and practical, that opium is ill-calculated to fulfil the indication in tetanus, namely, to diminish the excitability of the true spinal cord, until our views become improved, and the knowledge of an anti-tetanic agent ceases to be a *desideratum*, we are not justified in discarding altogether this drug.

3rd. That our grand object in the treatment of tetanus should be, to support the patient's strength by the administration of stimulants and strong nourishment, with a view, as it were, to compensate the vital powers for their great exhaustion consequent upon the expenditure of force by the violent muscular contractions, which in some cases are excessive.

4th. That as the removal of the exciting cause, once the first evidence that irritation has been propagated to the spinal cord becomes manifest, does not in the least degree check the progress of tetanus, or abate the violence of its symptoms, all operations, in traumatic cases, are generally not only unnecessary but injurious.

ART. II.—*An Essay on the Diagnosis and Treatment of Eruptive Diseases of the Scalp.* By J. MOORE NELIGAN, M. D., M. R. I. A., Physician to Jervis-street Hospital, Lecturer on the Practice of Medicine in the Dublin School of Medicine, &c.

MUCH difficulty, both as regards diagnosis and treatment, has always existed with respect to eruptive diseases, when situated on the scalp. By most writers on diseases of the skin, they have been described without reference to their situation, being classed with eruptions occurring on other parts of the body. This I believe to be a principal reason for the obscurity which still envelopes this class of skin diseases; for the peculiar anatomical structure of the scalp, and the presence of the hair, cause a marked dissimilarity in the appearance, and a still greater difference in the treatment, of the same class and order of eruptions (so far as regards any artificial arrangement of

diseases of the skin), seated here and on other portions of the cuticular surface.

It is somewhat singular that diseases so very common should, in this advanced age of medical science, require any further elucidation;—diseases, too, which demand for their investigation the employment of but one organ of sense, that of sight; while most other affections which the physician has to diagnose require the application of much less educated senses, the hearing and the touch; and the knowledge thus derived has to be further subjected to the process of analytic reasoning.

The slight interest which this class of diseases appears to have at all times excited amongst the members of the medical profession, is, I think, to be ascribed chiefly to two causes: first, the fact of their existence not endangering life, their presence being, indeed, in many cases, not incompatible with excellent health; and secondly, the tediousness, the obstinacy, with which they are said to resist the most active treatment. To the former cause I can object nothing; for although one form of eruption of the scalp, when long existing, produces or is connected with a certain amount of mental imbecility, as I shall by and by show, I have never yet heard or known of life being shortened by its presence. Nevertheless, the loathsome character of these affections, the annoyance which they occasion to the patient—almost invariably a child or young person, and his family—and the difficulty, or even danger, which attends their cure when they become chronic, renders them, I think, as deserving of careful investigation as many other affections of a more serious character to which the human frame is subject.

The second cause, their tediousness, instead of being a reason for their neglect,—as I believe it to be the chief,—should stimulate inquiry, with the view of ascertaining the precise plan of treatment best adapted for each form, or of devising remedial measures by which their naturally obstinate character

may be overcome. To this very tediousness of character, which many diseases present, may be, in a great degree, ascribed the existence of the empiric: the patient, tired by the long existence of a malady which appears to him to baffle the physician's skill, seeks for aid from any quarter promising relief; and the physician, impatient for the result of a case, is too often apt to have recourse to empirical plans of treatment, throwing aside those which experience should have shown him were still worthy of further trial. In no class of diseases is this so true as in those affections which I am about to describe. Much has been done of late years for their diagnosis, but little for their treatment. The numerous remedial measures proposed are nearly all empirical, the stage of the disease, or the constitution of the patient, being but seldom taken into account; and as a necessary consequence, *eruptive diseases of the scalp afford a fair domain to the quack.*

My object, then, in the following essay, is to direct attention to eruptions occurring on the scalp, as a special class of diseases,—bearing a close resemblance to cutaneous eruptions of other parts of the body, so close as to justify for their designation the same generic names, yet sufficiently distinct to require for their diagnosis, and especially for their successful treatment, a specific description. The observations which I venture to lay before the profession are based on my personal experience in the wards of Jervis-street Hospital, in the large dispensary attached to that institution, and on the results of cases in private practice. I shall not enter into a detailed account of the history of this class of cutaneous diseases, nor of the authors who have written on the subject, unless so far as may be requisite to elucidate my own remarks.

The different varieties of eruptions which occur on the scalp are, with one exception, of a decidedly inflammatory character in their early stage. They are, therefore, naturally divisible into two groups, *inflammatory* and *non-inflammatory*. This division is, I think, especially valuable as an indication

of the principles which should be our guide in treatment; for although the inflammatory affections do, like inflammations occurring in every other part of the human frame, become chronic, and then lose much of their inflammatory character, it must be always borne in mind that they do not bear a stimulating plan of treatment, even in their most chronic stage, so freely as the disease which constitutes the second division; and that in no instance is the application of stimulants indicated in their early stage. This arrangement thus at once lays the foundation of a rational, in contradistinction to an empirical, plan of treating these affections.

The generic names which I employ are those to be found in Willan's Classification of Diseases of the Skin. They indicate with sufficient accuracy the distinctive characters of the eruptions, and by their adoption we insure simplicity in nomenclature, and avoid the confusion which arises from proposing new names for diseases. I use but one specific appellation for each genus, and this has reference to the seat of the affection, as distinguishing it from a similar eruption occurring on other parts of the body.

The classification which I propose may be arranged as follows:—

Eruptive Diseases of the Scalp.

INFLAMMATORY.	NON-INFLAMMATORY.
Herpes capitis.	Porrigio capitis.
Eczema capitis.	
Impetigo capitis.	
Pityriasis capitis.	

It will be seen that I exclude from this arrangement some diseases of the skin which are ordinarily described as occurring on the scalp. My reason for doing so is, that psoriasis, lepra, and ecthyma, the other eruptions which occur in this situation, are very rarely met with there, unless in connexion with their existence on the skin generally; and their presence on the scalp not requiring any special plan of treatment, they cannot

be looked upon as diseases peculiar to this portion of the cuticular surface.

By a still further analysis of this class of skin diseases, we find that the two first-named belong to the order *vesicles*, the third to *pustules*, the fourth to *scaly diseases*, and the fifth to *vegetable growths*.

I shall now proceed to describe individually each of the forms which constitute the first group, and then speak of their treatment collectively.

Herpes capitis.—The variety of herpes which is met with on the scalp differs somewhat in its characters from any species of that disease which occurs on other parts of the body. It bears most resemblance to *herpes circinnatus*, but differs from it in the very trifling development of the vesicles which appear at the commencement of the eruption, and in their assuming almost immediately the characters of a scaly disease. They thus agree with the description given by Cazenave, in his *Leçons sur les Maladies de la Peau*, of a variety of herpes which he proposes to term *herpes squamosus*, but which, when it occurs on the scalp, he names *herpes tonsurans*. By careful examination, however, the vesicular character of the eruption, and its course, are sufficiently well marked to authorize its being classed as a species of herpes.

