen a

well-marked case of this disease, can be in no danger of mistaking it for any other affection of the scalp; and, that the confusion that has arisen in the diagnosis of this affection has had its origin in the unfortunate tendency that has existed, for so long a time, of arranging it with others, from which it differs in every respect, under one generic term, and from not classifying it according to its natural characters or elementary form.

Prognosis. There are three circumstances to be taken into consideration in the prognosis of this complaint, viz. its duration, the effect it has upon the hair, and the influence it may exercise in retarding the development of the intellectual faculties of the patient.

The prognosis, as far as the duration of the disease is concerned, depends upon whether it occur in a healthy individual from direct contagion, or whether it arise spontaneously in a scrofulous subject from constitutional causes; being in the former instance very readily cured by topical means, but in the latter case often resisting, for a great length of time, the best and most judiciously-directed efforts.

Favus has always a tendency, when left to itself, to proceed to the destruction of the hair-bulbs, and hence to produce permanent incurable baldness; this is more especially the case with favus disper-

sus, the loss of hair attendant upon which form of the disease is usually more complete than that which is a consequence of favus confertus. When the hair is not entirely destroyed, it usually becomes woolly and altered in its colour.

As this disease exerts no specific influence in retarding the development of the intellectual faculties, there is, as far as they are concerned, no cause for alarm, provided the child be properly instructed, and have not its feelings blunted by a continual course of harsh usage and by an expression of that loathing and contempt which this complaint is apt to excite. If children labouring under favus enjoyed the same advantages of instruction as those who are free from it, they would, without doubt, be found to be fully as capable of profiting by them. But parents and friends, instead of treating it with that pity which it calls for, are too apt to neglect a child afflicted with so loathsome a disease, and then to attribute the bad consequences that result to a deficiency in its mental powers, rather than to the little care that has been bestowed on its education.

Treatment. There is probably no disease in the whole range of medicine for the cure of which so many different modes of treatment have been employed, and such a variety of *specific* remedies vaunted, as for favus. And this can readily be accounted for when we reflect on the obscurity

that has hung over its diagnosis, and on the extreme obstinacy with which, when once fully established, it resists almost every plan of treatment that is adopted for its cure.

The treatment of favus may with advantage be divided into a *local* and a *general* one, in both of which there are several rational indications to be fulfilled.

The *local treatment* presents three indications, viz.:

1st. To clear the scalp of all scabs and crusts, and to attend scrupulously to cleanliness.

2d. To remove the hair from the diseased follicle.

3d. To set up a new action in the part affected.

The first indication is readily fulfilled by the application of poultices continued for two or three days, or by means of lotions containing the diluted hydrochloric acid in the proportion of an ounce to the pint of water, after the hair has been cut short. Either of these means will suffice for the object in view, but the poultices are preferable, as they are always most convenient in their application and most speedy in their action. If, however, the crusts be very thick, they may first of all be loosened by the acid lotion, which acts by dissolving out their earthy parts, and then be separated by means of a large, thick, and soft bread or linseed-meal poultice, which will effectually clear the scalp.

In the course of the treatment, cleanliness must be attended to by washing the head at least once a day with soap and water.

The second indication to be fulfilled in the treatment of favus, is the removal of the hair from the diseased follicle, and unless this be accomplished it will be in vain that we attempt a cure; for, as Rayer has justly observed, this is as essential in the treatment of favus as is the removal of the nail in certain varieties of onychia; and almost every plan of treatment that has been recommended has had this for one of its chief objects.

To effect this purpose a pitch cap or plaster used formerly to be employed, by which means the hairs were forcibly torn up by the roots. Fortunately this horrible barbarity, which was a disgrace to medicine, has now no advocate, although it was the common practice even at the commencement of the present century. The mode in which the cap was prepared and applied was as follows: A quantity of rye-flour was boiled in white-wine vinegar, to which Burgundy pitch and resin were gradually added until the mass became sufficiently consistent; it was then spread upon a thick, strong cloth, slit in different directions so that it might be made to fit the head more closely and without creasing. The scabs were then removed by means of poultices and emollient fomentations, and the hair having been shaved off, the plaster was applied as tightly and as closely to the head as possible.

After it had remained on for about four days, it was forcibly pulled off in a direction contrary to the growth of the hairs, so as to tear them out by their roots; this process was repeated every fourth day during the treatment. The pain, which was said to become less severe each time, was still so violent after a month of this treatment that children who were subjected to it uttered dreadful screams, and often voided their excrements involuntarily, so intense was the suffering. Gallot states that "after the third month the pain lessens," and that it matters not what species of tinea it is, as the cap is a specific for all of them. No patient was, however, cured in less than six months; some, says he, required nine or ten months of assiduous treatment; some are not cured till the second year, and those cases that are obstinate not till the third; in some even the disease persists after three years of treatment, and although it is then sometimes liable to relapses, yet these yield as readily as the first attack does. Mahon relates a case in which, after the pitch cap had been employed without success for ten years, his plan of treatment succeeded in six months. It is needless to make any comment upon these statements, but it is surprising that such a method, belonging as it did to the darkest ages of medicine, could have survived until the early part of this century.

For the same purpose, viz. the extraction of the

hairs, Plumbe invented a pair of pincers, by which these organs and their bulbs could be removed. This was certainly a less cruel procedure than the former one, but it must nevertheless have inflicted very great suffering upon those subjected to it. The length of time, also, that it required, to accomplish its object fully, was very objectionable; and besides, if the disease were extensive, it would be impossible to effect a complete extirpation of all the diseased hair without removing much of that which was healthy. Neither the cap or pincers, however, are any longer necessary, as by the proper use of mild depilatories, all the effects, of which they were capable, can be produced with certainty and without pain.

Various corrosive substances have been at different times, by the older writers especially, recommended as depilatories; but it is to the Messrs. Mahon that the credit is due of having first extensively employed milder and not less efficacious means for this purpose. In consequence of the success attending their method, which is attested by Rayer and others, it has been adopted very generally in the French hospitals, the enormous number of 39,719 cases of disease of the scalp, of which a large proportion was favus, having been treated by these gentlemen in the course of one and twenty years.

They begin their treatment by cutting the hair at a distance of two inches from the scalp; the

scabs are then removed by means of emollient applications and of poultices, and the skin freed from all impurities by means of soap and water. After this has been repeated for several days in succession, an ointment composed of lard and a depilatory powder, the composition of which is kept secret, is rubbed in every second day on the parts that are affected. A fine comb is then passed through the hair on the days on which this preparation is not used, and thus the hair is got rid of gradually and slowly, but without pain. After this plan has been continued for a few weeks, a small quantity of the powder is scattered through the hair, and the combing proceeded with. This is persevered in, according to the severity of the disease, for a longer or a shorter period, and has been found to succeed when every other mode of treatment has failed. It causes no pain, is devoid of danger, and does not prevent the hair from growing, provided the bulbs have not been destroyed. The composition of the ointment and powder is kept a secret, but according to Chevalier, who has analysed them, they consist of slaked lime partly carbonated, of a little silica, alumina, and oxide of iron (probably impurities in the lime), and of subcarbonate of potass; their activity evidently depending upon the lime and subcarbonate of potass they contain. The chief causes of the success of this treatment seem to consist in the removal of the hair by gentle means, and by the continued attention to cleanli-

ness which is enjoined, aided, no doubt, by the peculiar action which the salts of potass appear to exert upon the scalp.

For the ointment* of Mahon we may substitute one composed of ʒj of carbonate of potass to ℥j of lard, or else a lotion containing ʒij to ʒiij of the same salt to ℥vj of water, either of which, if used in the way recommended by Mahon, will be found to act as mild and sure depilatories.

For the fulfilment of the third indication, namely, that of setting up a new action in the affected part, a vast number of topical applications have been recommended by most of the writers on the diseases of the skin; almost every medicinal substance, indeed, whether mineral or vegetable, of any activity whatever, having found an advocate. The very fact, however, of such a variety of formulæ having been propounded for this purpose, shows how imperfectly the treatment of this disease was understood, and how very inefficiently it must have been conducted. Amongst the substances that have been employed, may be mentioned decoctions of

* M. Petel recommends the subjoined ointment and powder:

Soda (of commerce)	60 parts
Slaked lime	4
Lard	120

Mix together for the ointment.

