Lectures on clinical surgery. Vol. I. Pt. I. On certain rare diseases of the skin / by Jonathan Hutchinson.

LECTURES

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ON

CLINICAL SURGERY

BY

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VOLUME I—PART I

(ON CERTAIN RARE DISEASES OF THE SKIN)

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PREFATORY NOTICE.

The present publication constitutes the first part of a series which I hope to produce on various departments of Clinical Surgery. It will be followed, I trust, in a few months by another which will complete a Volume devoted chiefly to certain rare Diseases of the Skin. Others are in preparation—(1) *On Injuries to the Head*, (2) *On Syphilis*, (3) *On Gout and Rheumatism*, (4) *On Diseases of the Eye*, and (5) *Miscellaneous Topics*. Some of these are already considerably advanced. I have after much consideration decided to issue them in parts on account of the great difficulty I have found, whilst working simultaneously at many subjects, in completing a volume on any single one. The plan adopted will allow of several volumes being in progress at the same time, and will thus prevent, to a large extent, the risk of the material growing old from delays. It is hoped that this advantage will more than counterbalance certain inconveniences which must be encountered.

The volumes will consist chiefly of Clinical Lectures and of extracts from Clinical Lectures, but in many instances tabular statements, or series of corroborative cases, will be introduced which would not have been adapted for oral delivery. Some of the Lectures have already appeared in print in different weekly Journals, but most will be new, and all reprints will be carefully revised.

15, Cavendish Square;
May, 1878.

CLINICAL LECTURES.

LECTURE I.

MOLLUSCUM CONTAGIOSUM.

Its interest.—Rarity on the Continent.—General statements.—Peculiarities when inflamed.—Facts as to contagion.—May be mistaken for syphilis.—Experiments.—Rare on the scalp.—Treatment.—Instances of its occurring over the whole body.

Gentlemen,—Molluscum contagiosum is, as I shall hope to show you, much more than a mere curiosity in pathology. Not only does it present a problem as regards cause, which, though apparently easy, has as yet baffled our microscopists, but it now and then offers to the practical surgeon difficulties in diagnosis, and may cause serious mistakes.

As to the main facts in its clinical history, there can be, I think, but little doubt. The small, pearl-button-like tubercles, which constitute the disease, are in nine cases out of ten easily recognised; they can, indeed, scarcely be confused with any other malady by an observer who has ever seen either a well-marked case or a good portrait. The difficulties in diagnosis to which I alluded just now occur only in very exceptional cases; for the most part there is no skin eruption which it is more easy to be sure about. The comparison to a pearl-button is apt, not alone in that 'the tubercles present little round, abruptly margined eleva-

tions, but that there is in the centre of each a depression (or occasionally more than one) which will bear comparison with the needle-holes in the button; in colour, however, the comparison will not hold good, the molluscum tubercle being usually pink instead of white. The central depression just described is invariably present, and from its conspicuousness we get a clue to the anatomical structure of the tubercle. The depression leads to, or, perhaps, more accurately, is formed by, the enlarged orifice of a much enlarged sebaceous gland, and it leads straight into the interior of a little cyst containing sebum. The occasional presence of several little holes near together is accounted for by the enlargement and adhesion of a group of glands. The sebaceous character of the tubercles of molluscum has been recognised ever since the disease was first described by Bateman, and the central pit has given rise to the name *acne umbilicata,* by which the eruption is known in Paris.

Let me state here that molluscum contagiosum is, I believe, far more common in England than on the Continent. Although the disease has been long and well known with us, it is only within the last few years that cases have been described either in France or Germany, and they have in these countries been spoken of as interesting rarities. The disease is not figured in any of the older Continental Atlases of skin diseases, and the first and only portrait of the malady published abroad with which I am acquainted is that given by Hebra a few years ago. In England, on the contrary, Atlases of skin diseases and those devoted to diseases of the eye vied with each other in the accuracy of their delineations of this very characteristic eruption, the disease being, as you may know, most often met with on the eyelids.* Another proof that it is less common on the

* It would not be without interest to collect further data as to the geographical distribution of contagious molluscum. It seems to be common in Scotland, if we may judge by the numerous obser-

Continent than with us I deduce from the fact that I find but few Continental surgeons willing to admit that it is contagious; whilst as to this fact few English observers can entertain any doubt, the evidence in favour of contagion of molluscum being almost as strong as it is in the case of scabies.

The following are, I think, some of the statements which are true concerning this curious malady. It is one, let me observe, which stands remarkably alone, having, so far as we are aware, no relations, unless, indeed, in the future it should be proved that the verrugas of Peru (the pian of some authors) is an allied form.

1. The spots of molluscum contagiosum consist of enlarged and distended sebaceous glands.
2. It occurs, by preference, in certain positions, being more common on the eyelids and face than elsewhere.
3. Although showing preference for certain groups of glands, it may, in rare instances, become almost universal.
4. However general the eruption may be, it is never seen in the palms and soles (parts in which there are no sebaceous structures).
5. It does not in the slightest degree depend upon constitutional peculiarity, but occurs in the healthy and delicate alike; nor does it induce any material

vations published on the subject by Scotch surgeons. About Ireland I do not know. It seems almost certain that Celsus (I am indebted to Mr. Wilson for the quotation) knew it well, and that it was pretty common amongst the Greeks. Report says that it is common in India. From the fact that it occurs so often on the eyelids, molluscum contagiosum may be inquired for at ophthalmic hospitals with even more success than at those for diseases of the skin. In 1828 Cazenave and Schedel wrote of it that it was a "very rare disease," and that it did not appear to have been as yet observed in France.

constitutional disturbance, however general it may become.

6. It is commonest in the young, but may occur at any period of life.
7. It is easily cured by local means, but is not in the least influenced by constitutional ones.

The papules of molluscum contagiosum present different appearances at different stages, and in connection also with the greater or less degree of inflammation which occurs about them. At first they are seen as minute, pale, shot-like pimples, which in proportion to their size show a remarkable tendency to rise up from the surface. From the first a small orifice may be distinguished in the centre. Rather quickly the pimples increase in size, and as they do so become flat-topped and rise higher and higher above the adjacent level of skin. This tendency to become elevated is a very remarkable feature, and is, I suppose, accounted for by the circumstance that the first stage of the disease consists in simple overgrowth of the gland with inflammation around it, without much distension of its cavity, while it subsequently becomes prominent from the accumulation of altered secretion within.

We know that in acne, where the spots, as in molluscum, consist of enlarged sebaceous glands, there is no tendency on the part of the diseased follicle to eject itself from the skin; on the contrary, it rather tends to become deeply embedded. Now, in acne there is little or no true hypertrophy, while there is always inflammation of the parts around and distension of the cavity either with secretion or with pus. It is true that at a later stage the molluscum tubercle becomes distended with secretion and contains far more than we ever meet with in acne spots, and this would lead us to suppose that it is the absence of surrounding inflammation which constitutes the main difference, and which in the former favours the extrusion of the gland. In the later stages of

sebaceous cysts in the scalp (wens) we see the same tendency to extrusion, but here, no doubt, it is chiefly due to the proximity of an unyielding surface beneath, which prevents the enlarged gland from remaining embedded below the general surface. That the absence of inflammatory action around the gland is the main difference in the case of molluscum is also made more certain by the fact that when a molluscum tumour does inflame it loses its characteristic features and usually becomes embedded in the swollen structures which surround it. The tendency to extrusion often goes so far in cases of molluscum that the little tumour becomes pedunculated and finally drops off, and is thus spontaneously cured. Occasionally a molluscous gland will cause acute inflammation around it, and a painful swelling not unlike a small boil will result, and in such cases you must not expect the peculiar characters just described to remain; they will be completely hidden in the inflammatory swelling and redness. A correct diagnosis is, however, essential in these instances, for if the furuncle be really of molluscous origin it is very desirable that the gland should be taken completely out. In one remarkable instance I removed from the eyelid of an elderly lady an acutely inflamed molluscum cyst as large as a small cherry which had presented quite a formidable appearance; it had been in this state for nearly a month, but after the removal the inflamed parts healed immediately. I show you here a sketch from another case of inflamed molluscum on the eyelid of a little girl, which well illustrates what I have just said as to the deceptive appearances assumed in this stage.

When a molluscum tumour is only moderately inflamed a still more important mistake in diagnosis becomes possible. The tumour, being hard and abruptly margined, although surrounded by a certain amount of inflammatory swelling, may be mistaken for an indurated chancre. It has happened to me four times to see this mistake made, and in one of

the cases the patient had been put under the full influence of mercury by the surgeon, who ultimately brought him to me, complaining that the hardness did not in the least diminish; I convinced him that we had to do with molluscum only by cutting the little tumour out. In two or three other cases of molluscum on the genitals patients who were conscious of having been exposed to risk came to me in the belief that the disease was venereal. This mistake is more likely to occur when molluscum is, contrary to rule, solitary or nearly so. I have here a coloured sketch showing a large inflamed molluscum just above the nipple of a woman. She had been suckling an infant who had the disease on the face. I had the drawing made solely to illustrate the remarkable similarity of the aspect of the sore to a hard chancre, and whilst the artist was engaged on the case in the hospital ward several surgeons who saw it expressed an opinion that it was really a chancre; all doubt was removed, however, by the excision of the cyst.