Herpes capitis usually attacks children from the age of 3 to 12. It is very rare in early infancy, and I have never met with it after the age of puberty, except in one instance, in which it had commenced at the age of 13, and had lasted for over five years before I saw the case. It is but rarely witnessed in its first stage,—that of vesicle,—as it then produces but little annoyance, and advice is, consequently, not sought for until it becomes more developed. When seen, however, at its commencement, it presents the appearance of a small ring of minute vesicles, not more than an eighth of an inch in diameter, without any redness or other mark of inflam-

mation beyond a slight tingling,—not itching. These vesicles are attended with scarcely any discharge, soon drying up and desquamating; but as they dry up in the centre they spread from the circumference, and the diseased spots, in the course of a few days, attain the size of a shilling.

If we examine them in this stage, we find that the centre, the part where the eruption first appeared, is thickened, elevated above the surface of the surrounding scalp, and covered with fine scales, which are renewed rapidly on being removed. As the disease proceeds, the patches extend from their periphery, still retaining a perfectly circular shape, and, finally, after some weeks, attain the size of a crown-piece, which I have rarely seen them exceed, no matter how chronic the case may have been. Having attained this size, and ceased to spread, the entire of the diseased surface is thickened, elevated, and covered with fine, soft scales, which the least touch removes. Sometimes but one patch of herpes is found on the scalp, but more generally there are three, four, or more circles, distinct, and at some distance from each other: this, the advanced stage of the disease, is usually attended with much itching.

As the disease advances the hair assumes a very peculiar appearance, almost pathognomonic of this form of eruption of the scalp. In the early stage each hair appears to be slightly bent on itself, and turned against the grain, obstinately refusing to lie smooth; the roots are also somewhat matted together by the scaly crusts of the eruption. After some time it presents a diseased appearance, being twisted, broken, of a whitish colour, and readily falling out; so that bald patches begin to appear, over which are scattered small bundles of the altered hair, which has been described, not inaptly, as resembling tow. This condition of the hair has induced some writers to describe this affection as a disease not of the scalp, but of the hair itself. Thus Mr. Erasmus Wilson, one of the most recent English authors on diseases of the skin, has named it *trichonosis* (from $\theta\rho\iota\xi$, *capillus*, and $\nu\omicron\sigma\omicron\varsigma$, *morbis*) *furfuracea*.

The eruption does not in all cases assume the exact characters I have now described. In the early stage—when, however, it is rarely witnessed by the medical practitioner—its appearance always agrees with the description I have given, except that in some cases there is more inflammation than in others; but in the advanced stages it varies much, both as regards the amount of desquamation and the appearance of the elevated patches: it is this fact which has led to so much confusion in the diagnosis and nomenclature of the disease. Yet in the most chronic or complicated cases, the circular form of the eruption, and the peculiar condition of the hair, render its diagnosis easy to even the tolerably experienced eye.

Herpes capitis is the true ring-worm of the scalp.

The contagious nature of this eruption has been doubted by some, but I have seen too many instances of its direct communication from child to child, of *different* families, in which the argument of similarity of constitution and of dietetic arrangements could not avail, to have any doubt on the subject; and I look upon the contagiousness of ring-worm of the scalp as distinctly proven as that of small-pox. I do not mean to say that in the very young infant or the adult the disease will be produced by contact, for at either age it is but very rarely seen, as I have already remarked: but that contagion will give rise to it in children of the age at which it is likely to occur, and also, as in other contagious affections, that some individuals are more predisposed or more prone to its attacks than others. I need scarcely refer to the experience of most physicians as to the spread of this eruption in institutions where the youth of either sex are congregated together, or to the proofs we so frequently meet with, in private practice, of its propagation by contagion from wearing the cap or using the hair-brush of a child affected with the disease. I could relate many instances of both which occurred within my own knowledge, but prefer citing the following remarkable example from M. Cazenave.

“The 29th of April, 1840, I was sent for by the president

of a college at Paris, to see, with the physician and surgeon of the establishment, a number of children affected with an eruption of the hairy scalp. I was informed by them that about the same period of the year before, six or eight children of one of the lesser colleges had been attacked with an eruption similar to that which I had now been sent for to see; that there had not been the least appearance of the disease until the arrival of a young pupil who laboured under the affection previously to his admission; they also remarked that the companions ('*voisins*') of this boy were the first affected; and, in fine, that the eruption was limited to the boys of the lesser college, with a single exception, which occurred in a brother of one of the boys affected, but who was an inmate of another college."(*a*)

Herpes capitis does not cause baldness; the altered hair falls off the diseased patches, which, when the scales disappear in the progress of cure, are thus left in a bald state; but the hair eventually grows on them again, thereby constituting an essential difference between this affection and alopecia. The disease, unless when seen and properly treated in its early stages, soon becomes chronic and obstinate, and loses its inflammatory character.

Eczema capitis.—This, like herpes, is a vesicular eruption; but it soon loses this character, and in its various stages presents so much diversity of appearance that its diagnosis is not always unattended with difficulty: in one of its forms it bears so close a resemblance to impetigo, the eruption next to be described, that by most authors a species has been recognised which they term *eczema impetigonoides*. With the object, however, of attaining simplicity by avoiding numerous subdivisions, I have thought it better to describe the different forms of the disease under one specific denomination.

The eruption of eczema on the scalp is preceded by heat, tingling, and itching, which are rapidly followed by the appearance of minute vesicles, crowded together in irregular-shaped patches, or scattered over a large surface. The interspaces between the vesicles and the whole of the scalp on which they are seated is red and inflamed; in most cases the vesicles are so minute as to be scarcely recognisable, or at least are not seen by the physician until they have burst and given exit to a copious exudation of a serous fluid by which the roots of the hair are accreted together. In the acute forms of the disease this serous exudation continues for a long time, and is a most troublesome symptom; but in the chronic forms—and some cases assume a chronic character almost from the first—it rapidly dries into furfuraceous scales, which are pushed forwards by the hairs as they grow.

The vesicles of eczema usually first appear behind the ear, close to the edge of the hairy scalp, from whence the disease spreads rapidly, very generally attacking the ear itself; in some cases the entire of the scalp will be covered with the eruption in a week or ten days, but in others the disease spreads very slowly.

With the progress of the affection, the appearance of the diseased surface varies much; sometimes it is scarcely, if at all, elevated above the healthy parts, and is only to be recognised by the watery exudation which keeps the hairs in a constantly moist state. In other cases the scalp is raw or excoriated, and secretes a thin, whitish pus, which dries into greyish brown scabs, presenting cracks or fissures, through which the inflamed surface is seen. In a third form of the disease the serous exudation dries rapidly into extremely thin membranaceous scales, which are readily removable by the slightest friction, but cause much itching; and a fourth variety is characterized by a repeated eruption of minute patches of vesicles—the patches rarely exceeding the size of a small bean—all over the scalp, which pass through the stages of eczema as witnessed on

other parts of the cuticular surface, and disappear in seven or eight days, but to be rapidly succeeded by a fresh outbreak of the disease.

The hair in eczema, no matter how long the disease may have existed, remains unaltered. When in the acute forms, attended with much inflammation, ulceration of the scalp occurs, the hair, of course, falls off, but in the progress of cure it grows again in a perfectly healthy state, except that in individuals past the age of puberty the new growth of hair is often grey.

Eczema capitis is not a contagious disease; its cause (and this is also true of the other eruptions which occur on the scalp) cannot be satisfactorily accounted for. They appear on the scrofulous and on the non-scrofulous child, on the healthy and on the delicate, on the ill-fed, ill-housed, deficiently clothed children of the poor, and on the highly-nurtured, well-housed, warmly-clad children of the rich; in short, the only cause we can plausibly assign for their outbreak is that scarcely understood one, *constitutional*. We know that in many families a peculiar predisposition to diseases of the skin exists, and this predisposition appears to be hereditary; the same is true of eruptions of the scalp. Their duration is undoubtedly promoted, though their first appearance is not satisfactorily proven to be caused, by want of cleanliness.