Quicklime	120 parts
Powdered charcoal	8

Mix for the powder.

lentils, poppy-heads, marsh-mallows, bran, barley, dulcamara, hemlock, fumitory, white lilies, mulberry leaves, briony, plantain, myrtle, rose leaves, and of the leaves and husks of the walnut; burnt paper, oil, honey, alkaline lees, lime-water, the acids, muriatic and nitric acids, either concentrated or diluted, creosote, ink, charcoal, oxide of manganese, chalk, sulphur, nitre, the salts of iron, of copper, of silver, of mercury, of zinc, the preparations of potass, the sulphuret of potassium, alum, and the iodides, have all found their advocates. Of all the preparations in this list, which might be extended very considerably, none are of much value as external applications in this disease, except the iodide of sulphur, the sulphuret of potassium, and the carbonate of potass.

The iodide of sulphur,* which was introduced to the notice of the profession by M. Biett, is, without doubt, a topical application of very great power, appearing, when combined with other means, to set up a new action in the diseased scalp, which shortly puts a stop to the evolution of fresh favi. It should be employed in the proportion of ten grains, or a scruple, to the ounce of lard. If the ointment be of a greater strength than this, it will be very apt to give rise to an eczematous affection of the scalp, by irritating it too powerfully; it may be used twice a day. Active as this preparation undoubtedly is, it

* It has lately been strongly recommended by Dr. Davidson, in the Edinburgh Medical and Surgical Journal.

occasionally fails, especially in chronic cases of the disease occurring in a scrofulous subject. Biett, nevertheless, speaks very favorably of its use, and I have been very successful in curing several cases of this disease with it. Instances of a like kind have also been lately published in the journals.

The sulphuret of potassium, in the form of lotion, is especially of service in removing that scurfy condition of the scalp that is left after the removal of the scabs.

Lotions of the carbonate of potass are also most useful, as they possess the double advantage of removing the hairs from the diseased follicles, at the same time that they excite the vessels of the scalp to a new and a more healthful action.

When favus occurs on the extremities or trunk, in the form of a few small tubercles only, it may most effectually be got rid of by cauterization with the nitrate of silver, or the strong mineral acids. These means, however, should only be had recourse to when the disease is of very limited extent, and should not be employed when it is seated on the scalp, where their application might be attended by bad consequences. And it should be carefully borne in mind, that more good will always be effected in the treatment of this complaint by the patient and continued employment of gentle means to remove the hair, and to induce a new action in the hair-follicles, than by any heroic measures, which usually will only tend to aggravate the mischief.

General treatment. Although this disease is, in many cases, strictly speaking, a local affection, as when it occurs from contagion in a previously healthy subject, yet in other instances it certainly has a constitutional origin, or at all events it may have its severity increased, and its duration prolonged by the state of the general health of the patient. Thus when it arises spontaneously, without contagion, in a scrofulous child, it is, without doubt, merely the local manifestation of a general cause; just as much so as tubercle in the lungs or in the mesenteric glands would be. Why it should appear in the form of favus is a question that remains to be answered; as we are not cognizant of those circumstances that cause tubercle to be deposited in particular organs at different ages. But the fact remains certain that favus, *when it arises spontaneously,* is always connected with and appears to be dependent upon a scrofulous habit of body,—the tubercular cachexia of some writers. Hence, in the treatment of this disease, it is necessarily of the greatest importance that this state of the constitution be, if possible, corrected. And this can best be accomplished by the employment of mild tonics and alteratives. Of the former, the salts of iron, either alone or in combination with some light bitter infusion, will be found the most useful. The iodide of iron, more particularly, is of service in this respect, as it appears to combine the tonic properties of the metal with the alterative qualities

of iodine, and is therefore a very valuable remedy in those cases in which such a combination is required. It may most conveniently be given to children in half-grain or grain doses, twice a day, in a teaspoonful of simple syrup, which, at the same time that it conceals its taste, prevents its decomposition. Next to the iodide the ammonio-tartrate of iron, in doses of from two to five grains, will be found of most service, especially if given in combination with infusion of calumba, or the compound decoction of aloes, which, although not a very chemical mixture, is a very useful one. These preparations should, however, only be employed when the disease is ingrafted on a weak, scrofulous constitution, and are not called for when it occurs from contagion in a healthy subject. If any excitement supervene during their use, if the tongue should become dry and glazed, or red at the tip and margin, and the skin hot, they must immediately be discontinued, and a few doses of mercury and chalk, or of rhubarb and soda administered, so as to lessen the irritation.

In recapitulation then, the first thing to be done when a patient affected with favus places himself under our care, is to cut the hair to within a distance of half an inch or an inch of the scalp; poultices are next to be applied, and fomentations used, until all the crusts are thoroughly and completely removed, the head being, during the whole of the after-treatment, washed with

brown soap and water at least once a day. Mild alkaline depilatory lotions or ointments are then to be employed, and a small-toothed comb used on alternate days, the hair being thus separated slowly and gently from the diseased follicles. If the disease be more than ordinarily obstinate, an ointment of the iodide of sulphur should be had recourse to, and if it occur in a scrofulous child, the iodide of iron, and mild tonics and alteratives may be administered, with a view of improving the general health.

In conclusion it may be confidently stated, that by patience and perseverance in the employment of the means above indicated, and by scrupulous attention to cleanliness, there are few cases of favus that will not speedily be cured; and that this disease instead of continuing, as it ever has been, an opprobrium to medical men, can be as successfully treated, in the great majority of cases, as most other cutaneous affections.

Note. Since these sheets were in the press, an article on Favus, by Dr. John Hughes Bennett, has appeared in the London and Edinburgh Monthly Journal of Medical Science for June, 1842, in which the author adduces in a very satisfactory manner the evidence that I considered, at page 120, to be wanting as to the vegetable nature of that disease, or rather as to the presence of vegetations in it. These, however, no more affect the *tubercular* nature of favus than does the presence of the acarus scabiei the vesicular nature of itch.

Dr. Bennett agrees with me in considering favus to be a tubercular deposit, and he looks upon the tubercular matter as the soil from which the mycodermatous vegetations arise; he says, "The amorphous mass, from which Gruby describes the mycodermata of tinea as springing, is of a finely granular texture, and identical in structure to certain forms of tubercle:" thus bringing forward additional evidence

to that which I have already given in the text as to the identity of favus and tubercular matter.

The following is a description of the *mycodermata:* "The peculiar favus crust is composed of a capsule of epidermic scales lined by a finely granular mass; from this mass millions of mycodermatous plants spring up and fructify, and the presence of these vegetations constitutes the pathognomonic character of the disease. In order to examine the development of these vegetations microscopically, it is necessary to make a thin section of the capsule completely through, embracing the outer layer of epidermis, amorphous mass, and light friable matter found in the centre. It will then be found, on pressing this slightly between the glasses, and examining it with a magnifying power of 300 diameters, that the cylindrical tubes springing from the sides of the capsule proceed inwards, give off branches dichotomously, which in turn terminate in round or oval globules. These tubes are from the $\frac{1}{400}$ to $\frac{1}{800}$ of a millimetre in thickness, jointed at regular intervals, and often contain molecules varying from $\frac{1}{10000}$ to $\frac{1}{1000}$ of a millimetre in diameter. The longitudinal diameter of the sporules is generally from $\frac{1}{300}$ to $\frac{1}{100}$, and the transverse from $\frac{1}{300}$ to $\frac{1}{150}$ of a millimetre in diameter (Gruby). I have seen some of them, oval and round, twice the size of the others. The long diameter of the former measured $\frac{1}{75}$ of a millimetre. The sporules agglomerated in masses are always more abundant and highly developed in the centre of the crust. The cylindrical tubes, on the other hand, are more readily found near the external layer." From this there can be no doubt of the tubercular nature of favus, or of the existence of mycodermata in that disease. The question, however, yet remains to be decided, whether these vegetations are the essential cause, or merely an epiphenomenon of favus. They appear to be the latter, as from the observations of Dr. Bennett the tubercular matter seems to be the soil, so to speak, from which they spring, and which appears to be essential to their growth, as he has not been able to propagate the disease in his own person or in that of others, by the sporules merely. More extended observations are, however, required on this point before it can be considered as definitively determined. It also remains to be proved whether they occur in all cases of the disease, or whether, like the acarus of the itch, which is present in some vesicles, absent in others, these vegetations may not be only occasionally met with on the tubercles of favus. I may refer those who wish for farther information on this subject to a very interesting paper by Mr. George Busk, "On Parasitical Growths on Living Animals," in the 1st vol. of the Microscopical Journal, page 145.