Molluscum is much less frequent on the genitals than on the face, but I suspect that the difference is explained simply by a corresponding difference in the frequency with which these parts are respectively exposed to contagion. In nine cases out of ten the molluscum of the face is seen in young children, but when the disease occurs in young adults it is as common on the genitals as elsewhere. Indeed, after the period of childhood the face is but rarely affected. No doubt the frequency with which the skin of the face is washed in adults and the rarity with which it is kept long in contact with others, especially with the faces of those who exhibit any appearances suspicious of disease, explain this. With young children it is different. I have never myself chanced to see the disease on the genitals of married persons, but a case is mentioned by Dr. Paterson in which a young man had the tumours on his penis and his wife similar ones on her vulva.

You will see that I assume the contagiousness of molluscum as settled. I have indeed little doubt but that when the discovery of its real cause is made we shall find that the disease depends upon some parasite as definite and special as the *sarcoptes* of scabies, or the *Achorion Schönleinii* of favus. Whether it is animal or vegetable it would be premature even to guess. I have already stated some of my reasons for believing it to be contagious, but may add a few more. Here you have the New Sydenham Society's portrait of the disease, showing the face of an infant and the nipple of its mother both affected by it. I have seen this same occurrence in two or three other instances. At the Metropolitan Free Hospital, where, amongst the crowds of neglected children who were brought, I used often to see the disease, a mother once came with three children all of whom had it. "Do you know whether they have caught it from any one else?" I asked. "Oh yes," she said, "I have no doubt of it, for nearly every child in our yard has them." In my experience the knowledge on the patient's part that the disease has probably been caught from some one else, or at any rate has existed in several members of the same family, has been quite as common as the like knowledge or facts in cases of scabies.

The facts recorded by other observers are also strongly in support of the doctrine of contagion. Of Bateman's seven cases three were children and two servants in the same family, while the remaining two were children living together. Dr. John Thompson in 1821 saw it in three children of the same family, the boy first affected having, as was believed, brought it home from school; and in a second series the same observer witnessed it spread by contagion to three persons, from a farm servant to a child and from the child to his nurse. Dr. Henderson, who records five cases, observed it in three children of one

family, a fourth being a neighbour. Dr. Paterson recorded in one instance the conveyance of the disease from the face of an infant to the breast of its mother, and in another from the vulva of a wife to the genitals of her husband.

I have never made any experiments in artificial contagion, never having been able to feel in any need of convincement. Such experiments would, however, be very valuable and might possibly not only still further illustrate the fact, but also help us to find out in what part of the secretion the contagium exists. Dr. Paterson made an unsuccessful attempt, but we learn from a statement in Dr. Dyce Duckworth's second memoir on this disease that he afterwards succeeded in three or four separate cases.* Unsuccessful attempts to induce artificial contagion have been made by Hebra and several other German inquirers. It is not quite certain that in all of these the cases from which the material used for inoculation was procured were really instances of this disease. In Hebra's cases there could have been, of course, no mistake however, and we may freely admit that the artificial transmission of molluscum is not to be accomplished very easily. This, indeed, we might have expected, for were the contagion easily conveyed the disease would probably be much more common than it

* I am not aware that Dr. Paterson has himself published any account of his experiments. The words in Dr. Duckworth's paper are, "Dr. Paterson also informs me that his later inoculations succeeded, the conditions being that the contents of the tumours were inserted into the mouths of the follicles in a tender part of the skin, such as the angles of the mouth, axillæ, mamma, &c." It is added in a note, "In three or four cases he succeeded in producing a goodly set of enlarged sebaceous glands, secreting a milky fluid, and in every way resembling the disease. Dirt," he thinks, "is an essential element for success in inoculation" ('St. Bartholomew's Hospital Reports,' vol. viii, p. 64, 1872). Dr. Duckworth's papers are full of valuable facts; the earlier one is in vol. iv of the same 'Reports' (1868).

is. Dr. Duckworth states that he has himself made many trials of inoculation both on his own skin and on that of hospital pupils, and that, although precautions were taken to prevent removal of the secretion by washing, he never succeeded.

It should be stated, however, that Mr. Wilson considers that the epithet *contagiosum* is inaptly applied to a disease which in his opinion is dependent on debility both of tissue and constitution, and of which the occurrence in several members of a family or locality is attributable rather to endemic causes than to contagion.

Hebra also holds the opinion that the disease is not contagious, and thinks that no satisfactory explanation of its cause has been given.

You will see, then, that the problem before us in reference to this malady is, *me vatice,* a very simple one. We have only to find some form of *contagium animatum* which can explain the production and spread of this sebaceous disease; there is, I suspect, little else to be made out. It occurs to all ages and on all parts of the skin where sebaceous glands exist, and has no reference to the age, sex, or health of the patient. As to its occurrence or frequency in the dark races I am not aware that any observations have as yet been made, nor do I know whether it has ever been identified on the skins of the lower animals. This reminds me that I have not yet told you how rare it is on the scalp. It would seem, indeed, that possibly the presence of large hairs offers some difficulty to its implantation. It may, however, occur with considerable severity on the scalp. A hairdresser once consulted me for a thick mass of diseased skin on the right side of his scalp just above his temple, where, in the course of his occupation, he was in the habit of putting his comb. On examination I found a patch as large as a crown-piece made up of confluent molluscum tubercles. Some of them were inflamed and suppurating.

Their condition is well represented in the portrait which I hand round. He thought that the irritation of the comb had caused it, and I had no doubt that the implement in question had been the means of conveying contagion to him from some one of his clients; and probably a good many subsequent customers had run some risk of receiving it from him in turn. Amongst other of the less usual places in which molluscum spots are sometimes seen is the verge of the anus. This portrait shows their aspect in this position. I do not think that I have ever seen them there excepting in this case and in one other.

The treatment of molluscum may be very satisfactorily conducted on the hypothesis as to its nature which I have suggested. If the tumours are in the earliest stage, not larger than pins' heads, I believe that they will rarely advance further if a little ointment containing sulphur and the ammonio-chloride of mercury be systematically rubbed into them; in the course of a week or two they will usually disappear. If, however, they have attained a larger size, then, although the disease may be arrested by such measures, the case will be slow and the individual tubercles may persist for a long time, with the risk that they may inflame at any moment. In all such cases it is far better at once to remove them. Remember that you have to take out, not only the contents of the gland, but the hypertrophied gland itself. This is not difficult, for the gland has but slight adhesions to adjacent parts; just as after freely cutting into the scalp you can squeeze out a steatoma with the two thumb-nails, so on a smaller scale can be done with molluscum. It is better to cut off the front half of the little tubercle, thus removing the orifice of the gland and the epidermal layers with which it is united, and leaving the middle of the gland-cavity exposed; then with the thumb-nails the remaining and deeper half of the follicle can easily be ejected from its bed. Be careful that the whole gland is

removed, for if any portion be left it will inflame and hinder healing, whereas if the gland be wholly removed the little wound will heal immediately and no scar will result. You have indeed removed a thin layer of epidermis, but no true skin. A pair of sharp scissors curved on the flat is the most efficient instrument, but the sharp point of a cataract or tenotomy knife will do very well. It is a lazy plan on the surgeon's part, and slow and painful for his patient, to touch the spots with nitric acid and leave them to shrivel, and this plan should be resorted to only when either they are very small or so very numerous that their excision would be unusually painful. The excision method becomes essential when the cysts are situated on the eyelids.

After you have excised a molluscum tubercle the identification of its anatomical structure is very easy; externally, are readily seen the lobules of the gland, while within is an irregular cavity with prolongations extending into the lobules, and which contains white sebaceous matter. The walls of the follicle are much thickened, generally enough so to allow of the cyst-cavity retaining its form even when cut across, and in these features the molluscum tumours exactly resemble the little swellings known as Meibomian cysts, which are so common in the eyelids. In the latter the gland hypertrophies and secretes and, as in molluscum, by far the best treatment is complete excision. I always make a free crucial incision on the inner surface of the lid, and then carefully eject the gland by pressure; the contents of the cyst are fluid and often like a drop of gruel, but the substance of the gland is quite different, being solid and jelly-like. Now and then a Meibomian cyst may be got out whole, and then its structure may be identified almost as easily as that of a molluscum, but more commonly it is so soft as to break up under the pressure required to eject it. Although, however, molluscum and Meibomian cyst tumours

thus closely resemble each other, allowance being made for the difference between the glands in which they originate, still there is no reason to believe them in any way connected. I never met with them together, nor do I believe that the Meibomian tumours are caused by contagion; they result in most instances probably from accidental occlusion of the gland-orifice by a plug of indurated secretion.