Impetigo capitis is a pustular disease; and the only one of this class which is met with on the scalp. Its occurrence in children is preceded, for a few days, by feverish symptoms, frequently attended with vomiting; the surface of the scalp is hot and painful, and the part about to be affected presents an erythematous blush. The eruption makes its appearance either in distinct pustules of a *psyrdracious* character, scattered over the head, or in groups thickly set on an inflamed base. In the former case each pustule is about the size of a small pea, both in circumference and elevation; and is attended with but little surrounding inflammation. On the second day of their

appearance, each pustule contains thick yellow matter at the summit, but it is soon matured, when it bursts, and gives exit to the contained pus, which rapidly dries into a greenish-yellow scab. This form of impetigo,—the *impetigo sparsa* of most writers,—rarely assumes a chronic character, when it has lasted for any time its continuance being kept up by an eruption of fresh pustules on other parts of the scalp; but it most generally passes into the second form.

The second form of the disease is, as I have said, characterized by the eruption occurring in groups of pustules; but the individual pustules also are different in character, being of the variety which have been termed *achores*. Their appearance is attended with more decided symptoms of inflammation, both general and local, and the heat and itching is in many cases so severe that children tear the scalp and prevent the disease from presenting the truly pustular character of the first stage. The eruption usually commences on the forehead, involving at the same time some of the hairy scalp; the inflamed patches vary in size and form in different cases; in some extending in their longest measurement not more than from half an inch to one or two inches, while in others the greater part of the scalp is involved from the very commencement: in nearly every instance the skin bordering on the scalp is more or less engaged in the disease, and it often appears at the same time on the ears or on some part of the face. The pustules are not so large as when they occur singly; their coats are apparently thinner, and the pus which they contain is not so consistent, and is of a richer yellow colour. They usually become confluent before they burst, and the resulting greenish-yellow (when chronic, greenish-brown) scab is consequently much more extensive. When the eruption has continued for any length of time, large quantities of bright yellow pus are secreted beneath the greenish crusts, which separate in cracks to give exit to the matter, exhibiting beneath the highly inflamed raw surface of the scalp from which the pus is secreted.

In either form of impetigo the hair is unaltered; it is usually matted together by the purulent secretion and the scabs, but it does not fall off or become changed in appearance even in the most chronic cases.

Impetigo capitis is not a contagious disease; it is met with at all ages, but most generally in early infancy, lasting for several years if not properly treated; it very rarely appears for the first time after the age of 9 or 10, but I have seen two instances in which the eruption occurred in advanced life: in both the disease was of the form first described.

In the chronic stage of this eruption of the scalp small abscesses very frequently form at the nape of the neck, close to the roots of the hair; and some of the chain of lymphatic glands, which lies behind the sterno-mastoid muscle, become enlarged, swollen, and tender, but they very rarely suppurate.

Pityriasis capitis is a squamous disease; though I have placed it amongst the inflammatory affections of the scalp, the inflammation with which it is attended is, from the first, of a chronic character; it would indeed seem to form an intermediate division between the inflammatory and non-inflammatory eruptions of this part of the dermis. Its appearance is not accompanied by any sign of constitutional or local disturbance, but soon after its eruption on the scalp it gives rise to much itching, without heat or redness of the surface. The disease consists in the secretion of numerous minute, papyraceous, dry scales, in most cases scattered over the entire of the head, without any sensible elevation of the surface, and perfectly free from moisture. I cannot describe the precise manner in which this eruption originates, as I have never seen it until the squamous secretion was fully developed, there being no symptoms to direct the patient's attention to it until then. The presence of the scales produces much itching, compelling the individual affected to scratch the head, by which the scales are readily detached in large quantity, in the state of a fine

powder or *dandriff*; their removal is rapidly succeeded by a further secretion.

If we examine the condition of the scalp in pityriasis capitis, the surface is found to be closely covered with the imbricated scales, with small intervals here and there; the skin of the unaffected parts presenting a smoother or more polished appearance than natural. On removing one of the scales we find that the spot on which it is seated is soft, and that another finer scale may be removed from it; and it is not until after the removal of several scales, each finer than the preceding, that we arrive at the reddened and inflamed surface of the scalp, which is somewhat depressed.

The chief annoyance which this eruption of the scalp causes is itching; the patient, in scratching himself to allay it, removes large quantities of dandriff; and in the child the irritation is often so great that the scalp is torn, becomes inflamed, eczematous vesicles appear, and the original affection becomes complicated with the latter disease.

Pityriasis is most commonly met with in infants at the breast, the frequency of its appearance decreasing with the advance of years towards puberty, at which age it is very rarely met with, but it again appears at the approach of old age. It thus seems to be most frequent when the head is least covered with hair, and it is also most generally seen in individuals whose hair is naturally thin. Were we to reason on this fact with reference to the causation of this form of eruption on the scalp, we might reasonably conclude that the scaly secretion was an effort of Nature to protect that portion of the surface when its proper covering was deficient in quantity.

In pityriasis capitis the hair remains unaltered.

The differential diagnosis of the four inflammatory eruptions of the scalp will, I think, be rendered most simple by an arrangement of their essential characters in the following tabular form:

HERPES CAPITIS.	ECZEMA CAPITIS.	IMPETIGO CAPITIS.	PITYRIASIS CAPITIS.
<p>A vesicular eruption. Appears in circular patches.</p> <p>Preceding or accompanying inflammation always slight.</p> <p>Discharge serous, small in quantity, lasting only for a few days.</p> <p>Secretion dries into fine, soft scales, which are readily detached by the slightest touch, but are again very quickly renewed.</p> <p>The hair on the diseased patches is bent, twisted, apparently broken, and whitish; as the disease becomes chronic, it falls out on the slightest touch, leaving bald patches, with scattered masses of diseased hair, resembling tow; but with the progressing of cure the hair grows again.</p> <p>Highly contagious.</p> <p>Usually occurs in children from the age of 3 to 12.</p>	<p>A vesicular eruption. In irregularly-shaped patches, or scattered over a large surface of the scalp.</p> <p>Preceding or accompanying inflammation moderate; rarely very active.</p> <p>Discharge, in one form, at first serous, afterwards sero-purulent, very copious; in the other form, trifling, but more copious and lasts longer than in herpes.</p> <p>Secretion dries into either <i>brownish</i>-yellow scales, through which the discharge forces its way, or into furfuraceous scales.</p> <p>The hair is held together by the furfuraceous scales, or is kept in a constantly moist state by the discharge; but its texture and appearance are unaltered.</p> <p>Not contagious.</p> <p>Occurs at all ages, but most frequently in the earlier years of life.</p>	<p>A pustular eruption. Diffused in single pustules, or in closely aggregated confluent masses.</p> <p>Preceding and accompanying inflammation generally active.</p> <p>Discharge purulent; always very copious.</p> <p>The purulent discharge dries into large <i>greenish</i>-yellow crusts, by which the whole head, and even sometimes the forehead and part of the face, is in many cases covered, as if with a mask.</p> <p>The hair is matted together by the thick discharge and scales, but is otherwise unaltered.</p> <p>Not contagious.</p> <p>Met with in children of all ages, but very rarely in adult life. The confluent form of the disease is more common in early infancy; the scattered, after the third year.</p>	<p>A scaly eruption. Scattered over the entire of the scalp.</p> <p>No attendant inflammation, unless it be produced by some irritating cause; slight inflammation usually precedes the eruption.</p> <p>No discharge.</p> <p>The scales are minute, dry, papaceous, and imbricated, though scarcely, if at all, elevated over the surface of the scalp; readily separable in the form of a fine powder or dandruff.</p> <p>The hair is unaltered, but it falls out more easily than natural.</p> <p>Not contagious.</p> <p>Most generally occurs in infancy, and in the advanced periods of life; very rare in childhood, adolescence, and manhood.</p>

The swollen glands of the neck and abscesses of the scalp, though most frequently met with in impetigo, may occur in every form of eruption of the scalp; their occurrence is, therefore, of no value as diagnostic symptoms. Moreover, there does not seem to be any constitutional disturbance *peculiar* to the inflammatory eruptions of the scalp.