CHAPTER V.

SQUAMOUS DISEASES.

The only squamous disease that commonly affects the scalp is pityriasis. Psoriasis and lepra are occasionally, though rarely, seen in this region; seldom, however, unless occurring at the same time on some other part of the body. They can therefore scarcely be considered as scalp-diseases, and will not require any farther notice on our part, as the reader will find every information concerning them in any of the standard works on the diseases of the skin that he may consult.

PITYRIASIS CAPITIS.

Pityriasis of the scalp is characterized by the presence of a number of small, dry, grayish-white scales scattered amongst the hairs, which are attended by but little, if any, inflammation, and can be detached in considerable quantities on scratching, rubbing, or moving the head.

Symptoms. This disease, which is exceedingly common in early life, makes its appearance in the form of a number of minute scales, usually of a yellowish-gray, whitish-gray, or white colour, very thin, especially at the edges, and perfectly dry, although occasionally somewhat unctuous. They are usually, in children, imbricated to a certain degree. When, however, the disease occurs at a more advanced age, it will be found that they do not assume any regular arrangement of this description, but are scattered irregularly amongst the hairs. These scales, or *scurf* as they are usually called, gradually increase until they accumulate to such an extent, that the patient cannot scratch, or even move his head, without detaching a quantity of them, which fall off in the form of a mealy white powder, some of which will usually be found about the upper part of the clothes, as the collar of the coat, of those affected by this disease. The formation of this scurf goes on very rapidly, for however much may be detached by the comb or brush it accumulates again, apparently to the same extent as before, in the course of a few hours.

The scales are usually at first adherent at one extremity and loose at the other, but they soon separate entirely from the scalp. They are most generally very small, and, when this is the case, of a pure silvery white, but sometimes they are larger, and then they assume a darker colour; they oc-

casionally attain a diameter of five or six lines. If the hairs be separated, and the scales removed, the scalp will be found to be dry, rough, and reddened in patches, more especially when the disease is recent; in cases of old standing, it will be seen to be of a dull, grayish, opaque white, the cuticle appearing to be thicker and coarser than natural. The hairs do not fall off to any very great extent in this disease, although they frequently appear to be both thinner and drier than usual. The scales sometimes form by their union, especially in children, a thin layer, which may extend over the whole of the head, being thickest at those points where they are evolved in the greatest abundance.

The most frequent seat of pityriasis of the scalp, when partial and in patches, is about the coronal and squamous sutures, whence it may extend to the temples, forehead, and even sometimes to the eyelids. The itching attendant upon it is frequently exceedingly distressing, causing the patient, in scratching himself, to loosen clouds of scurf.

If, during the existence of this disease, an attack of inflammation occur in the scalp, giving rise to the evolution of eczematous vesicles, that peculiar affection, eczema amiantacea, is very likely to occur, as it consists in nothing more than a mixture of the scales of pityriasis with the discharge of eczema.

When this affection is approaching a favorable termination, the scales that are brushed away will not be re-formed as quickly as before, until at last their secretion entirely ceases; the scalp remaining, for some length of time, smooth, red, and shining.

Causes. Age exercises a considerable influence upon the frequency of pityriasis capitis, which is in early childhood, more especially in infants at the breast, in whom the hair is thin, of very common occurrence. As life advances, and the hair becomes thicker and more abundant, it is more rarely seen, until in old age it appears again with renewed frequency; probably in both these instances, namely, in childhood and in old age, being occasioned by the irritation that the scalp, when deprived of its covering, is subject to; or perhaps it is an effort of nature to replace the presence of the hair by an increased secretion of epidermis; however this may be, the fact is certain that this disease is of most frequent occurrence at those periods of life at which the hair is thin, and offers less protection to the scalp.

Temperament has some influence on the occurrence of this disease, which appears to be more frequent in dark than in fair children, being replaced in the latter by eczema, into which it has a tendency to pass, from any cause of irritation.

The proximate cause of this affection is an increased action in that part of the cutis which secretes the epidermis, giving rise to an increase in the quantity, and an alteration in the nature of that tissue, and causing it to be eliminated in detached scales rather than in continuous layers.

Prognosis. This disease is often the forerunner of other affections of the scalp, being frequently followed by eczema and impetigo eczematosa. It is, in many cases, exceedingly chronic in its duration, continuing for months and even years, and proving rebellious to every mode of treatment that may be adopted. It never causes the permanent loss of hair, but it commonly renders it thin, dry, and light-coloured.

Diagnosis. It is less important to distinguish pityriasis capitis on its own account, than it is to avoid confounding it with other diseases, so that an affection which is exceedingly trifling in itself may not be kept up for an indefinite period by an injudicious and over-active treatment.

The disease with which pityriasis of the scalp is most likely to be confounded is *eczema furfuracea*, the *porrigo furfurosa* of Willan. There is, however, this essential difference between the two, that the former is a dry, whilst the latter is a moist affection;

the scales of the one being moist, glutinous, and of a dark colour, whilst those of the other, on the contrary, are dry, small, of a grayish or pearly white, and readily separable from the scalp. In *eczema furfuracea* also, an occasional eruption of vesicles may be observed on the diseased scalp, which will be tender, red, and bedewed with a serous fluid. This, which is the most decisive character, and serves at once to distinguish the two affections from one another, is never present in pityriasis. These remarks, however, only apply to well-marked cases, as these diseases run so much into one another in many instances, that it is occasionally impossible to draw the line of demarcation between them.

From *eczema amiantacea* the diagnosis is more easy, the large masses of white glutinous scales that bind the hairs together in the form of grayish, shining, striated locks, being sufficient to distinguish it from the small, dry, mealy scurf of pityriasis. From the shrunken vesicle of eczema it may be distinguished at once, by the difference in the elementary characters of the two diseases.

With *favus* there can be no possibility of confounding this affection; the one being characterized by small, rounded, yellow tubercles, depressed in the centre and traversed by a hair, which gradually increase in size until they form large, circular, depressed, cup-shaped crusts; the other, on the con-

trary, consisting merely of thin, dry, white scales, unattended by much loss of hair. Sometimes, however, in pityriasis capitis the scales are united together so as to form small, circular disks, but these are perfectly flat, and not, like the crusts of favus, depressed in the centre.

Treatment. Although this disease is trifling in itself, yet, from the uncleanly appearance it gives to the head, it is a source of great annoyance to those affected by it, who are usually very anxious for its cure. In order to accomplish this, but very little is necessary in many cases; in others, however, it is very obstinate and rebellious.

In children, slightly stimulating washes, spirit or zinc lotions, with the daily use of a small-toothed comb, and a soft brush, will in general suffice; but when the disease is more chronic, especially when occurring in advanced life, we must have recourse to more active measures. In these cases, lotions of the sulphuret of potassium will be found exceedingly useful, more particularly if conjoined with the use of the ointment of the white precipitate of calamine, or of the oxide of zinc; the Harrowgate, or other sulphureous waters being at the same time taken internally, and due attention paid to the state of the secretions, especially those of the liver and alimentary canal.