I have reserved as the last subject to mention in this lecture certain rare cases in which the molluscum eruption is unusually severe and extensive. In most cases the disease is restricted to one region and the tumours may easily be counted. I do not, indeed, know that the cases to which I now ask your attention have as yet been described by any author. In them the eruption is so copious that the greater part of the skin is almost covered. I have seen but few such, and in all the patient was an adult. One of them a man æt. 46, came under my care at Blackfriars, and the state of his body is well represented in this portrait; you will notice that the little spots which cover his arms and trunk are for the most part so small that their true character as molluscum might even have been doubted. The following are the details:

Case of molluscum contagiosum, very abundant and presenting peculiarities; many of the spots very small and lichen-like.

James Thomas L—, aged 56, was sent to me by Mr. Tay in September, 1871, with a very copious eruption of molluscum contagiosum. His case presented several features of unusual interest, both with regard to the skin disease and in reference to the hereditary transmutability of the various arthritic diseaess.

The eruption. — His arms and trunk were covered with spots of molluscum of various sizes, some of them very small. They presented some peculiarities, so that at first I did not recognise the disease. On the backs of the arms the eruption was very copious, but none of the spots were larger than No. 6 shot. Most of them were pointed, and they were so smooth and semitransparent that they looked just like vesicles. I was astonished on touching them to

find them all solid, and almost as hard as shots. On still more careful inspection I found some from which small horns projected, and on seizing each horn with forceps a small pellet of very firm sebaceous matter was extracted; I pulled out these from at least a dozen spots. Many spots showed small central depressions. On some parts two spots were joined together. On his back, breast, and shoulders there were many larger spots of the size of split peas, and in all stages of progressive ejection from the skin; some were quite pedunculated, and almost all were elevated and a little constricted at their bases. Many of those on his back were as large as swan-shots, flat-topped, and with budding growths from the interior of the gland. None of them contained any material quantity of fluid. They could be easily enucleated. There was no inflammation of the surrounding skin and had been no pain whatever. It was perfectly evident that the spots were enlarged sebaceous glands, but I felt a little reluctant at first to think them merely molluscum contagiosum. Their abundance, small size and the absence of fluid secretion seemed points of difference; but my conclusion was that these were merely minor features and not of real importance. It seemed possible that he had caught the disease at a Turkish bath.

When the above case occurred I had not previously seen any exactly similar one, and I did not see another until a few months ago, when my friend Dr. Crosby sent to me a gentleman whose skin was in much the same state. This patient was about 25, and in excellent health. He knew of no source of contagion. He was covered with molluscum-spots, some rather large, but many small. They were especially abundant on his chest, back, and abdomen. Under treatment, in part by excision and partly by white precipitate ointment, Dr. Crosby in the course of a few months effected a cure.

About the time the preceding case was under notice, my colleague Mr. Waren Tay told me that he had under care at Blackfriars another example of general molluscum. In it the patient was a man of 23, a compositor. The eruption had begun under his jaw, and had thence spread to the forehead, cheeks, and lower extremities.

In the autumn of 1875 a fourth example of molluscum

as a profuse general eruption came under my observation. A gentleman, aged 33, had been for some months under treatment for unquestionable syphilis. Part of his eruption, however, persisted in remaining, in spite of mercurial baths and other measures. In this condition he was sent to me. He had more than a hundred molluscum-spots, most of them of considerable size and many pedunculated. They were scattered over his trunk and limbs. He was delighted when I told him they were not syphilis, and could be easily cured by excision, and at once stripped naked and allowed me to cut away almost the whole of them. We finished the business a week later, and although he suffered subsequently from other syphilitic symptoms he never had another single molluscum-spot.

I do not suppose that there is any difference between these cases and others, excepting in the unusual extent of the disease.

A curious point in the history of molluscum contagiosum is its easy curability, I may almost say its tendency to spontaneous disappearance. It is not often that a case lasts longer than six or eight months, whether treatment be used or not, and this is probably to be explained by the two facts that the disease is not very easily communicable and that the individual tubercles are of short duration.

In conclusion, let me just add that molluscum contagiosum *seu* sebaceum stands quite alone, and has no connection whatever with other diseases of the same substantive name.

LECTURE II.

VARICELLA-PRURIGO.

General statements.—Its occurrence after vaccination.—A fatal case.—The vaccine exanthem.—Trousseau's experience of persisting varicella.—Cases.—Tabular statements.—Summary.

Gentlemen,—We meet occasionally with an eruption in children, concerning which it might be asserted, with some plausibility, that it is a kind of persistent chicken-pox. When the eruption first shows itself, it either is chicken-pox or is exactly like it. The cases, from the observation of which I make these statements, have seldom been of less than a month's duration, and in nearly all the mother of the patient stated that the doctor who first saw the case said that the rash was chicken-pox. In a few, the original diagnosis has been modified smallpox; and in some others it followed so closely on vaccination that it was attributed to it. In a few others, no medical opinion had ever been obtained, but the mother described the eruption as having come out copiously, and as having consisted of clear watery vesicles. I think, therefore, that I am safe in stating that it is probable that these cases do begin as *bonâ fide* varicella. Their peculiarity consists in that the eruption, instead of disappearing in a few days, is indefinitely prolonged by the succession of fresh crops, and that the spots ulcerate and scab, sometimes becoming large sores. Great irritation is produced, and the child becomes fretful and thin. The eruption may last

for months, and the spots then come to resemble ecthyma on the one hand, or yet more frequently the disease known as *lichen urticatus*.

I do not think that after the first stage we ever notice any vesicles so similar to those of varicella as to be likely to be mistaken for them, but throughout its course the disease is attended by the successive formation of fresh vesicles of a certain kind. On parts where the skin is thin these vesicles are like those of pemphigus on a small scale, become turbid very quickly and are soon broken by the patient's scratching. On the palms of the hands and soles of the feet, however, it is not uncommon to find perfectly transparent vesicles somewhat deeply placed and persistent for a few days. Wherever on the thinner parts of the skin the miniature bullæ have been broken, red excoriated or scabbed patches result, and on the scalp thick heaped-up scabs, like those of porrigo, may sometimes be seen. The eruption is attended by intense irritation, and everywhere the child's skin shows the effects of scratching. It is not uncommon for the mother to assert that the child scarcely sleeps at all. Now and then this eruption, as I have said, is attributed to vaccination; but in these cases there is usually the history also of a varicella-like eruption. Some years ago Dr. Flack of Shoreditch brought me an interesting example of this occurrence. He had himself vaccinated the child, and when the rash not long after came out, he made no question that it was chicken-pox. The rash, however, did not disappear, but persisted for three months, covering the whole surface and wearing the child out by the irritation produced.

I saw this child only once; but, on inquiry some years afterwards, I learnt from Dr. Flack that the eruption had persisted in spite of treatment, and had ended in death. I will read to you Dr. Flack's note, which contains some further particulars of this interesting and important case.

It is the only one in which I have ever known death follow, but in several others the patient has been very ill.

"56, *Shoreditch, May 2nd*, 1871.

"DEAR SIR,—I find the child you inquire about gradually went from bad to worse, and died in August, 1866, after suffering for nearly five months. Treatment entirely failed. Dr. P— saw the child after you did, and was of opinion that it was syphilitic, but I could obtain no history to confirm it. I may say that the mother, for eight months of her pregnancy with this child, suffered extremely from pruritus of the vulva, so much so that fears were entertained of her mind giving way, and it continued within twenty minutes of her confinement. The child was apparently healthy, and very clear in the skin till three months old, and was then vaccinated. The pustules were good and the inflammation not great; but, as the scabs began to form and dry, the eruption appeared with all the symptoms you so well describe. I have thought the sufferings of the mother might have produced such an irritating state of the child's system, that it only wanted an exciting cause to develop it.

"I am, yours truly, JAMES FLACK."

Dr. Flack's suggestion that the child inherited a pruriginous skin is, I think, highly probable. In several other examples of the malady I have found that there was a history of pruriginous or urticarious complaints in the child's family; probably it is chiefly in such patients that vaccination-rashes and varicella become pruriginous and persist. I may add that I had carefully examined this child as to inherited syphilis, and could find no reason to suspect it. An anti-syphilitic course which was carried out (not on my recommendation) did no good whatever. This is the only actually fatal case which has come to my knowledge.