Of the four varieties now described, I have met with eczema the most frequently; next to it, impetigo; next, herpes; and pityriasis the least frequently.

The prognosis to be given in any of these eruptions depends more on the length of time which the disease may have lasted, than on the exact variety which is present: the longer they have existed, the more inveterate and obstinate they are, as also the more liable to relapse after cure. When seen early, and submitted to judicious treatment, they are generally cured in from a fortnight to three weeks, and sometimes in a much shorter space of time; but in old standing cases the cure is rarely accomplished in less than from two to three months. With reference to the peculiar form of eruption, I have found the prognosis as to curability to be as follows: 1st. the scattered form of impetigo; 2nd. pityriasis; 3rd. the moist form of eczema; 4th. confluent impetigo; 5th. herpes; and 6th. the dry form of eczema.

As respects the first group of eruptive diseases of the scalp, two principles must, I conceive, be laid down, to enable their treatment to be based on rational, and not on empirical, principles: first, that they are inflammatory, and secondly, that they are constitutional affections. That they are inflammatory is sufficiently proved by the preceding and attendant inflammation with which they are all accompanied, and by the character of the same eruptions when they occur on other parts of the cuticular surface. It is evident from what I have said, when describing their symptoms and diagnosis, that they are not all equally inflammatory, and also that the inflammatory character disappears much when they become chronic. That

they are constitutional diseases is proved chiefly by the great advantage derived from their treatment by the administration of internal alterative medicines.

It is, I am convinced, to the neglect of these two principles that the difficulty of treating scalp diseases, as so generally acknowledged, must be ascribed. For we find that some trust to external applications, others to internal remedies alone; and most practitioners use the most powerful stimulants to the scalp in every form and in every stage of its eruptions. Stimulating applications do unquestionably, in some instances, cure these diseases, when they become very chronic, and have, so to say, nearly worn themselves out; but the manner in which they do so is by exciting a fresh inflammation in the scalp, by which a new action is produced sufficient to change the condition which previously existed there. They, however, more frequently fail, and the existing disease is then much aggravated from their use; it is, moreover, only in the very chronic stage that they ever do prove beneficial, as the employment of even the most mildly stimulating applications proves highly injurious in the early stages of any of the eruptions of the first group.

One general rule which I have adopted in the treatment of every form of eruptive disease of the scalp, and from which, I think, I have derived much benefit, is, *never to shave off the hair*; I direct it to be cut *close* with a sharp pair of scissors, and to be kept cut as closely as possible while the least trace of the eruption remains. The mere operation of shaving the head produces much irritation, and the growth of the hair afterwards continues constantly to excite repeated attacks of inflammation, and thus interferes with the remedies employed. For the same reason I do not permit the use of a comb or hard brush, which are so generally used with the view of loosening and removing the crusts. The *softest* hair-brush may be used, but when the hair is kept cut sufficiently close there is no occasion even for it.

The local remedies which I am in the habit of employing are the carbonates of soda and potash, either made into an ointment with prepared lard, or in solution in distilled water or rose-water. I use them of various strengths, according to the form of the eruption, and the greater or less degree of attendant inflammation. The carbonate of potash, being of a somewhat more irritant character, is applicable only to those cases where the attendant inflammation is slight, as it generally is in pityriasis, in many cases of herpes, and in the more chronic forms of eczema; but the carbonate of soda is best suited for impetigo in all its stages, and for the acute and recent cases of the other eruptions. The quantity of either of the carbonates in the ointment varies from twenty grains to half a drachm to the ounce of prepared lard. As it has an unpleasant odour, in private practice I usually add three or four minims of the oil of lemon or oil of bergamot, which addition also makes it keep better; where, however, the inflammation is very active, even this small quantity of an essential oil would render it too stimulant: in all cases I commence with the weaker preparation. The ointment is applied three times daily, being lightly smeared over the eruption; it is washed off with the corresponding alkaline lotion every morning, previous to the first application for the day. In very inveterate cases, where the head is covered with thick, hard scales, a light poultice of linseed-meal should be first applied for twelve hours, the scalp is then to be covered with a piece of old linen, on which the ointment is spread, and an oil-silk cap laid over the linen; this is left on for twelve hours more, when the scales are readily removable by washing the head with the carbonate of soda lotion. A clean surface is thus procured, on which the ointment acts more readily.

The alkaline lotions are prepared by dissolving from half a drachm to a drachm of the carbonate of soda or potash in a pint of rose water or distilled water. During the whole course of treatment the head is washed, at least once daily, with

either of these lotions. They keep the scalp cleaner, and freer from scabs, than soap and water, which, however, I never permit to be used, as the irritant quality of soap tends much to retard the cure. In some cases, with which greasy applications disagree, but which we cannot ascertain except by trial, I use either of these lotions as the only external application; but then I order it to be applied five or six times daily.

In the chronic forms of any of this class of eruptions the application of a mild stimulant to the scalp becomes necessary, but more especially in cases of impetigo and eczema of long standing. The preparation which I have found most useful is a very dilute citrine ointment,—from half a drachm to a drachm of the officinal ointment to the ounce of prepared lard. This is applied only once daily, at bed-time, and washed off in the morning with the alkaline lotion, which is also used three or four times during the day.

In the treatment of the inflammatory division of eruptive diseases of the scalp, the alterative medicine that I employ is the yellow iodide of mercury (the incorrectly denominated proto-iodide of the London Pharmacopœia): I prescribe it in combination with hydrargyrum cum cretâ and aromatic powder. To a child six years old I give half a grain of the yellow iodide of mercury, two grains of hydrargyrum cum cretâ, and two grains of aromatic powder, every second morning; for an older child I order the same quantity every morning; and for a younger child only every third or fourth morning. Should the child, however, be not more than three years old, I order half the quantity to be administered twice in a week; for infants at the breast, I omit the iodide of mercury, and give either the hydrargyrum cum cretâ or the hydrargyrum cum magnesiâ: the latter preparation I usually prefer, as it is a more certain mild purgative than the former.

In all cases I keep the child strictly on milk diet during the entire of the treatment.

Such is an outline of the plan of treatment I have now

employed for more than six years in this obstinate class of diseases, with almost uniform success, both as regards rapidity and completeness of cure. Some cases, of course, prove more rebellious than others, but I have met very few which resisted for so long as three months the remedies I have mentioned, when carefully and perseveringly employed. Like other skin diseases, eruptions on the scalp are apt to return; I have, therefore, invariably made it a rule to continue the treatment for at least a fortnight or three weeks after the disease has been to all appearance completely cured: this, I need scarcely say, it is often difficult, if not impossible, to do with the children of the poor, our hospital and dispensary patients.