The head should be washed daily with soap and water, and the scales removed with a soft brush, the hair being at the same time cut very short. Mild measures of this description, carried on with patience and perseverance, will seldom fail in effecting a cure, which is in many cases retarded by the employment of irritating ointments and stimulating lotions.

CHAPTER VI.

DIAGNOSIS OF THE DISEASES OF THE SCALP.

HAVING given the characters that distinguish each disease of the scalp, when treating of these affections individually, it is now my intention to recapitulate their diagnostic symptoms, and so to arrange them as to facilitate the diagnosis of any case that may be presented to the practitioner, that by acquiring a knowledge of its name he may be enabled, if necessary, to consult some standard work as to its treatment and mode of cure.

The importance of this subject must be obvious to every one; for unless an accurate knowledge of the disease be first of all obtained, it will be impossible so to conduct the treatment as to accomplish a speedy and effectual cure. For as a different mode of treatment is required for each different affection of the scalp, we shall not know whether we employ that one which is proper for the peculiar

disease before us unless we are acquainted with its precise nature.

It is also of considerable importance to be able to distinguish readily the contagious from the non-contagious scalp affections, and thus to prevent the former from spreading, by separating those who labour under them from all contact with others. And indeed it is on this point that the practitioner will be frequently cross-questioned by the parents and friends of the patient, who are desirous of knowing with certainty whether the case be contagious or not; and it is obvious that his reputation may suffer materially if he be not able to answer this question satisfactorily and at once. How often do we not find that unnecessary alarm and anxiety have been spread in a family by cases of herpes and impetigo of the scalp being represented as contagious in consequence of their having been confounded with favus.

It is owing, as has already several times been said, to the practice that has prevailed amongst most writers of classing together all scalp affections under the one term of tinea or of porrigo that so much confusion has prevailed in their diagnosis, and that a set of diseases, simple enough in themselves, have been rendered complicated and difficult by the very means taken to reduce them to greater simplicity.

In treating of the diagnosis of these affections generally, it will of course be necessary to go over

in a great measure the ground that has already been traversed; but I trust that the importance of the subject will excuse any repetition that may unavoidably be made. I shall, however, confine myself as closely as possible to the broad distinctions that characterize them, and leave out all minor details, for which I must refer the reader to the pages that have been devoted to the consideration of individual species.

The first thing to be attended to in the diagnosis of a disease of the scalp, as in that of cutaneous affections generally, is the *elementary* form that it may assume. When this has once been determined, the particular species or variety may soon be ascertained; but we shall be constantly liable to err if we look to the *secondary* characters at once without having previously satisfied ourselves as to this, which is not influenced by the same slight circumstances that frequently modify, to a considerable extent, the secondary appearances that these affections may put on.

As only four forms of disease ordinarily occur upon the scalp, namely, those characterized by *vesicles*, *pustules*, *tubercles*, and *scales*, we shall find but little difficulty, as soon as we have ascertained to which of these four orders any particular case belongs, to determine to what genus of the order it is to be referred, as we shall have at most but two to choose between, these genera again admitting but of a small number of species. Thus

by a process of analysis we shall arrive at a knowledge first of the order, then of the genus, and lastly of the species to which any one of these diseases that may be presented to us belongs.

For the sake of example, we may suppose that a disease is met with characterized by the presence of a number of small, acuminated, transparent collections of serum, scattered irregularly on the surface of the scalp, and attended by a good deal of itching and tingling; we may ascertain at once, by the most cursory inspection, that this is not a *pustular* affection, as no purulent matter is observable; it cannot, therefore, be impetigo of the scalp; still less is it a *squamous* disease, as no scales are present; and it cannot be a *tubercular* affection, as the small, yellow, dry, cupped tubercles of favus are absent; it must therefore necessarily be a *vesicular* disease. This being determined, we have only to compare it with the two genera of this order that affect the scalp, eczema and herpes, in order to see with which its characters agree most closely. It cannot be the latter, as the vesicles that appear in that affection are globose, and are arranged in groups, most commonly in rings, whilst these are, on the contrary, pointed, and scattered irregularly over the surface of the scalp; it must therefore be the former, and we cannot be wrong in pronouncing the case to be one of eczema.

Although it is by the elementary characters that we determine the order to which a disease belongs, and by some modification either in its form, arrangement, or course, that we ascertain the genus, yet it is by a consideration of the secondary characters that the disease assumes, the shape, colour, and arrangement of its crusts, scabs, or scales, that we usually obtain a knowledge of the particular species. Hence the necessity, in the diagnosis of these affections, to pay especial attention to both their elementary and their secondary forms; for if we confine ourselves to a consideration of one set of characters only, we shall constantly be liable to commit the greatest errors.

An attentive observation of the secondary characters of these diseases is of the utmost consequence in another way, as by them alone we are sometimes enabled to arrive at a knowledge of the elementary forms, when we should not otherwise have been able to have done so, as they are frequently entirely destroyed, either by the patient scratching himself, or in consequence of the chronic nature of the complaint. As an example of the importance of the secondary characters in leading to a knowledge of the elementary form, I may instance favus. When we find on the scalp of a patient a number of dry, yellow, circular, cupped crusts, we may, without seeking for the elementary characters of the eruption, be certain that the disease with

which we have to do is favus. And again, when we see irregular, thick, rugged, rich-looking, yellowish-brown, glazed scabs, we may be sure that none but a pustular disease could have given rise to them, and as there is only one pustular scalp affection, it must be impetigo.

The numerical method has its application to diseases of the scalp as well as to every other department of medicine, and constitutes an important collateral evidence in forming our diagnosis. Thus when we know that eczema occurs at least twenty times more frequently on the scalp than herpes does, it is at once at least twenty times more probable that a vesicular affection of that region is of an eczematous than of a herpetic nature. Of course this cannot positively determine the disease, but it helps us very materially in our diagnosis, by showing us what the probable nature of any particular case may be.

The age and constitution of the patient may also be taken into account as auxiliary circumstances. Thus impetigo granulata usually occurs after the third or fourth year of life, whereas impetigo eczematosa most generally makes its appearance before that period; the former disease, again, being commonly met with in weakly, puny children, who have been underfed and neglected, whereas the latter affection chiefly occurs in those that are robust, florid, and apparently full of health and vigour.

In its elementary characters, then, *eczema* of the scalp differs from *herpes* of the same region by the vesicles being small, very numerous, acuminated, and scattered irregularly in patches of a greater or less extent, but which do not assume any definite form; whilst in *herpes*, on the contrary, they are few in number, globose, and always arranged in groups that usually present a circular outline, the circumference being inflamed and studded with vesicles, whilst the centre is healthy.

In their secondary characters these diseases differ even more distinctly. In one form of chronic *eczema* we find extensive, thin, laminated, yellowish-white or grayish scabs matting the hairs together, and frequently attaining a considerable size, whilst in another variety of the same disease a thin fluid constantly exudes from numberless small openings in the scalp, soaking the hairs and forming them into small yellowish-gray dirty-looking locks. In *herpes*, on the contrary, the scabs are thin, few in number, and small in extent, being chiefly confined to the circumference of the affected patch.

The other species of eczema, namely, *eczema furfuracea* and *eczema amiantacea*, may be distinguished from *herpes* with the greatest possible ease, as these diseases possess no characters in common beyond the vesicular element, and indeed, although belonging to the same order, differ more from one another than from some other affections,

such as pityriasis, that appertain to a different class.

The varieties of *impetigo* are the only pustular diseases that affect the scalp. They are characterized in their earlier stages by an eruption of psydracious and achorous pustules, with which are occasionally intermingled some of a phlyzacious kind, and in one species, impetigo eczematosa, a few vesicles, which, however, soon become pustular.