It becomes a most interesting question in such cases as this as to what connection the vaccination has with its sequences. It is possible that it has none at all, and that the eruption is a true varicella, for the age at which vaccination is usually performed is the same as that at which varicella is most likely to occur. We must remember, however, that, according to the observations of Mr. Ceely

and many others, various forms of eruption do occur as the direct results of vaccination, and that a vesicular one is the most common. Indeed, the wonder is not that vaccination should sometimes produce an exanthem, but that it should ever be without one.

A portrait (No. 32*) which has been issued by the New Sydenham Society illustrates remarkably well the local conditions of the disease under consideration. It was taken from a child, aged three months, in whom the diagnosis of varioloid had in the first instance been given; but as it occurred during the epidemic of smallpox in 1871, it is probable that not a few cases that were really varicella, got the name of the more severe disease. I show you the portrait of the patient referred to, and may remind you that, on a former occasion, you had an opportunity of seeing the child itself. The following are the notes of the case.

George T—, aged 3 months, and at the breast, was admitted on April 21st, 1871, with an eruption which had then lasted for six weeks. It was stated that the rash came out rapidly at first, chiefly on the arms and legs, and that it was said to be smallpox. The patient had never been vaccinated at the time she was brought to the hospital. No one else in the house had had either smallpox or chicken-pox. The two other children in the house had had no eruption of any kind. The mother described the rash as consisting at first of large clear watery spots. When first seen the child had a copious eruption of vesicles and pustules on the hands, feet, arms, and legs, and a rash of large porrigo patches on the head. There was no evidence of the existence of itch mites.

I will now read to you the notes of some other cases of a similar kind. I may here observe that all of these have been sporadic. I have never met with this form of persistent pruriginous varicella, or, more strictly speaking, of persistent vesicular rash following varicella, as an epidemic malady. In a former lecture, however, I quoted a passage from one of Trousseau's lectures, which stated that, during

* See my Catalogue of the *Atlas*, p. 107.

an epidemic of varicella at the Necker Hospital, some cases were protracted for six weeks, and passed into an ulcerating form of eruption, looking like pemphigus. You will find the lecture in the second volume of the New Sydenham Society's translation, and it is well worth reading. Trousseau does not mention prurigo as having been a marked symptom, nor does he say anything about the eruption having occurred on the palms or soles, and he mentions the period of two months as if it had been the extreme limit of duration. Now, in all my cases, the pruriginous element has been a very marked one; the condition of the palms and soles has been a peculiar feature; and the duration of the eruption has been much longer.

Case 1.—Rosina C—, aged 18 months, was admitted on February 19th, 1869, suffering from a very copious eruption of vesicles or small bullæ on the extremities, trunk, and face. It avoided the flexures, but was very marked on the soles and palms, and this latter feature led to the suspicion that the case might be scabies, but there was no evidence of the presence of the itch mite. The vesicles when commencing were very firm and felt quite shotty. The eruption had already lasted four months, and the mother's clear statement was, that it appeared all over the body at once, and that the doctor to whom she took the child considered the disease to be smallpox. She stated that there had been some spots on the head. The rash was attended by great itching. The patient was pale, but seemed in other respects healthy. She remained under treatment for five months without any material permanent improvement. The spots altered somewhat in character; some of the later bullæ were as large as peas, and it was noted after the child had been attending for some months that many of the spots passed into pustules. As the child was eighteen months old, no doubt she had been vaccinated, but my notes do not mention this point.

Case 2.—Edward B—, aged 16 months, came under my care in May, 1869. He was pale, and seemed out of health. He presented a copious eruption of vesicles and papules in various stages, and affecting the face, trunk, and limbs, and, to a slight extent, the scalp. The fresh spots consisted of elevated pointed papules, feeling very firm, and each surmounted by a small vesicle. In the older ones the vesicle had sometimes broken, but in the greater number it had dried up; on the scalp the spots had sometimes run on to

porrigo. There were a few on the palms and soles. The eruption avoided the flexures and was more abundant on the back than on the chest and abdomen. It was evidently excessively pruriginous, and there were numerous scratches. The mother's history was, that the rash had appeared when the child was three months old, and soon after vaccination, and that the medical man in attendance told her that it was "glass-pock." The eruption varied in intensity at different times, but had never been quite well since its first appearance. He remained under care only two months, and I cannot tell you the final result.

Case 3.—Sarah R—, aged 11 months, was brought on June 22nd, 1869, with a papular and vesicular rash on the trunk, limbs, and scalp; it affected the palms and soles. The spots were at first small papules, apparently devoid of fluid; presently these became inflamed and red at the base, while at the top was formed a yellowish point, in the centre of which a little dot was seen; while still later, a considerable red areola was present, and a concave scab was formed on the top of the spots. The mother stated that the eruption had been present for five months, and that it came soon after the child had been vaccinated. When it first came out, she thought it was chicken-pox, on account of the "clear watery heads" which were present at that time. The child's only sister was free from any eruption.

Case 4.—Sarah Ann T—, aged 19 months, was admitted on July 13th, 1869. She was suffering from a pruriginous rash on the body and on the backs of the hands and soles of the feet; some of the spots were very like wheals of urticaria. The history given was of a gradual onset of the eruption at the age of five months, the mother thinking that it was like chicken-pox. It was said to get well in winter. The child was of fair complexion and very stout, but seemed very muscular and strong, notwithstanding the constant itching she suffered from the rash. She was the youngest of eight children, and the only one who had suffered from any skin disease. (This case is not very well characterised.)

Case 5.—Isabella B—, aged 12 months, a fair-skinned, light-haired child, was brought on account of an eruption in September, 1869. The rash was general and pretty thickly distributed; it affected the soles, the face, and the scalp, but not the palms. The flexures were avoided. It was distinctly vesicular, and in parts impetiginous from scratching, but there were no large pustules. It had already lasted seven months, and was said to have come out soon after vaccination. The child was nearly well in six weeks.

Case 6.—Walter F. S—, aged 12 months, in good health, was brought on September 24th, 1869. He had a copious itching eruption of papules and vesicles, with some pustules. The parts affected were the trunk, palms of hands, dorsal surface of feet, scalp, and, to a less extent, the face. The bulk of the rash was papular. There were, however, some large irregular vesications, with areolæ of congestions, and containing turbid fluid; other spots looked as if they had been about to suppurate, but had dried up before pus was formed in sufficient quantity to break the cuticle; some especially on the hands and feet were distinctly vesicular. The rash had been mistaken in the first instance for chicken-pox. Under treatment the rash improved for a few weeks, but very soon relapsed and became as bad as ever again.

Case 7.—Walter T—, aged 19 months, admitted on April 2nd, 1869, on account of a very copious pruriginous eruption. He was stout and healthy looking, and was said to have an excellent appetite. He had been nursed till 11 months old. The eruption had appeared for the first time at the age of 15 months, and it came out about three weeks after vaccination; the vaccination spots did well. His nurse thought it was chicken-pox; but, from her statement, it seemed probable that the spots were not so distinctly vesicular as in that disease. The eruption had steadily got worse until he was brought to the hospital. There was no reason to suspect either scabies or pedicularia as the cause. The eruption consisted, when first seen at the hospital, of very numerous isolated spots, most of them papular and of dusky colour. The early stage, as seen in some recent spots, appeared to consist in the formation of a vesicle on an indurated base; the vesicles were deeply placed, and contained but little fluid, and it seemed that subsequently they either dried up or had their tops removed by scratching. The rash was most abundant on the limbs and face, the forearms and legs being more thickly covered than the arms and thighs; it occurred in tolerable abundance on the palms and soles. There were no spots on the scalp or forehead, and the eruption specially avoided the parts where the skin was thinnest, the flexures of the joints and the inter-digital clefts. Looking at the soles and palms only, we might easily have mistaken the case for scabies; but its symmetry and uniformity, and its avoidance of some parts, such as the bends of joints and the spaces between the fingers, served to distinguish it from that disease. He got quite well in six weeks under arsenical treatment, and remained well for about eight months, when he again (in April, 1870) came under my care for a dry lichenous rash. This time, however, there were no vesicles, and the palms and soles remained free.

Case 8.—Alfred V—, aged 2 years, admitted on September 7th, 1869. His mother stated that the eruption, on account of which she brought him to the hospital, began suddenly when he was nine months old as an eruption of clear vesicles. She was told that it was chicken-pox. There was no contagion either to herself or the girl who nursed the patient. When first seen the child presented a copious, itching, scratched, papular and vesicular rash. The vesicles were most conspicuous on the feet. The rash was most abundant on the outer parts of the arms and thighs, on the backs of the forearms and fronts of the legs; it avoided the flexures in a very marked way. The backs of the hands were almost free from spots. He was of fair complexion, and had a thick upper lip and fine downy hair on the general surface of the body; he was much emaciated, probably in part from the incessant irritation. He remained under notice, more or less regularly, for more than a year, and improved very much during the earlier part of his attendance while taking bromide of potassium, cod-liver oil, and quinine, and using an ointment. The eruption, however, relapsed somewhat towards the end of the time.