Before I proceed to describe the only remaining eruption of the scalp, I shall shortly relate a few cases in illustration of the preceding observations.

January 31, 1844, I was sent for to see Master O'B., aged two years, a fine boy, with a florid complexion, well-developed body and limbs, and rather fat. He has had an eruption on the scalp from the time he was nine months old, for which he has been ever since variously treated. It is a case of very aggravated impetigo, the whole head and forehead, down to the eye-brows, being covered with greenish-yellow scabs, through which a copious, rich yellow discharge exudes in various parts; of late it has been extending much, and the child's mother was afraid that it would soon cover the whole face. The hair is all matted together, the head is hot, and the tongue is very foul, although his bowels are freed regularly twice in the day; his appetite is good. A light linseed-meal poultice was applied all over the head and forehead, and left on for twelve hours; he was ordered three grains of the yellow iodide of mercury, twelve of hydrargyrum cum cretâ, and twelve of aromatic powder, in six powders; one to be taken twice a week. The next morning, the greenish crusts being quite soft, the hair was ordered to be cut as close as possible, and the scalp and forehead to be washed four times

daily with a lotion consisting of twenty grains of carbonate of soda dissolved in eight fluid ounces of rose water. In a week's time, the scalp being quite free from any tendency to heat of surface or inflammatory action, and the scabs having nearly disappeared, though the discharge was still very copious, the head was ordered to be smeared every night, at bed-time, with an ointment containing half a drachm of citrine ointment to the ounce of lard; the lotion and powders to be continued as before. This treatment was continued without any alteration, except that of increasing the strength of the ointment one-half in about three weeks, until the 2nd of April, when there was not the least trace of the eruption; the hair was then permitted to grow, and he was gradually allowed to get meat, at first only twice a week, for dinner: he had been kept all through strictly on milk diet. I have been attending this child within the last few weeks, and there has never been the least return of the disease since the above date, now more than four years.

This case is a good example of rapid and permanent cure of a very inveterate form of impetigo. Recent cases of the scattered variety of the eruption are often cured in from a week to ten days, as in the following instances:—

Michael Daly, a fine child, three years old, was brought to the dispensary of Jervis-street Hospital Feb. 3, 1848. His mother states that about four or five days ago he complained of his head being sore and itchy, and on examining it she found little boils, as she calls them, on several parts of the head. The entire scalp is now the seat of impetigo sparsa, the hair is matted together in various places by the crusts, and there is a good deal of discharge present. The hair was ordered to be cut close; the carbonate of soda wash—half a drachm to ten ounces of water—to be applied to the head repeatedly during the day; and a third of a grain of yellow iodide of mercury, with a grain and a half of hydrargyrum cum magnesiâ, to be taken every morning. The child was brought to the dispen-

sary quite well on the 11th, but the remedies were ordered to be continued for ten days longer. I have seen him on the 25th of May, up to which time he had no return of the disease.

James Keogh, aged 8, was brought to the hospital, May 2, 1848, with impetigo sparsa of three days' standing; treatment as above; well in ten days.

I have reports of numerous cases of impetigo which were treated thus at the dispensary of the hospital during the last six years, and which were witnessed by the pupils; but it is needless to occupy space with the reports of any more. In one case, that of James Donohoe, extensive ulceration of the scalp on the crown of the head followed the bursting of an abscess which was consequent on an aggravated and long persistent attack of impetigo; and after the eruption was cured by the ordinary treatment, the ulceration healed in about three weeks under the use of a lotion of sulphate of copper, three grains to the ounce, and the hair has since grown on the part.

I have rarely found eczema, even when seen in its earliest stage, get well so rapidly as impetigo, the mildest cases requiring from three weeks to a month, and the more aggravated from two to three months, for their cure. The following case was treated in hospital.

John Halpin, aged 9, was admitted into Jervis-street Hospital, October 19, 1847, affected with eczema of the whole scalp, the left ear being also engaged in the disease; the hair was matted together at the roots, but at its free extremity covered with dry furfuraceous scales. The disease was of twelve months' standing. The hair was ordered to be cut quite close, and a light linseed-meal poultice applied. The next day he was directed to take a powder containing half a grain of the yellow iodide of mercury, two grains of the hydrargyrum cum cretâ, and two of aromatic powder, every morning, and to have the carbonate of soda ointment applied to the scalp three times a day, and the head to be washed every morning with the carbonate of soda lotion. On November 8th, being nearly well,

he was made an out-patient, but, although he attended regularly at the dispensary, he was not completely cured until the 20th of December.

Cases of herpes and pityriasis are much less common than either impetigo or eczema; thus, for the last eight months that I have been on duty at Jervis-street Hospital, I have treated twenty-eight cases of eczema, twenty-six of impetigo, six of herpes, and two of pityriasis; but I meet with both these eruptions in a much larger proportion in private practice. The only additional observation that I have to make as to their treatment is, that they bear stimulants—the lotion and ointment of carbonate of potash, and the dilute citrine ointment—at a much earlier stage, and much more freely, than either of the other eruptions.

Porriago capitis constitutes the second division of eruptive diseases of the scalp. It is essentially a non-inflammatory disease; for although it is in some instances attended with heat, inflammation, and itching of the scalp, these symptoms depend on the presence of minute pustules which sometimes accompany the eruption, but in most cases they do not occur. It cannot be classified in the artificial arrangement of diseases of the skin by Willan, or any of the more recent writers on these affections, inasmuch as it is unquestionably a vegetable growth, a view of its nature first promulgated by Schönlein in 1839(*a*), and by Gruby in 1841(*b*), and since authenticated by the investigations of Hughes Bennett(*c*), Corrigan(*d*), Müller(*e*), Lebert(*f*),

(*a*) Müller's *Archiv. für Anatomie und Physiologie*, p. 82. 1839.

(*b*) *Comptes Rendus hebdomadaires des Seances de l'Academie des Sciences*, tom. xiii. pp. 32, 309. 1841.

(*c*) Transactions of the Royal Society of Edinburgh, vol. xv. p. 277; Edinburgh Monthly Journal for June, 1842; and Northern Journal of Medicine, Sept., 1845.

(*d*) Dublin Hospital Gazette, vol. ii. p. 1.

(*e*) *Archiv. für Anatomie und Physiologie*, 1842, p. 201.

(*f*) *Physiologie Pathologique*, tom. ii. p. 477, p. 22. 1845.

Remak(*a*), Vogel(*b*), Robin(*c*), and others. Its vegetable nature has been denied by Erasmus Wilson, the most recent English writer on the disease; but I have satisfied myself of the correctness of the conclusions arrived at in the investigations above referred to, by a personal examination of the diseased product in two instances with a powerful microscope. I at first failed in recognising the peculiar structure of the fungus, as figured by Bennett, and more recently by Robin, but this arose from using too low a power for the purpose, as Robin's illustrations were made with a microscope which magnified 500 times linear, and the power which I at first used was only 300; but on using a magnifier of 450, the eye-piece being of a low power, while the object-glass was a powerful achromatic, by which means a sufficient power was obtained without sacrifice of light, I was enabled without any difficulty to verify the correctness of his drawings.