In *impetigo sparsa* the pustules, which are usually but few in number, are of a mixed kind, being partly psydracious and partly phlyzacious, surrounded by a slightly-inflamed base, and scattered irregularly upon the scalp; the pus which they contain is thick, yellow, and viscid, concreting into large, irregular, semitransparent, rich-looking scabs, of a yellowish-green or yellowish-brown colour, and presenting very much the appearance of concreted honey, and having usually a glazed, glistening surface. The pustules of *impetigo granulata* are achorous, usually of a small size, of a light yellow colour, and scattered irregularly upon the scalp, not being collected in clusters; the fluid contained in them has somewhat of an ichorous character, concreting very readily into small, irregularly-shaped, hard, grain-like scabs, which assume a dirty grayish colour, and are generally strung upon the hairs of

the part affected, resembling, very closely, pieces of dirty mortar or dried crumbs of bread.

Impetigo eczematosa has a mixed elementary character, consisting of an eruption that is partly vesicular and partly composed of achorous pustules, the fluid effused from which is viscid and tenacious, of a yellowish-green colour, concreting rapidly into soft scabs that are usually thin and laminated, but occasionally rather thick, and which frequently occupy a large surface, extending down upon the forehead, cheeks, and temples, producing very great temporary, but no permanent disfigurement.

We have very rarely an opportunity of seeing the elementary form of *favus*, as this disease, when presented to us, has usually assumed its secondary characters. In its earliest stages, however, we should find it to consist of a number of small, round tubercles, exceedingly minute, of a circular form and yellow colour, each of which is traversed by a hair, and appears to be seated within the structure of the cutis. These gradually enlarge until they form crusts, the characters of which, although differing somewhat in the two species of the disease, are very remarkable and peculiar, and lead us at once to a knowledge of the elementary form of the affection, which, as has already been stated, is very seldom met with.

Favus dispersus, then, is characterized by the

presence of a comparatively small number of these tubercles scattered upon the surface of the scalp, and which, by increasing in size, gradually form crusts that preserve in a great measure their peculiar characters, being, when isolated and distinct, perfectly circular, of a clear sulphur-yellow colour, depressed in the centre, which is traversed by a hair, and inserted as it were *into* the cutis, not seated upon the cuticle. They do not run together into large masses, although they sometimes form by their union patches of moderate size, which, however, always retain rudiments of the circular outline that is so characteristic of them when single. The affected parts are always more or less bald.

Favus confertus does not differ from the preceding species otherwise than in degree and arrangement. As is the case with *favus dispersus*, this affection is very seldom presented to us in its elementary characters, but is usually met with in the form of bald circular patches of greater or less extent, studded with a number of small yellow tubercles that are depressed in the centre and implanted in the cutis; they are most numerous at the circumference of the patch, and are succeeded by dry, friable crusts of a yellowish-gray colour, which in some cases cover nearly the whole of the scalp, but which, whatever size they may attain by their union, will always present a sweeping, circular

outline, and here and there the characteristic central depression.

The only squamous disease that ordinarily affects the scalp is *pityriasis*. *Lepra* and *psoriasis* may certainly occur in this region, but when they do so it is usually as part of a general affection, the scalp being implicated along with the rest of the body.

The diagnosis of *pityriasis* from the other scaly affections is sufficiently simple, indeed it is impossible to confound the small, thin, white, or grayish loose scales of the one with the larger, more adherent, and regularly arranged squamæ of the other diseases; it will therefore be unnecessary to dwell any longer upon it, more especially as it has already been described.

Having thus, in order to avoid all unnecessary repetition, given but a very brief outline of those characters that distinguish the different diseases to which the scalp is liable, for farther and more detailed information on which very important subject the reader is referred to the history of the individual affections. I must again urge the necessity of especial attention being paid to the elementary forms that they assume, as it is chiefly by them that we can ascertain to what order any particular case may belong; whether it be vesicular, pustular, tubercular, or squamous. And when once a knowledge of this has been acquired, the greatest diffi-

culty in the diagnosis will have been overcome, as, by a strict comparison between the characters of the different genera and species, we can easily learn the one to which it is to be referred. In doing this, we must be careful, however, not to lose sight of its secondary forms, or of those collateral circumstances that have already been spoken of as tending very materially to facilitate the diagnosis.

CHAPTER VII.

DISEASES OF THE HAIR.

I DO not intend noticing several morbid conditions of the hair, such as an excess, or a crisp, rigid, or indurated state of it, or the change or loss of its colour, which appear to be rather matters of curiosity than of practical importance, but shall proceed at once to a consideration of the only important disease to which it is subject in this country, viz., alopecia.

ALOPECIA.

Alopecia may either be a primary affection of the hair-bulbs, being unconnected with any other lesion, or it may be secondary, being the sequela of some other disease, whether vesicular, pustular, or tubercular, of the scalp. It may be general or partial, according as more or less of the scalp or

body be affected by it; and it may occur either slowly or rapidly, according to the nature of the causes that gave rise to it.

It may occur at any age, in the young as well as in the old, although of course it is most frequent in the latter, in whom it is a natural effect of age; whilst, when it is met with at an early period of life, it is in consequence of some abnormal condition of the hair-follicles, that may depend upon either a local or a general cause.

Alopecia is of much more common occurrence in men than in women, who usually preserve their hair even to extreme old age. It is not easy to account for this difference in the sexes, which most probably, however, depends upon some peculiarity of organization, although it may, perhaps, in some degree, be owing to the greater care and attention that females habitually pay to their hair.

Primary alopecia is of three kinds:

1st. That dependent upon atony or atrophy of the hair-bulbs.

2d. *Alopecia folliculosa,* depending upon a morbid condition of the hair-follicles. The *teigne tondante* of Mahon and Rayer.

3d. *Alopecia circumscripta,*—the porrigo decalvans of Willan.

Alopecia, depending upon atony or atrophy of the secreting organs of the hairs, may arise from various causes. Old age, any circumstance that

debilitates the system generally, as long-protracted illness, phthisis, dyspepsia, profuse discharges, venereal excesses, over-study, the depressing passions, fevers of a low type, and in fact anything that lowers the vital energies, thus influencing more especially the activity of the extreme parts of the body, may occasion it. Long-continued pressure, as from a military cap or helmet, may also give rise to it. In some rare instances there appears to have been a congenital atony of the hair-bulbs, not only of the scalp but of the body generally; the surface being entirely destitute of hair, and only furnished with a light down. Rayer and Cullerier both cite instances of this description.

Syphilis, and the abuse of mercurials, have been said by some to give rise to alopecia, but this is probably erroneous, and is founded on popular opinion, the cases related being by no means unequivocal, but appearing rather to be the accidental complication of this disease with syphilis, than a consequence of that affection.

The baldness that arises from these causes, various as they are, depends in every instance upon an atonic or atrophied condition of the hair-bulbs, and may be either partial or general, temporary or permanent, according to the nature and intensity of the cause that gives rise to it. Thus, when it occurs as a consequence of old age, it is always partial in its extent, and permanent in its nature;

whilst that form of it that is occasionally met with during the convalescence from some acute diseases, may be general as far as the scalp is concerned, but only of temporary duration.

ALOPECIA FOLLICULOSA. This affection, which has been noticed by Mahon and Rayer under the name of *teigne tondante*, is of but rare occurrence. Two instances of it, however, fell under my observation last summer.

It is characterized by the presence of circular or oval patches of variable extent, somewhat elevated above the surface of the surrounding scalp, and of a grayish, pink, or dull purple colour; thickly studded with a number of small papillæ, that give a rather rough feel to the part affected, the hairs covering which, are always broken off at a distance of two or three lines from the surface of the skin.

This disease makes its appearance, in the first instance, in the form of a small, grayish, scurfy patch on the scalp, a line or two in diameter, but which may enlarge to the size of the palm of the hand, or even extend over the greater part of the head. On a cursory inspection, the patch appears to be bald, but when examined more closely it will be found to be covered with hairs two or three lines in length. It is always of a pretty regularly circular or oval figure, and in some instances appears as if

made up of two or more circles joined together. Its colour is uniformly a grayish-pink, or dull purple, and it is somewhat elevated above the surrounding skin. Its surface, which is rough, dry, and rather hard, is evidently deprived of those oily or sebaceous secretions that serve to soften the scalp when in a healthy condition, and is covered by a number of papillæ, which, being closely set, give it very much the appearance of a portion of the integument of the leg of the fowl. In consequence of the close arrangement of these papillar bodies the skin has a very dense and compact appearance, and when it is raised up between the fingers it feels as if hypertrophied, being both thicker and firmer to the touch than natural. The surface of the diseased patch is covered by a number of very thin, fine, small scales, of a light-brownish or silver-gray colour. These, from their minute size and light colour, occasionally give it a mealy appearance. This is more particularly the case with the smaller patches.