Case 9.—Frederick M—, aged 1 year and 9 months, was admitted on May 9th, 1871, with a pruriginous eruption of nine months' duration There were five other children in the house, and none of them had suffered from it. The mother thought it was chicken-pox when it first appeared; but the medical man considered it not to be that disease. The child was not known to have had chicken-pox. The rash had never been well since its first appearance.

Case 10.—Samuel B—, aged 15 months, came on October 12th, 1869, and was under notice, more or less regularly, for about thirteen months. He had a severe papular, vesicular and pustular eruption, which was worst on the legs; the soles and palms were also severely affected. There were spots on the face. It avoided the flexures. It was then of eight months' duration, and was stated to have come out immediately after vaccination, and to have been considered by the medical man to be chicken-pox. There was great itching, and the child was said to be often awake most of the night. The scratching had produced large porriginous scabs in some parts. The child was somewhat relieved for a time, but the rash relapsed several times. There were three other children in the house, none of whom had had any eruption, excepting one who was subsequently brought to the hospital with eczema-porrigo of the scalp from lice.

Case 11.—Anne C—, aged 3¼ years, was brought for an eruption of prurigo urticans in March, 1871. It was stated that she had been liable to the rash since an attack of chicken-pox at the age of two years.

I must not weary you by the citation of individual cases; but I have yet one or two others to which I wish in an especial manner to call your attention.

Three children in one family had chicken-pox at Christmas 1869. The two elder were well in a week; but the youngest, then six months old, had his eruption pass into "strophulus pruriginosus." He was brought to me in the following April, still covered with rash. It was of the characteristic form, beginning in some places as papules, and in others as bullæ. Many of the papules still looked like scratched lichen; but, in many, ulcers or excoriations of considerable size had formed. The largest bullæ had, as usual, occurred on the feet and legs; some of the most characteristic on the soles. He had lichen-eczema on the face and ears, and porrigo on the occiput. In spite of it all he had thriven pretty well. His nights had often been much disturbed. He was still at the breast, but was fed also on a variety of food. He had never been vaccinated, having in early life had "much tightness of chest." He had cut six teeth, four before the eruption. He had no kind of eruption before he had the chicken-pox. The vesicles of the latter were very abundant. His mother's expression was "The chicken-pox never really died away, but every spot festered and went into one of those that he now has." It should be stated that the eruption was specially copious across his loins.

You will observe that the fact as to the eruption having really begun in chicken-pox is very strong in the above case, for three children had it at the same time. It is equally so in the following; the father of the patient being a medical man, and having watched the eruption from the first.

A well-known physician, whom I chanced to meet one

evening a few weeks ago at a medical assembly, asked me, "Have you ever known chicken-pox last for a year?" "Yes," I replied: "I have just been preparing a lecture on the very subject." "Well," he said, "one of my own children had, a year ago, a most undoubted chicken-pox eruption; and she continues still liable to the appearance of spots." This patient, a girl of about eight, was brought to me a few days afterwards; and I found that she presented a mild example of the disease under consideration. Scattered over the surface were a number of spots which had begun as papules or abortive vesicles, and were now abraded by scratching. They had been very troublesome from itching. The spots were not nearly so numerous as in many other of my cases, but they were quite characteristic.

I might add many more cases to the above list if it seemed advisable; for the eruption is by no means a very rare one. I think, however, I have adduced enough evidence to prove my point, and to illustrate most of the peculiarities of the eruption in question. In order to facilitate the comparison of cases, and to show more clearly what the facts are respecting the age of the patient, the antecedents of the eruption, and its duration, Mr. Nettleship has kindly arranged for me, in tabular form, the cases already given, together with a number of others of which I have the notes. We have compiled two tabular statements; one containing cases in which the original eruption was diagnosed as varicella; and the other those in which it followed vaccination.

The first list (Table I), comprising cases in which the eruption followed varicella, or varioloid, contains sixteen cases, ten of which were in boys and six in girls. The youngest was six weeks old, and the oldest seven years, at the time of the original attack. In five the eruption had lasted for a year or more when the patient first came under observation; and in all it proved very intractable. I can, indeed, only in a

TABLE I.—*Cases of Prurigo following Varicella.*

Name.	Age at admission.	Duration at admission.	Remarks.
1. Alfred Vernon (Case 8)...	2 years	15 months	Began suddenly, and the mother was told it was chicken-pox. Attended 12 months. (In the report of the case given last week, the age at which the eruption began is stated to have been 3 months: it should have been 9 months.)
2. James Quinlan.....	7 months	5½ months	Began as modified smallpox. Under care 8 or 9 months.
3. Anne Cridland (Case 11)...	3¼ years	15 months	Liable to the eruption since varicella at the age of 2 years.
4. Frederick Manger (Case 9)	1¾ years	9 months	Mother thought it chicken-pox at first, but the doctor said it was not that disease. Attended 4 months.
5. Rosina Childs (Case 1) ...	18 months	4 months	Began all over the body at once, and the doctor considered it to be smallpox. Attended 5 months.
6. Sarah Tosland (Case 4) ...	19 months	14 months	Began gradually in summer. The mother thought it chicken-pox. Attended 2 months.
7. Walter F. Seymour..... (Case 6)	12 months	No note	Was taken in the first instance for chicken-pox. Attended 2 months.
8. David Forster	3 years	2¼ years	The medical attendant called it "glass-pock" when it began at the age of 8 months. Attended 11 months.
9. Georgiana Langton	2¼ years	3 to 4 months	Began as large blisters, "like vaccination marks" or "chicken-pox." Attended 1 month.
10. Frederick Tothem	3 years	4 months	Some considered it "smallpox," others "chicken-pox," in the first instance. Attended 2 months.
11. Sidney Lee	3 years	3 months	Two doctors said it was a bad case of chicken-pox at first.
12. Charles Bell.....	14 months	2 weeks	Began 2 weeks ago as "chicken-pox."
13. Richard Bathurst	2 years	6 months	Began like smallpox. Attended 8 months.
14. George Thornton ..... (Case detailed above)	3 months	6 weeks	Supposed at first to be smallpox, but was probably varicella. Had not been vaccinated.
15. Private Case (M.)	6 months	4 months	Began as undoubted varicella.
16. Dr. G.'s case	8 years	1 year	Undoubtedly varicella at first.

minority, assert that anything approaching to a cure was effected. In almost all, however, much benefit resulted; and there appeared reason to think that, in the end, the disease would be conquered. Several of them attended under treatment, however, through many months. In all the eruption was much alike: a mixed papular and vesicular rash, symmetrically arranged, avoiding the flexures, very pruriginous, and prone to affect the soles and palms. This last point easily distinguishes the eruption from the other forms of prurigo, and also proves that the eruption is not a lichen. Lichen being a chronic inflammation of hair-follicles and their adjuncts, cannot, of course, occur in parts where no such structures exist.

It is with very great regret that I bring forward any facts which tend to show that ill consequences do occasionally ensue from vaccination. But in this, as in all other matters, it is far better to know, and to make known, the real truth. I feel no doubt that varicella does not unfrequently leave a most troublesome prurigo; and I feel equally little that vaccination does, in some of the rare instances in which it is attended by a varicella-like rash, leave a similar ill consequence. The eruption under the two conditions seems to me exactly alike. During the last six months a number of cases have been sent to me at the Blackfriars Hospital by a committee of philanthropic ladies who are engaged in visiting the poor, with especial reference to the prevention of disease. Having been informed by them that they met with much prejudice to vaccination, and frequent assertions that skin diseases were caused by it, I offered to receive and investigate (and, if possible, cure) all cases of the kind which they would send to me. I was already well aware of the relations existing between vaccination and this form of prurigo; but I quite expected that the majority of the cases I should get would be eczema and porrigo. Such has not been the case, however; and all the cases as yet sent (only, I think, about

six or seven) have been examples of the form of prurigo to which this lecture is devoted. Some of them have been very marked cases and of long persistence.

The following table (II) exhibits the chief facts as to age of patient and duration of eruption in twelve cases which seemed to be more or less closely connected with vaccination. The rash was of the same character as I have described in connection with varicella. It may be observed that, in several of the cases, the interval alleged to have occurred between the vaccination and the rash was so long as to throw some doubt upon the connection between the two. It is only in those instances in which the rash follows promptly that I would infer a connection.