Porrigio capitis, *the true tinea or scald head*, is a rather infrequent disease, occurring at all ages, but most generally in childhood, from the age of 3 to 12; I have, however, seen one instance of it in an infant only eight weeks old: the oldest person in whom I have met with it was the young man Kiernan, whose case I shall by-and-by give in full.

Porrigio, in its first stage, does not give rise to either heat of scalp or itching, and, consequently, is very rarely noticed until it is fully developed. It usually commences on the forehead, at the edge of the hairy scalp, but it spreads rapidly over the head, soon involving nearly the entire surface, the healthy patches which are left between the diseased spots being but very few, and small in extent. The eruption is also

(*a*) *Diagnostische und Pathogenische Untersuchungen*, p. 193, figs. 5 and 6. 1845.

(*b*) *Anatomie Pathologique générale*, traduit par A. J. L. Jourdan, p. 391. 1847.

(*c*) *Des Vegetaux, qui croissent sur l'Homme et sur les Animaux Vivans*. Par M. Ch. Robin. Paris. 1847.

met with on various parts of the body, the trunk, or extremities; but I have very rarely seen it there except when it existed at the same time on the scalp.

The appearance of this eruption is so peculiar, and so distinct from all the other eruptive diseases of the scalp, that it cannot possibly be mistaken for any of them. It first appears in the form of small, yellow, dry spots, about the size of a pin's head, of a bright yellow colour, seated on the surface of the skin, which is depressed slightly by them; each spot is distinct, hemispherical, slightly concave, or cup-shaped, on its free surface, and convex beneath, where it is adherent to the skin. On removing the small, diseased mass, that portion of the scalp on which it was seated is found to be somewhat depressed, smooth, and shining. A single crust of the disease, or *favus*,—as it has been termed, from its honeycomb appearance,—is often traversed by one, and sometimes by two hairs, which appear to grow, as it were, from the very centre, or most depressed portion; this has given rise to the notion that the disease is one of the bulbs of the hair, but the fact of its appearance on other parts of the body which are quite free from hair is a sufficient refutation of this opinion.

The eruption spreads by additions to the outer edge or circumference of each crust, which thus retains its hemispherical character, until it attains a diameter of two or three lines, or sometimes more. In a case which I have had recently under my care in hospital, some of the favi which were seated on the back of the trunk were fully half an inch in diameter; on the head, however, they rarely exceed the size above-mentioned. The adjacent favi, as they increase, unite with each other, and form large, irregularly-shaped masses, in which the original circular form of the individual crust is lost; the centre also of each is changed in appearance, and, instead of the cup-shaped depression, the entire surface is covered with alternate elevations and depressions, or, so to speak, ridges and furrows, concentrically arranged. The eruption thus increasing, the whole of the scalp,

often, too, the forehead, the neck, and parts of the trunk, become encased in one large, yellow crust, at the edges of which some favi, of the peculiar characteristic appearance, are invariably to be seen.

The crusts of porrigo are of a pale, sulphur-yellow colour; they are hard and dry, and break with a short fracture, exhibiting within a mealy powder, of a paler yellow than the external surface. They may generally be removed with facility from the scalp, but they bring away with them a thin layer of epidermis, which is firmly adherent to their under surface, through which small projections may be seen with a moderate lens, sometimes with the naked eye. These projections, or processes, pass into the dermis beneath, and when the crusts are torn forcibly away, blood issues through the small orifices into which they were inserted. From the very commencement of the eruption of porrigo the hair becomes altered; much of it falls out, and the straggling hairs that remain are thin, broken, weak, whitish, and readily removable with the crusts of the disease, in which they are firmly imbedded. When this affection has continued for any length of time, bald patches are left after cure, on which the hair does not again grow; and even where it has been cured at an earlier stage, the hair never regains its proper character, being weak, thin, and of a pale, whitish-yellow colour.

As the disease advances, much irritation of the scalp is produced; small pustules form here and there in spots as yet unaffected with the eruption; the tingling and heat are so unbearable as to compel the patient to tear the surface with his nails, even to such a degree as to cause ulceration; innumerable pediculi are engendered; the favus crusts emit an abominable odour, resembling that of mice; and a copious offensive discharge is secreted by the pustules and ulcerated spots: in short, an individual affected with this disease in its aggravated form becomes a loathsome and disgusting object.

I have already referred to the vegetable nature of this

eruption; it is in the spongy, friable contents of the favus that its characters are best seen. "Reduced to powder, and placed under the microscope, it presents," says Robin, "a mixture—1. of tortuous, branching tubes, without partitions, empty, or containing a few molecular granules (*mycelium*); 2. straight or crooked, but not tortuous tubes, sometimes, but rarely, branched, containing granules, or small, rounded cellules, or elongated cellules, placed end to end, so as to represent partitioned tubes, with or without jointed articulations (*receptacles, or sporangia, in various states of development?*); 3. finally, *sporules*, free, or united into bead-like strings. The mycelium is very abundant near the inner surface of the external layer, to which it adheres. The spongy, friable mass of the centre of each favus is principally formed of the sporules and the different tubes containing mycelium already described (*sporangia, or receptacles?*). We often find mixed with them *mycelium* tubes, but in small quantity. All these elements pass insensibly into each other: empty tubes (*mycelium*); tubes containing small, round corpuscules; tubes with corpuscules as large as the smaller sporules; sporules placed end to end, so as to resemble a hollow partitioned cylinder, with a tendency to separate at the joints; and free sporules. Bennett has given a good drawing of this arrangement."^(a) M. Robin gives a minute description of the various parts of which this fungus is composed, as well as faithful and well-executed illustrations of this vegetable parasite, for which I must refer to his excellent essay. I shall only add, that he adopts the nomenclature of Remak, who has termed it "*Achorion Schonleinii*." The botanical characters of the plant are appended in a note^(b).

(a) *Op. cit.* p. 8.

(b) "*ACHORION SCHONLEINII. Remak. Orbiculare, flavum, coriaceum, cuti humanæ presertim capitis insidens; rhizopodion molle, pellucidum, floccosum, floccis tenuissimis vix articulatis, ramosissimis, anastomoticis (?)*. Mycelium floccis crassioribus subramosis, distincti articulatis, *articulis inæ-*

Porrigio capitis is a contagious disease, the vegetable being propagated by the *mycelia*. Its contagious character has been denied by many, on the ground of the rarity of the disease, and the failure to produce it by inoculation, as tried by Gruby and others; the former of whom only produced the disease once out of seventy-six trials on vegetables, and not at all on animals. But Remak succeeded in inoculating his own arm in August, 1842(a); and Bennett, who had previously failed in his own person after repeated trials, succeeded completely in 1845, in producing the disease in one of his class by inoculation and close contact of the favous crusts, obtained from the head of a boy at that time in the Royal Infirmary. An account of his experiment, and also of Remak's, will be found in the Northern Journal of Medicine for September, 1845, p. 202. Now in all these trials to generate the plant, one important fact connected with the natural history of parasitical fungi has been overlooked by all, namely, *that they require for their growth a peculiar soil*; thus we find one genus is only found on snow, another on cheese, another on yeast, different varieties on different decaying vegetable matters, and individual genera and species on various living animals and plants; nay, even different sorts on different parts of the same animal. This holds true with the *Achorion Schonleinii*; it requires for its reproduction to be planted in a peculiar soil, that is, on an individual whose system is in a peculiar cachectic condition; and until it is ascertained what this exact constitution is, a single instance of its propagation by contact—and such instances are not uncommon—must be held as sufficient proof of its contagious character.