The causes of this affection are very obscure; it occurs chiefly in children, and appears sometimes to be contagious, but of this we have no direct evidence.

The diagnosis of this form of alopecia is easy, as it differs from all other diseases of the scalp by the thickened and papillated condition of the skin, by

the colour of the part affected, and by the hairs being thinned and broken off at a short distance from their fixed extremities. Its circular form might at first cause it to be confounded with herpes circinnatus, but from this it is distinguished by the absence of vesicles and scabs, and by the above-mentioned characters.

With regard to the seat of this disease, I agree with Mahon in supposing it to be in the sebaceous follicles of the scalp. From the circumstance of the hairs being broken off at a short distance from the surface of the skin we should, *à priori*, expect that it was situated in some part having an important relation to these organs, and accordingly we find, on examining the diseased spot with a magnifying glass, that in each elevated papilla there is a small mass of morbid sebaceous matter, that gives, when broken down, the mealy aspect to the surface of the patch. From the appearance of the diseased part when thus examined, I think it probable that the sebaceous matter is accumulated in the orifice of the follicle, where it undergoes some change, becoming harder and firmer by the absorption of its more oily parts, and that it is this collection in the follicle that gives rise to a small, prominent tumour; a number of which being situated close together, will cause the skin to assume the close papillar arrangement that is so characteristic of the disease. That it is seated in the sebaceous follicle is rendered

still more probable, by the remarkable dryness that the affected part of the scalp presents, which can only be accounted for by the absence of the oily secretion that it is the office of these organs to pour out; and it is probably owing to the same cause that the hairs become fragile and break off.

ALOPECIA CIRCUMSCRIPTA, the porrigo decalvans of Willan, is a remarkable affection, and one the causes of which are entirely unknown.

It consists in smooth, shining, bald patches, of the natural colour of the skin, occurring suddenly upon the head, perhaps in rubbing or washing it; the hairs falling off without any previous disease of the scalp, or of their secreting organs. These patches may continue naked for a great length of time, and as quickly as one becomes covered with hair another may form on a different part of the head. When seated near one another they may unite, so as to denude a large portion of the scalp.

This disease may be distinguished from the other varieties of alopecia and diseases of the scalp by the suddenness of its occurrence, by the smooth, naked patches it gives rise to, and by its not being preceded by any vesicle, pustule, or scale. When hair grows upon the affected patches it is, according to Willan, gray in adults, and of a light brownish hue in children; at all events it is thinner and lighter in colour than natural.

The causes of this disease are altogether unknown. It may occur at any age, and in either sex, and appears occasionally to be epidemic. According to Cazenave,* an epidemic alopecia of this description made its appearance in most of the schools in Paris in the year 1839. It was not preceded by any pustule or vesicle, and occurred in different parts of the town much about the same time; there was no evidence of its being of a contagious nature.

SECONDARY ALOPECIA is the result of inflammation, or ulcerative absorption of the hair-bulbs, excited by the long-continued existence of eczema, impetigo, or favus; and is more especially liable to occur when the scabs of these diseases have been allowed to remain for a great length of time without having been loosened. When it arises from this cause, it may be either temporary or permanent, according to the nature of the affection that occasions it, and to the length of time that it has existed. Thus, the loss of hair consequent upon attacks of herpes, eczema, or impetigo of ordinary duration, is but temporary; whilst that which occurs after favus, or that follows long-standing, neglected cases of the above-mentioned diseases is usually permanent, as

* In a clinical lecture delivered at the Hôpital St. Louis, Oct. 1839.

it is owing to a complete destruction of the piliferous bulbs.

Treatment. The causes of alopecia being so various, its treatment must, of course, differ considerably in different cases of the disease.

As senile alopecia is owing to atrophy of the hair-bulbs, consequent upon age, it is necessarily incurable. When, however, loss of hair depends upon mere atony of these organs, there being no inflammation or ulceration of them, as when it is the effect of low fevers, chronic diseases, such as dyspepsia and other similar complaints, stimulating washes or ointments may be of service, as soon as the morbid state of the system is rectified; for until this be accomplished, either no good effect will follow their application, or it will only be temporary. For this purpose stimulating lotions and embrocations, containing the essential oils of rosemary, thyme, lavender, mace, or turpentine, infusions of walnut-leaves and of mustard, and alcoholic washes, have been recommended. Willis has seen the mercurial ointment of service in some cases. Dr. Thomson recommends a lotion composed of alcohol and spirits of turpentine, and Copland an ointment of the balsam of Peru and oil of lavender. Others have advised the application of solutions of the sulphates of copper or of zinc in alcohol, or of the nitrate of silver, of the tinctures of capsicum

and of cantharides; in fact, anything that stimulates the scalp may be of service. I have occasionally seen the infusion of tobacco, as recommended by Zacutus Lusitanus, succeed when other means have failed; but I have found nothing more useful than the continual shaving of the head, until the hair assumes its natural strength and colour. At the same time that this is being done, any stimulating applications, more particularly those recommended by Drs. Thomson and Copland, may excite the piliferous bulbs to increased action. When alopecia is dependent upon, or connected with, any chronic disease, that may lower the energies of the system generally, we cannot hope for a permanent cure until this be remedied, and the health of the patient restored. These remarks apply to alopecia circumscripta as well as to that form of baldness that arises from simple atony of the hair-bulbs.

Alopecia folliculosa is a most rebellious affection, and one that will resist all the above plans of treatment. The chief object appears to be to stimulate the sebaceous follicles, so as to cause them to discharge the morbid secretion that is accumulated in them. For this purpose I employed, in the two cases already mentioned, the ointments of the iodide of sulphur, and of the nitrate of mercury, with some success. But yet I cannot speak confidently of any mode of treatment, nor can I find any recommended by others.

The treatment of secondary alopecia of course varies according to the nature of the disease that it is consequent upon, and the extent to which the hair-bulbs have been affected. Thus, when it is the effect of eczema, of herpes, or of impetigo, and is not owing to any complete destruction of these organs, it may be most easily remedied, after the primary disease is cured, by the employment of any of the stimulating applications recommended for simple atonic alopecia; but when dependent upon a deeper affection of the piliferous bulbs, as is usually the case in favus, it is incurable.

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EXPLANATION OF THE PLATES.

Plate 1

Represents a case of Dry Chronic Eczema of the Scalp, passing, towards the fore part of the head, into Eczema Furfuracea. The thin, dry, laminated, yellowish-gray scabs of the former species of the disease are well shown, as also the inflamed condition of the scalp where they have separated.

Plate 2

Represents that scaly condition of the scalp which is usually observed in Favus after the larger incrustations have been removed.

Plate 3.

Impetigo Sparsa of the Scalp. The round, full pustules characterizing that disease may be seen, together with the rich-looking yellow and yellowish-brown scabs, to be scattered irregularly upon the surface of the scalp and the nape of the neck.

Plate 4.

Impetigo Granulata of the Scalp. The small, irregular, grayish-white scabs of that disease may be observed, especially about the vertex, to be strung, like beads, upon the hairs.