It is difficult to speak with any degree of confidence as to the precise nature of the links which connect this eruption with varicella. In attempting to investigate them, I must ask you to remember that varicella presents certain curious tendencies which it does not fully share with the other exanthems. Chief amongst these we must note that its stages vary in duration very greatly in different cases. Thus, its stage of incubation, which most count as eight or nine days, may, according to Trousseau, extend even to twenty-seven, and is rarely less than fifteen. Its stage of invasion, rarely more than twenty-four hours, may sometimes be three times as long, and its exanthem or eruption stage may, instead of observing the average duration of three or four days, be protracted over ten or twelve. I have myself seen a rash exactly like fading chicken-pox, which was said to have been out a month. The belief that in this instance the rash really was chicken-pox was supported by the fact of its spontaneous disappearance almost immediately afterwards. I have already alluded to Professor Trousseau's mention of the Necker Hospital epidemic, during which some cases were followed by pemphigoid rashes, which lasted a month or six weeks. It becomes a question whether, in these protracted cases, the

TABLE II.—*Cases of Prurigo following Vaccination.*

Name.	Age at admission.	Duration at admission.	Remarks.
1. Samuel Bristowe (Case 10)	15 months	8 months	Came directly after vaccination; but the medical man said it was chicken-pox. Attended 18 months.
2. Sarah Ellis	2 years	18 months	Vaccinated at the age of 6 months. Eruption began immediately afterwards. Attended 3½ months.
3. George Humphrey	14 months	11 months	Began after vaccination at 3 months. Attended 3 months.
4. Edward Barfoot (Case 2)	16 months	13 months	Began after vaccination at 3 months; was called "glass-pock" by the medical man. Attended 2 months.
5. Sarah Richardson (Case 3)	11 months	5 months	Vaccinated at 6 months. Eruption began soon after. Vaccination did not "take." The mother thought the eruption chicken-pox. Attended 2 weeks.
6. Martin Lewis	2½ years	Abt. 2 yrs.	Said to have been present since vaccination.
7. Isabella Brown (Case 5)...	12 months	5 months	Came out soon after vaccination. Attended 2 months.
8. Walter Thompson (Case 7)	19 months	3 months	Vaccinated at 15 months. Eruption began 3 weeks afterwards.
9. William Welch	6 months	2½ months	Began 2 weeks after vaccination. Attended 7 weeks.
10. Sydney Woolford	15 months	9 months	Vaccinated at 5 months. Eruption began a month later. Attended 4 months.
11. Caroline Duffell	10 months	2 months	Vaccinated at 7 months. Eruption began a month later. Attended 3 months.
12. Dr. Flack's patient..... (Detailed above)	...	...	Vaccination at 3 months, followed in about 2 weeks by eruption, which Dr. F. considered to be chicken-pox. The child died from the eruption after it had lasted 5 months.

eruption is throughout the same as at first. In some, as in Trousseau's, it probably differs; but in others, as in my own case of one month's duration, there are no features by which it can be distinguished. Now, if the true varicella eruption, which has usually a four days' duration, may be protracted to four weeks, there is, perhaps, no definite limit to what is possible as to its stay. These cases may, then, be simply abnormally protracted and extremely pruriginous varicella rashes. There is, however, I believe, no reason for believing that such cases continue to be infectious after the first stage. The febrile stage ceases when the pruriginous one begins, and the hypothesis seems more probable that they ought to be regarded as sequelæ of the exanthem, and not as in any strict sense continuations of it. Another hypothesis is that the outbreak of varicella in some way so affects the nerve-structures of the skin as to induce a state of pruriginous irritability; to aggravate, indeed, what is often a personal peculiarity, a tendency to itch on the slightest provocation. But the eruption which I have been describing is something more than can be so explained. Its single spots often closely resemble those of varicella, and they differ in their vesicular tendencies from those of all other forms of prurigo. I cannot help believing that they result from the same process in the skin-tissues as that which causes the varicella eruption, and that they probably originate in precisely the same parts. Otherwise, it would be most difficult to explain their peculiarities of appearance. We come thus to the question, what are the peculiarities of the varicella spot? That they differ much from all other eruptions will be readily admitted, and that their differences are more than merely those of size and shape is rendered certain by the very curious fact that their contents do not contain the germ material from which the disease is reproduced. It is generally believed that you cannot inoculate chicken-pox. In external appearance a varicella vesicle remarkably resembles

one of herpes. This similarity has not escaped Trousseau. They are further not unlike herpes in their duration, rapid decline, and mode of healing. Just as, in herpes, we occasionally have long protracted pain in the part, so in varicella we have occasionally long-protracted itching. The parallel fails in this, that we have no such thing as protracted vesicular eruptions in herpes; it is the pain alone which lasts. We know that herpetic eruptions are produced through the agency of sensory nerve-filaments; it is even possible that they may arise over or in nerve-papillæ. It is just possible, then, following this line of suggestion, that the varicella vesicle originates in irritation of a nerve-papilla. I admit that this is a mere conjecture, but it seems to me not unplausible, and we need some theory by which to explain our facts.

It is necessary, however, to keep in mind a few other general facts in reference to prurigo, if we would master the whole of the bearings of these curious cases. Even if we grant the suggestion that, as herpes may leave its well-known after-pain, so may varicella and allied eruptions leave their after-prurigo, we have scarcely explained the whole matter. The next fact which we must acknowledge is, that prurigo, from whatever cause it may have begun, tends to perpetuate or even to aggravate itself. It causes itching, and the itching causes scratching, and the scratching extends the prurigo, and thus the patient goes on from bad to worse. This is true of all forms of prurigo, whether beginning from lice, from fleas, from woollen clothing, half-cured scabies, or from some internal cause. If we could entirely prevent scratching, very few prurigos would assume a severe type. This being so, we can easily explain the alterations which these cases undergo when they persist long. At first it is probable the rash is really a protracted varicella attended with prurigo; its vesicular character proves it to be such; and it may even be the case that the prurigo element is but small. The longer

the case persists, however, the less does it preserve the aspect of varicella. Vesicles cease to appear, and pruriginous papules take their places; the palms and soles no longer show the eruption, which is almost confined to the parts on which the prurigo of infants (strophulus pruriginosus of authors) is common. It is in these later stages that the diagnosis from strophulus, which was easy at first, becomes difficult, and is, indeed, to be based chiefly on the history of the initial period.

You will notice that these cases all occur at an age at which pruriginous affections are common, and at which restraint as to scratching is almost impossible. They have, indeed, hitherto been counted by dermatologists amongst the considerable group of infantile skin-affections known as lichen infantum, lichen pruriginosus, lichen urticatus, and strophulus pruriginosus. These maladies, or this malady, for they are closely similar diseases, have, as yet, been only named and described; little or nothing has been done as to the suggestion of causes. I am convinced that the facts which I have stated to you to-day give us the clue to the real cause of a large number of them, and I shall not be surprised if, in the future, we are able to extend it to a much larger number than we at present feel justified in allotting to it. The age at which infantile prurigo is met with is the age of children's exanthems; and, although varicella appears to stand pre-eminent amongst those which are capable of throwing the skin into a pruriginous condition, it is probably not the only one. I have several times, indeed, known measles assigned as the parent of a long persistent prurigo; and the other exanthemata (perhaps even abortive exanthemata) may sometimes stand in the same relation. It is for the present the general statement only for which I contend; the details of its extent of application we must determine hereafter. That statement is, if you will excuse the repetition, simply this, *that varicella, varioloid, the rash which some-*

times attends vaccination, and possibly other exanthems, possess the power in exceptional cases of making the skin irritable, and thus laying the foundation for long-continued and most troublesome conditions of prurigo ;* to which I must add, *that this consequence is especially apt to ensue when, as is not unfrequent in varicella, the eruption is long protracted, and occurs in successive crops.*

* It was to my friend Mr. Ceely, of Aylesbury, that I was indebted, some years ago, for a knowledge of the fact that an exanthem rash does occasionally show itself after vaccination. I find the fact mentioned both by Ballard and Hebra; and it appears to be well established. This rash is probably not very common; for I have been assured by several experienced vaccinators that they have never witnessed it.

LECTURE III.

ON THE IMPORTANCE OF THE DIAGNOSIS BETWEEN LEUCODERMA AND WHITE LEPROSY.