Some have held that this eruption occurs in scrofulous persons only; others, that it is an hereditary disease; but neither statements are consistent with the observation of the cases

qualibus, irregularibus, in sporidia abeuntibus; sporidia rotunda, ovalia vel irregularia, in uno vel pluribus lateribus germinantia."

(a) *Medicinische Zeitung*, for 1842.

which I have seen. It appears to have some connexion with, though I cannot say that it is *caused* by, poverty, filth, wretchedness, and a weak development of the mental faculties. Unquestionably where the disease has long existed, the mind is weak, and the countenance presents a somewhat idiotic expression.

I have spoken so fully of the characters and symptoms of porrigo, and it differs so completely from the other eruptive diseases of the scalp, that I do not think any further observations are required on its *diagnosis*. When the affection has become chronic, it is usually complicated with impetiginous pustules, eczematous scales, and pityriasis.

Porrigo capitis is the most obstinate of the eruptive diseases of the scalp, and cases of it are recorded as having resisted the most varied treatment for years; indeed, by many physicians it is believed to be altogether incurable. Our prognosis, therefore, must be always less favourable as regards the duration of this affection, than when any of the other forms of eruption is present. The experience, however, which I have had, enables me to state, that, although an obstinate disease, it is a curable one, and one which, when duly attended to, may be cured in a much shorter space of time than is generally believed.

The plan of treatment which I have found effectual in porrigo is both constitutional and local. The constitutional remedy which I use is the iodide of arsenic, a powerful alterative, and an active remedy, but one which may be given with the greatest safety to the youngest child, its effects being, of course, duly watched. The dose of this preparation is, for an adult, from one-tenth to one-fourth of a grain, very gradually increased; for a child six years old, one-fifteenth of a grain; and for a younger child, from one-eighteenth to one-twentieth of a grain. It is best given to adults in the form of a pill, made with dry manna, and a little mucilage; to a child it is best administered in the form of powder, its minute division being perfected by means of a little white sugar or aromatic

powder. When the system is saturated with this medicine, we usually find that some constitutional symptoms, such as acute headach, dryness of the throat, &c., are manifested; but in some cases I have given it in full doses for many weeks without any manifestation of its effects, further than those produced on the disease for which it was administered. When, however, it gives rise to the symptoms above mentioned, its use should be intermitted for some days, and an active purgative administered.

The following is an outline of the local treatment: the hair is to be cut, *not shaved*, as closely as possible, and a large linseed-meal poultice applied and kept on for twelve hours, so as to soften the crusts. As soon as the poultice is removed, the head is well washed with the stronger carbonate of potash lotion, and slightly brushed with a soft hair-brush or roll of lint; the scalp is then covered with the carbonate of potash ointment spread on lint, and over it a closely-fitting oil-silk cap is placed: the ointment is renewed twice daily. By the use of these applications the crusts of the eruption are generally completely removed in from two to three days. The carbonate of potash ointment is at the expiration of this time replaced by one containing the iodide of lead, in the proportion of half a drachm of the iodide to an ounce of prepared lard; the head is to be still washed every morning with the carbonate of potash lotion. In some cases it will be found that the iodide of lead ointment excites a certain degree of inflammation of the surface of the scalp after it has been used for some days; when such occurs it should not be applied for a day or two, and the lotion alone employed three or four times daily. After this first attack of inflammation disappears, I have not seen it again recur, although the use of the ointment had been persisted in for months. The strength of this ointment should be increased after a fortnight; if the disease again appear, even to double that above indicated. I have only lately employed the oil-silk cap, but its use appears to be attended with the greatest benefit. The ad-

vantage derived from its employment is twofold: in the first stage of treatment, by keeping the hard and firmly-planted crusts of the disease in a constant atmosphere of warm moisture, it softens, and thus renders them more easily removable; and in the after-treatment the mucedinous vegetable being retained by it in the closest contact with the iodide of lead and the emanations arising therefrom, is more certainly destroyed, and its reproduction prevented.

After continuing this treatment for at least three weeks or a month, all external applications should be stopped, and the hair allowed to grow, so as to ascertain if the fungus will be reproduced; for it often lies dormant, and suddenly shoots forth, increasing rapidly when no longer subject to the action of the iodide of lead. Should it again return, the local applications must be had recourse to as before, immediately on its appearance. We should continue the administration of the iodide of arsenic until we are quite satisfied that the cure is complete.

The rational principles on which I think this plan of treating *porrigo capitis* proves successful, and which first led me to its adoption, are: "*That it is a vegetable production, which grows and is reproduced on the cuticular surface of individuals whose system is in a peculiar cachectic state, and, consequently, that it is a constitutional affection.*" The object, then, is, to destroy the vitality of the fungus, and, by altering the nature of the soil on which it flourished, to prevent its reproduction. It is with the first view that I use the iodide of lead as a local application, and to fulfil the second indication that I administer internally the iodide of arsenic. Numerous metallic salts are, it is well known, and has been experimentally proved, poisonous to vegetables; but the inferior classes of vegetables, like the lower classes of animals, have a much more persistent vitality than those placed higher in the scale. So numerous were the local applications that had been employed, without success, in the treatment of *porrigo*, that but few were left

for me to try. Corrosive sublimate, as used by Dr. Corrigan(a), seemed to have proved the most successful of any, but the danger of its application to an extensive diseased surface for any length of time, from the constitutional symptoms which it must be so apt to produce, was to me a sufficient contra-indication to its employment. Iodide of sulphur had been very generally used on the Continent, with little advantage; but I am not aware that any person had previously employed the iodide of lead.

My reason for administering the iodide of arsenic internally, in preference to other alteratives, was, that I had seen it productive of the best effects in other cuticular diseases, in which the constitution was much engaged, especially in inveterate cases of psoriasis. I also found that it combined the effects of a tonic and alterative, the class of remedy indicated in this affection, and that its use, even when continued for a lengthened period, was unattended with danger. I restrict the patients to a purely milk diet, because, as I have already mentioned, when speaking of the inflammatory eruptions of the scalp, I found it useful in their successful treatment. I shall now conclude with a short account of a few cases in illustration of the effects of these remedies.

The following case was reported by Mr. J. B. Watson. Owen Kiernan, aged 18, was admitted into Jervis-street Hospital, May 23, 1846, affected with a copious eruption on the scalp. He states that it first appeared about three years and a half ago, when he took it from his brother, who was older than himself, and who laboured under the disease for years. At first he thinks that there used to be some matter on his head with the pimples, and that it caused him much itching and annoyance, his hair falling out readily; but he is quite positive that for the last two years it has been quite dry and powdery. At present his health seems good, but he has a foolish appearance,

and is evidently somewhat silly. The top of his head is quite devoid of hair, of a clear white colour, smooth and shining, with rather large-sized opaque yellowish scales scattered over it at considerable intervals. On the temples and back of the head the hair is still remaining, but it is thin, whitish, broken, and like tow; it is on these parts that the disease exhibits itself chiefly; appearing in the form of a number of *saucer-shaped* scabs, sometimes separate, but mostly confluent, forming crusts of irregular shape in some places, and scattered pretty thickly over the intervening spaces. Each scab is nearly circular, dry, raised at the edges, concave at the centre, and pierced with usually a single hair, but sometimes a tuft of hairs, which it firmly encircles. They are of a pale sulphur-yellow colour, and show a tendency to crumble into a deeper-coloured yellow powder. There seems to be no inflammation around the bases of the scabs, or in the subjacent tissues, but the entire scalp is covered with pediculi and exhales an abominable odour. He has been repeatedly subjected to various treatment, but without the least benefit.