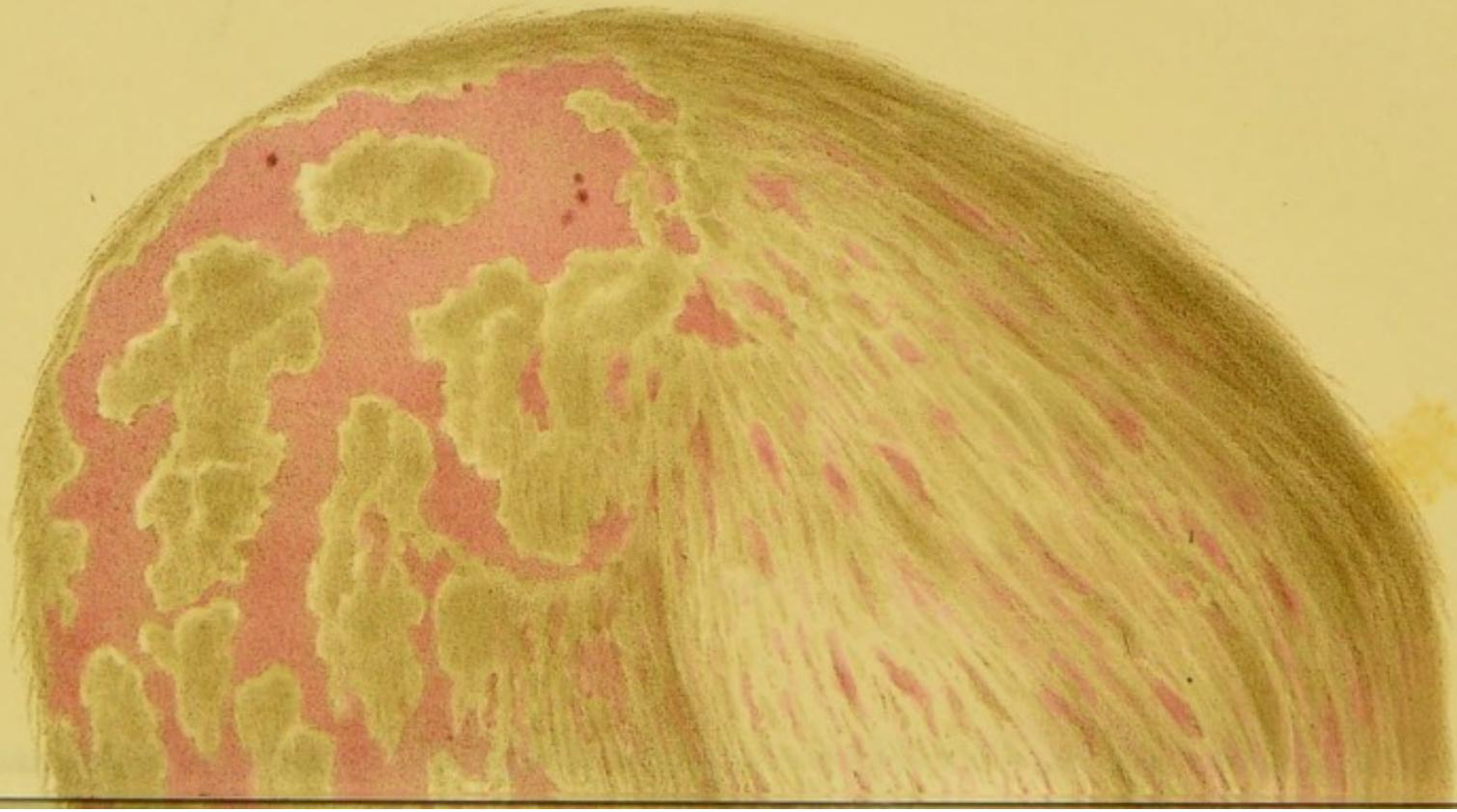
Plate 5.

Impetigo Eczematosa of the Scalp and Forehead. The soft, laminated scabs, of a yellowish-white colour, extending themselves over the fore part of the head, are very well marked.

Plate 6.

An inveterate case of Favus Confertus. Some small tubercles may be observed about the upper part of the forehead, in their earlier stages, presenting the characteristic circular, dry, cupped shape. Towards the coronal, temporal, and parietal regions are large, rugged masses implanted, as it were, in the cutis, but maintaining their peculiar sweeping, circular outline.

Plate 1.



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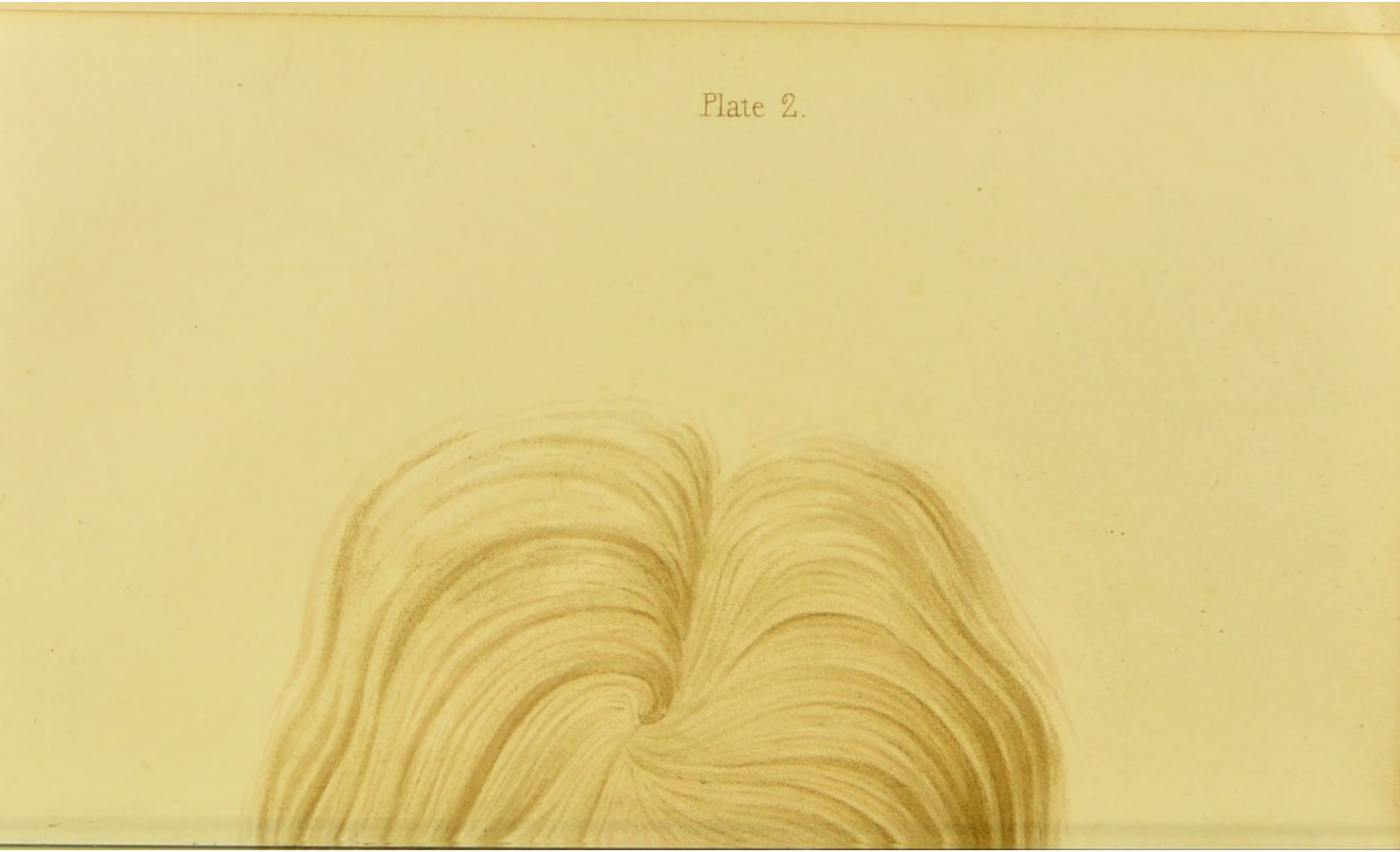
Scalinops in Fauna
after removal of larger incrustations -

Plate 2.