Gentlemen,—When, a few years ago, I thought the subject of leucoderma deserving of careful clinical study, the chief points of practical importance respecting it with which I was acquainted were, its diagnosis from "bronzed skin" and from tinea versicolor. More recently* I have become aware that the differential diagnosis of this malady has yet another and far more important bearing. The disease known, from time immemorial, in the East, as "white leprosy" is no other than leucoderma. Of this fact I shall hope to convince you by the citation of a considerable amount of modern evidence from Indian sources. Before quoting this evidence I will, however, ask your attention to the patient before us. He is an excellent example of a "white leper," and would certainly in former ages have incurred the penalties attaching to that class—exclusion from society, imprisonment for life in a lazaretto, or even burial alive. You will see, then, that the precise diagnosis might have been to him a matter of some consequence. He presents the most extreme condition of leucoderma that I have ever seen, though not, I suspect, nearly so extreme as is not unfrequently witnessed in the dark-skinned natives of hot climates. Leucoderma is common enough amongst English people. In a person of fair skin, however, the distinction between the pigmented patch and the blanched

* This lecture was delivered in April, 1870.

patch is not great, and in many instances it needs careful examination to be convinced of its existence. In still colder climates it is probably scarcely ever noticed. On the swarthy skin of one who has been exposed to a tropical sun white patches are, however, so conspicuous that they arrest the attention of the most superficial observer. Hence it is that leucoderma is said to be common in Spain and Portugal, in the northern parts of Africa, and in some parts of South America; hence also that it is so conspicuous in India that it has been long known, even by the natives themselves, under a distinctive name. We must stop here for a moment to note a circumstance of some interest which, I believe, is true concerning this remarkable change in the pigmentation of the skin. The members of the most deeply coloured races (Negroes, &c.) appear to be less prone to it than those of fairer ones. Although "piebald Negroes" are now and then seen, there is every reason to believe that they are infrequent, since it is not possible that the change in them could escape observation. The fact of its occurrence, supposing it to be at all common, would certainly have attracted much attention from travellers and others.

Some facts which have come under my notice would favour the belief that leucodermic changes are especially likely to happen in those who have experienced great physiological changes in the pigmentation of the skin. Thus, for instance, if a member of one of the fair races has been exposed to the influence of the sun, and has become very much bronzed, under such circumstances leucoderma would, I think, be especially likely to happen. Our present patient is an example of this. He is a Russian by birth, but has lived in India, where, as he says, he "first became burnt brown and then afterwards whitened." He is at present, as you see, of an extremely deep brown hue on his neck and face, and on those parts of his extremities and trunk which the leucodermic patches have not as yet invaded. In all

the following points his condition coincides exactly with what is common in leucoderma.

1. The white patches are very white; absolutely devoid of pigment, with, at places, a bluish tinge, and at others, in connection with the state of the circulation, a light pink hue.

2. Everywhere the patches are abruptly defined, there being no shading off whatever between their edges and those of the brown skin in which they are developed.

3. Excepting in the change of colour from brown to dead white, the patches show no peculiarity whatever. They are not scurfy, and they are neither swollen nor depressed. If hairs grow on them, they, like the integument, are blanched; but they do not fall out, nor exhibit any tendency to other disease.

4. The patches of white occur with tolerably accurate symmetry on the two halves of the body and on the limbs. The symmetry of leucoderma is never exact, but it is always sufficiently so to prove that the disease depends upon some influence affecting the whole body, and not upon either local or accidental causes. I have never seen an example of unilateral leucoderma, or of anything in the least approaching to it.

5. The parts affected are precisely those which are most often attacked; the backs of the hands, the trunk, and large portions of the limbs. The face and neck have, as is often the case, almost escaped. You will notice on his neck that the pigment remains on those parts which would be exposed to the sun when wearing a low collar, as sailors do. The inference suggested that the influence of the sun has been sufficient to retain the pigment is, however, contradicted by the fact that the backs of his hands are quite white. We may note also, as of interest in the same direction, that nearly the whole of his penis remains pigmented, almost to blackness. The pubic region and the root of the penis are

quite white. The margin where the white and brown join at the root of the penis is just as abrupt as that at the root of his neck.

6. Lastly, we may add that the man considers his change of colour of no sort of consequence, and states that it has not in the least influenced his general health.

The point to which we ought next to direct our attention is to show that leucoderma, as we know it in England, is not really a form of leprosy. You will, I think, readily excuse me from entering into any detailed proof of this point. We have of late years seen case after case of leucoderma, in all stages of development, and we have never met with a single one in which there was any reason to believe that it influenced the patient's health. The subjects of it have come under observation quite accidentally, being often those who had been admitted into our wards on account of accidents, or for some internal and totally distinct disease. Leucodermic patients rarely consult us on account of that symptom, and its discovery usually depends upon their being compelled, for some other cause, to strip in the presence of a surgeon. It seems certain that in England, what we know as leucoderma is a mere pigment peculiarity, and not in connection with any special diathesis or dyscrasia. In this conclusion all who have written on it are unanimous. I should not have thought it necessary to occupy your attention, even to this extent, with the discussion, were it not in order to show that leucoderma is quite different from true leprosy, which is, from the beginning, attended by symptoms of nerve-lesion or of disturbance in general health, and which inevitably tends to a fatal termination within from seven to twenty years of its commencement.

My next point is to prove to you that in countries where true leprosy occurs, and especially in the East Indies, the disease known as "white leprosy" (Baras, Berat, Noona) is no other than the leucoderma with which we

are familiar. This is the condition which, in all probability, suggested the expression, "a leper as white as snow." I have already mentioned certain circumstances which make the differential diagnosis of considerable importance to the subjects of this peculiar change. The distinction is also one which it is absolutely necessary to make in order to arrive at clear opinions as to the conditions under which true leprosy prevails. Leprosy is an endemic disease, and due, without doubt, to local peculiarities. Leucoderma, as far as we know, occurs everywhere; and is not in the least influenced by climatic peculiarities, excepting in so far as they make it less or more conspicuous. If leucoderma is confused with leprosy, we may have the latter disease reported as prevalent in localities which are in reality free from it. It is only quite of late years that we have had any chance of assigning the true limits to the prevalence of leprosy. In the olden time common psoriasis and lepra, lupus, morbus pedicularis, when unusually persistent and severe; scabies, occasionally, when under similar conditions; and tertiary syphilis, very often, were, undoubtedly, confused with true leprosy; and their subjects were allowed to claim a share of the benefits provided for the latter, or, as the case might be, were forced to submit to its penalties. Hence, probably, arose the very prevalent idea that leprosy is contagious; and here is to be found the explanation of the repute which many remedies gained for being able to cure an absolutely incurable malady. The quotations which I am about to bring before you are selected from the very valuable 'Report on Leprosy,' published three years ago by Her Majesty's Secretary of State for the Colonies, under the supervision of a committee appointed by the College of Physicians. They establish, I think, very clearly the following facts.

1. That what is called "Baras," or "white leprosy," is really leucoderma.

2. That it runs in India precisely the same course that leucoderma does with us.

3. That the natives still count it a form of leprosy, and have always done so.

4. That many of the medical men who furnished information to the compilers of the Report refused to allow it a place as true leprosy, whilst others recognised clearly enough the great differences which distinguish it from that disease. Some, however, confused the two together.

The confusion has been helped, and chiefly caused, by the fact that in the anæsthetic form of leprosy there are large patches which are more or less blanched. These may, however, be distinguished from those of leucoderma by very noticeable peculiarities. They are usually devoid of sensation, and the skin involved in them has become dry and harsh, and is surrounded by a dusky red edge, which is tender and hyperæsthetic. These patches are never so white as those of leucoderma, nor are they usually so large, nor would they certainly ever suggest a comparison with snow. The confusion has been yet made more difficult to escape from by the circumstance that, in hot climates, the blanching of leucoderma is of real detriment to the patient. In our own climate it subjects him to no inconvenience; beneath an Indian sun, however, the decolorised skin is apt to scorch, to smart and tingle, and to become temporarily numb, or even, in extreme cases, to vesicate. These lesions of nutrition will of course seem to confirm the suspicion as to leprosy, which the alteration in colour had suggested.

At different parts of the Report we find the following statements:—Ceylon, "*Lepra Hebræorum*,—or the white Jewish leprosy.—This form of disease is extensively prevalent in the island, particularly so in the north-western Province. It is characterised by a peculiar marbled appearance of the skin. It generally makes its first appearance on the hands and lower extremities, and, occasionally, on other parts of the

body, in the form of small white dots, which gradually enlarge and extend over the whole surface. It not unfrequently shows itself on the lower lip, whence it spreads to the face. The hair on the affected parts becomes quite white from the very beginning of the disease. The spots are sometimes of a grey or dusky hue, and often remain stationary for some time; but when they once begin to assume an active development, they rapidly extend so as to cover the whole body with large irregular white spots, which deface the person very much. This disease appears to answer the description given in the Mosaic writings more than any other with which we are acquainted; the 'Berat Lebina,' or white leprosy of the Jews, and the 'Berat cecha,' or the 'dusky berat.' Although this disease produces a striking singularity of appearance in its advanced stage, yet it does not cause any inconvenience to the patient. It is seldom attended with ulcers or other physical suffering or disability" (p. 91).