The day of his admission a linseed-meal poultice was applied to his head; and the next morning it was ordered to be washed with the carbonate of potash wash, and the following mixture was prescribed for him: bicarbonate of soda, two drachms; simple syrup, four ounces: dissolve. A tea-spoonful to be taken three times a day in a glass of water. To have milk diet.

May 28. He was ordered two grains of the iodide of arsenic, to be made into twenty pills with the aid of hard manna and mucilage, of which one was to be taken three times a day; and an ointment composed of half a drachm of the iodide of lead, six drachms of prepared lard, and two of white wax; with which the head was directed to be smeared three times daily; the carbonate of potash lotion to be still used every morning. On the 23rd of June the carbonate of soda lotion was substituted for that of the carbonate of potash, and the ointment was

directed to be stopped; and on the 26th of June, there being no appearance of any return of the disease, he was made an out-patient. This young man presented himself at the dispensary of the hospital in May, 1847, nearly twelve months afterwards, up to which time there had been no return of the disease.

Another case, which I attended much about the same time in private practice, a child eight years old, in the middle rank of life, was treated precisely as Kiernan, but was not cured for more than three months, a relapse having occurred at the end of the second month, which I ascribed to the child being allowed to indulge too soon in animal food.

The following is an example of the very inveterate character which porrigo usually presents. I regret much that, at the time I was treating it, I was not aware of the benefits derivable from the use of the oil-silk cap; as had it been employed I feel confident the cure would not only have been permanent, but more rapid.

Catherine Molloy, aged three and a half years, was admitted into Jervis-street Hospital, October 9, 1847. She is a full child, with a heavy, stupid expression. The entire of her head is thickly covered with large yellow crusts of porrigo, small distinct favi being scattered over the forehead and neck. The disease is also present on the back, extending from the tip of the right shoulder to the last rib, and from the axilla to the vertebræ, but not passing the median line. In this latter situation some of the favi are fully an inch in diameter, but for the most part they form a large crustaceous mass of a bright yellow colour: there are also some spots on the arms and other parts of the body. The whole of her person emits an exceedingly offensive odour, and she is covered with pediculi. The hair on those parts of the scalp to which the disease has not yet spread is of a dark brown colour, and matted together by the discharge from numerous impetiginous pustules, which are thickly scattered on them.

Her mother, who is one of the lowest class of beggars, has one other child, an infant at the breast; she states that this little girl has been affected with the disease since she was a few months old; the infant has some spots of it on the head, and she herself also has numerous crusts of the eruption on her head and neck. She states that both she and the infant took it from the elder child, the infant first, herself afterwards from the infant.

The child was first cleansed as well as possible in a warm bath, and the pediculi destroyed with mercurial ointment. The hair was then cut close and the treatment I have above described employed, except that the iodide of lead ointment was used much weaker (fifteen grains to the ounce); and as I was afraid to give the iodide of arsenic to so young a child, the yellow iodide of mercury was substituted for it. On the 20th of October the strength of the ointment was increased, and on the 21st the iodide of arsenic was prescribed in the dose of a twenty-fourth of a grain every morning. On November 5 the eruption on the trunk was nearly well, and that on the head much better. The strength of the iodide of lead ointment was increased to half a drachm to the ounce, and the iodide of arsenic was prescribed in doses of the eighteenth of a grain daily.

December 29. There was not the least trace of the eruption on the trunk, but a fresh outbreak of it had occurred on the scalp, which a few days previously was nearly well; an ointment was ordered to be applied to it, containing a drachm of the iodide of lead to the ounce of lard; and the twelfth of a grain of the iodide of arsenic directed to be taken every morning. On the 24th of January she was so well that the ointment was stopped and the carbonate of soda wash ordered to be used four times daily. The disease, however, again broke out on the head, but not at all on the trunk, early in February; and my term of attendance at the hospital having expired the end of that month, I lost sight of the case, which was dismissed from hospital immediately afterwards by my colleague.

This case is especially interesting, as showing the safety with which iodide of arsenic may be given to a very young child; during the time that its use was continued, nearly four months, I had only to intermit its use twice in consequence of its causing headach, which was readily removed by a mild purgative. The repeated outbreaks of the eruption I ascribe to the complete impossibility of keeping the child strictly on milk diet; being so young, she was made a pet of by the other patients in the ward, who were constantly giving her meat: this I was told by the nurse, and it was proved by the condition which the child acquired. I may remark here that this is the greatest difficulty I find in treating eruptive diseases of the scalp in private practice; parents are so much afraid of their children not growing strong if they are altogether debarred the use of animal food. The strict adherence to milk diet, however, I look on as an essential part of the plan of treatment I have laid down.

The next and last case which I shall narrate, though still in hospital (June 5, 1848), is, I am quite confident, completely cured. I am chiefly anxious to introduce it here, because it is the first case of porrigo in which I have used the oil-silk cap, and its progress to amendment has been much more rapid than any case that I have hitherto treated. It is reported by Mr William Moore.

J. Maginn, aged 8, a fine healthy-looking boy, was admitted into Jervis-street Hospital, May 15, 1848. He states that about three years since some small spots appeared on the back part of his head, which gradually spread in every direction until nearly the entire of the scalp was covered. It now presents the characteristic appearance of porrigo, a large bright yellow crust enveloping the head and spreading down the left cheek in front of the ear; the hair is thin, scattered, broken whitish, and enveloped in the favous crusts. There are also some spots of the eruption on the back and on the right leg. The head is covered with pediculi, and emits a disagreeable

mousy odour. He states that he contracted the disease from putting on the cap of a schoolfellow who had a sore head. He has been variously treated without the least benefit.

On admission the hair was cut close, and a large linseed-meal poultice applied over the head. Next morning he was ordered an ointment, containing twenty grains of the iodide of lead to an ounce of lard, to be spread on lint and applied over the entire of the head, which was to be then covered with a closely fitting oil-silk cap. The head was also ordered to be washed every morning with the carbonate of potash lotion, half a drachm to twelve ounces of water. For internal administration the following powders were prescribed: iodide of arsenic, a grain; hydrargyrum cum cretâ, thirty grains; aromatic powder, thirty grains; to be divided into fifteen powders, one to be taken three times a day. To be kept strictly on milk diet.

June 4. The eruption has been now for some days completely eradicated, both on the head and body; the ointment was ordered to be stopped and the hair to be allowed to grow, but the powders and lotion to be continued for another week.

ART. III.—*An Outline of the History of Pharmacy in Ireland.*

By WILLIAM D. MOORE, M. B., Licentiate of the Royal College of Surgeons, Edinburgh, and of Apothecaries' Hall, Dublin^(a).

CIRCUMSTANCES having a short time since directed my attention to the early history of pharmacy in Ireland, I was fortunate enough to discover some old and apparently forgotten documents which afford so much information on the subject that I am induced to think a brief sketch of the facts deducible from them may not be uninteresting. Before, however, entering on the more immediate subject of this paper, I shall

(a) I am happy to acknowledge my obligation to Dr. Aquilla Smith for much valuable assistance in the compilation of this Paper.