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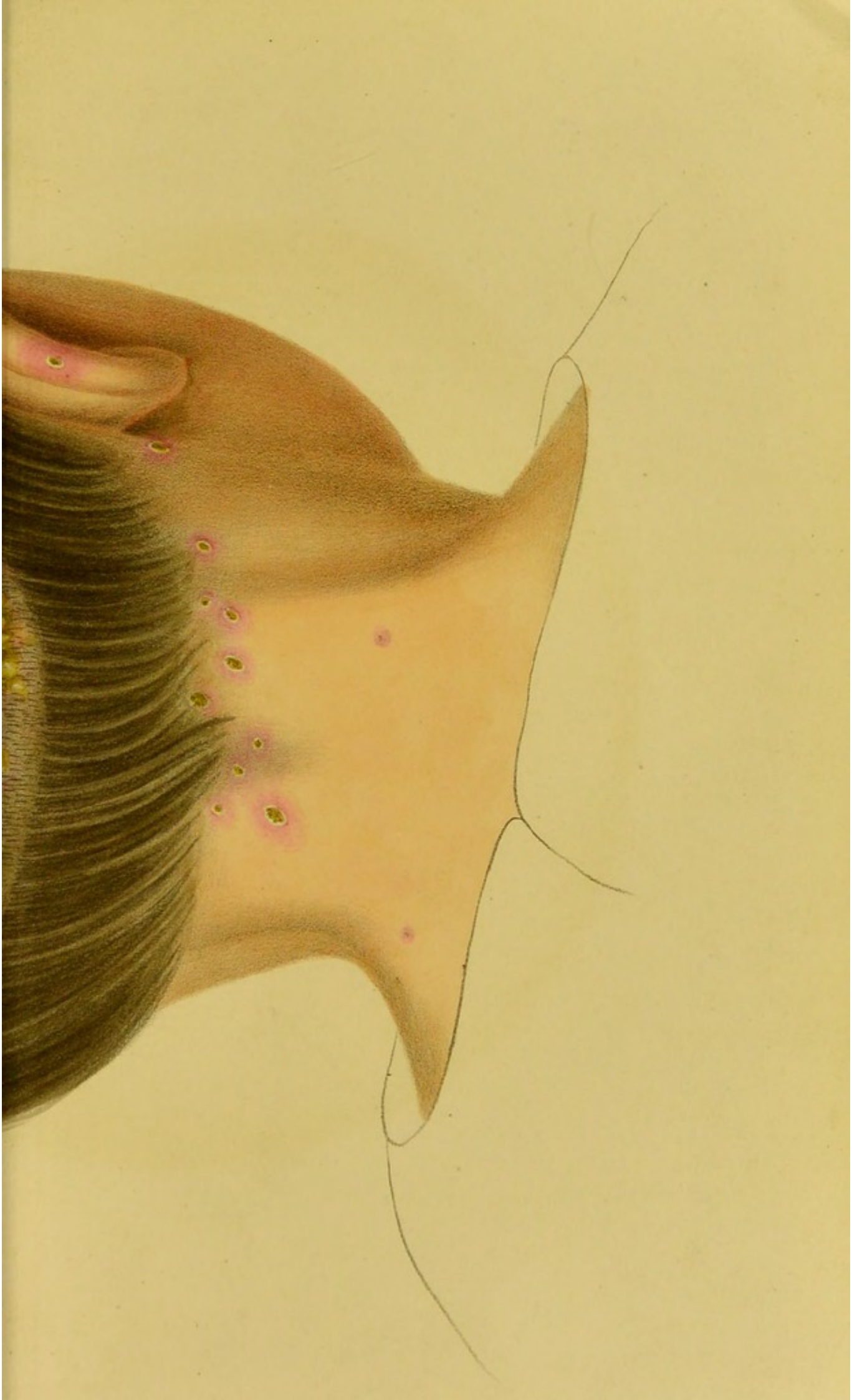
Impetigo Sparsa

Plate 3.



Impetigo Granulata

Plate 4.

J. Perry del et lithog.

Printed by C. Hullmandel.

Impetigo Eczematosa

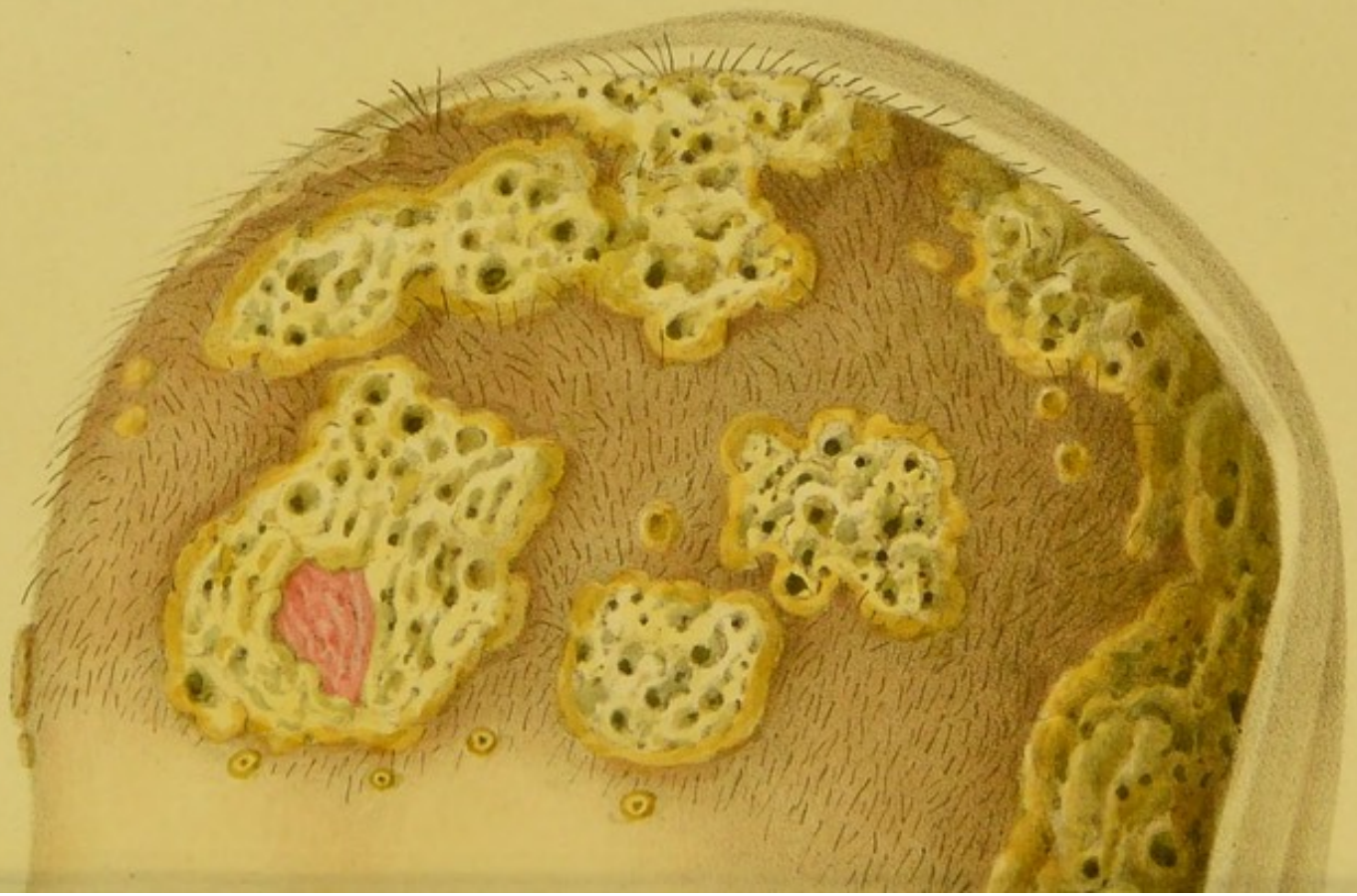
Plate 5.

J. Perry del et lithog.

Printed by C. Hullmandel.

Fauno Confettura

Plate 6.



J. Perry del et lithog.

Printed by C. Hullmandel.