"Besides this, and the anæsthetic forms of the disease, there is the white or the Jewish leprosy, the Berat of Moses. Of this I have seen instances of both the 'Berat lebina' and the 'Berat cecha,' or the bright white and the dusky lepra. The Berat lebina occurs in the form of one or more pearly spots. The white patches are the same as the healthy skin, except in colour, and that they are either free from hairs, or that the hairs turn white and silky. Sensibility is not affected in pure cases. I have seen the disease coexisting with the lepra anæsthetica, as well as with the true (tubercular) leprosy. The natives consider albinos to be lepers, the disease being supposed to be 'Berat lebina;' and, indeed, the white leprosy appears to me to be physiologically indistinguishable from albinism, except in the fact of the latter being congenital, and affecting the whole body; and the former not congenital, and affecting only parts of the body. Both consist of an absence of pigment, and do not of themselves affect the general health" (*Punjab*, p. 169).

"In the simple discoloration of the skin the disease will remain passive for years, and most probably not pass beyond this first stage. I have known individuals for five and six years to observe no change in the disease, and not to suffer from any constitutional symptom" (Dr. Jackson, p. 201).

"White leprosy, as most generally seen, consists of snowy white spots, of various sizes and shapes, over different parts of the body and extremities. The inside of the lips also often turns white, and occasionally the whole surface of the body becomes affected" (Dr. Cockburn, p. 150).

"White lepers suffer, like albinos, much from sunburning; their skin getting readily scorched and blistered by exposure to the sun's rays. Sensation remains unimpaired in the parts of the skin which are decolorised" (p. 188). Here probably we have leucoderma with bullæ.

The following quotation is from an extract from the Medical Report of the Madras Dispensary, by Thomas Hogg, Esq.: "The bright white leprosy of Leviticus, chap. xiii, in some cases affects the palm of the hands; in others it is seen in patches on various parts of the body. The hairs become changed to white or grey on the diseased parts. Very frequently these patches are seen on the genitals, at the back of the head, on the under part of the female breast, &c. The disease in this form prevails in Madras to a greater extent than I think is generally known or credited; hence the necessity of examining domestic servants" (see p. 226).

Mr. Hogg does not hint at any difference between the disease which he is describing and true leprosy. We know that leucodermic patches are especially common on the genitals.

I quote the following from p. 115: "Those observers who write from sufficient experience of the disease distinguish two forms of leprosy; and Dr. H. V. Carter (whose replies are much fuller than any others) speaks of three varieties; viz., *first*, white leprosy, or shvet kusta, probably a variety of the leuke of the Greeks, the baras or beres of

the Arabs; it is also called khoor by the Sindees; *second,* guleet khusta, sunbahiree of the Hindoos; it corresponds with anæsthetic leprosy, articular leprosy; *third,* tubercular leprosy, elephantiasis, leontiasis, &c., of the Greeks." "The first and second forms are commonly confounded under the name white leprosy; the third all agree in naming black leprosy."

Dr. Bell, reporting from the same locality, gives the following interesting fragment of evidence: "I had always been of opinion that there were two forms of the disease—viz., white and black leprosy; but, from careful investigation, I now find that there is no affinity between them. That which I regarded as white leprosy is a distinct disease, never passing into the jujam or leprosy proper of the natives. The Mussulman name for it is buras (baras)."

At p. 154 we find four forms of leprosy mentioned, and amongst them the "leucopathic or chalky whitening of the skin, without tubercle or lesion of sensibility (baras)." It is added: "There is a variety of the baras known as bohaq, in which the skin, instead of turning white, takes a red or brownish tint." Is it possible that "bohaq" is tinea versicolor? In a long paragraph following the expressions which I have quoted, both bohaq and baras (leucoderma) are inextricably confused with true leprosy.

At p. 151 it is stated that "the white leprosy (sufaid korhor baras), to external or outward appearance, is less offensive, and, I believe, does not undermine the health so speedily as the black form. On parts affected the hair becomes white." Other expressions in this description indicate that the writer was confusing leucoderma and anæsthetic leprosy together. The same remark applies to a description on the next page, where we are informed that white leprosy first appears on the face, hands, legs, and arms, in white smooth patches; and that the affected surface is neither itchy, swollen, nor painful.

From Seharunpore, four forms of leprosy are reported; and here again "white leprosy" is clearly leucoderma. "The white spots of the third variety are of a silvery hue, rather depressed than elevated; appear on any part of the body, vary in size from that of a pea to the palm of the hand, often coalesce, retaining at the same time their crescentic form, and are unattended by any uneasiness."

In the answers from Calcutta we are informed that "saithburn" is white leprosy; the body being covered with white patches, or the skin being almost entirely changed in colour" (p. 121).

At British Burmah white leprosy is said to be distinguishable by the white smooth patches of apparently healthy skin, which discolour its naturally dark hue in the races most liable to it. It is added: "The subjects of this disease have a piebald appearance, the white patches appearing white by contrast; or, as happens in some not very numerous cases, the whole skin is denuded of its dark pigment, and presents a similar appearance to that of Europeans" (p. 194).

Another reporter from the same district writes: "the obvious and distinguishing characteristics of the leprosy called 'noona' or 'the benign' are simply white patches, without any sores or ulcers, lasting to the end of life, without any great discomfort or suffering of the general health in the person afflicted."

Both these reporters clearly confuse leucoderma with anæsthetic leprosy.

After mentioning two forms, one in which the fingers and toes are destroyed, and the second characterised by local anæsthesia, we have, "third, that distinguished by pale rose-pink spots, called in Hindee, phool ajeetburr, or, in Persian, bars. The first two forms are constantly met with in the same person, and are varieties of one common morbid state. *The third form is a distinct disease.*" (Dr. Jackson, p. 149).

Thus, then, Gentlemen, I think we have made it sufficiently plain that there exists in India a skin malady which is identical with what we know here as leucoderma, but which is confounded by many observers with true leprosy. Most of the quotations which I have brought before you show an acquaintance with the points of diagnosis, but some do not. Thus, Dr. Carter, of Bombay, who is himself perfectly aware of the great difference, writes: "The first and the second are commonly confounded under the term 'white leprosy.'" The first and second to which Dr. Carter refers are respectively anæsthetic leprosy and leucoderma. We find some observers styling leucoderma "benign leprosy;" others record that it is much slower in progress than the other forms, and tell us, with some apparent surprise, that they have known its subjects remain for several years without constitutional symptoms being developed. I assert that leucoderma is utterly and permanently distinct from leprosy, and that it never passes into the latter malady; and that if, as must be expected, the two are now and then met with together, their concurrence is an accident only. In reference to this assertion, that leucoderma is not even an ally of leprosy—not even remotely connected with the same cause—many facts might be mentioned. I have already referred to the differences which the two diseases present, to be reminded of which you have but to look again at our patient, or at the portraits which I now show you. In leucoderma we have the dead white patch so abruptly margined, and so entirely free from other peculiarities, possessing the same degree of sensation as other parts, continuing supple, soft, and free from either swelling or desquamation; whilst in true white leprosy all these conditions are altered. For the sake of contrast I will now show you a portrait of a leprosy patient in whom the white patches as closely resembled those of leucoderma as in any case that I have seen. Many of you have had opportunities

of seeing leprosy patients for yourselves, for we have had several under care within the last few years. The man from whose thigh the portrait I now show was taken was the subject of the mixed form. On his face the leprosy was tubercular, and on his body and limbs there were numerous white anæsthetic patches. This coexistence of the two forms, as they are called, is very common. I have seen it scores of times in Norway; and it is acknowledged there and elsewhere by all competent observers. Perhaps instead of calling them two forms, we ought rather to consider the two conditions as different symptoms of the same malady. The man whose condition is shown in our sketch was not a native of a leprosy district, and his case will serve well to illustrate the importance of the subject under our discussion. If we are ever to arrive at a knowledge of the true cause of leprosy—and I am very sanguine that we have already hit upon it—we must be most careful to remove all sources of fallacy; and of these, none are more treacherous than errors in diagnosis. It is clear that if a number of maladies are jumbled up together, some of which have no real relation with each other, our search for a common cause must of necessity be hopeless. There are few problems of deeper interest, or which are more certain to rivet the attention of those who engage in it, than the search after the cause of leprosy. It is a wonderful malady; and of late years our facts concerning it have greatly increased in number; and, thanks to the labours of many, and to none more heartily than to Drs. Danielsen, Boeck, and Bidenkap, in Norway, and Dr. Carter in India, they have also greatly improved in precision. If we have not got the solution yet, we are at any rate approaching it.

Let me tell you a few facts as to the man whose portrait I have exhibited. He was a Scotch sea-captain, aged nearly sixty, who came under my observation in one of Mr. Adams' wards in the London Hospital. Excepting the special

disease from which he suffered he appeared to be in good health, being active and energetic. His voice was rough and hoarse. His face was covered with thick bossy folds of dusky and indurated integument, between which the skin was thin and pale. On his arms were very large patches of bluish-white skin, decidedly thinned, and in most places quite without sensation. Between these patches the skin was raised, thickened, hot, hyperæsthetic, and of a dusky-livid colour. He complained much of "numbness and pins and needles" in his hands and feet; and the skin of these parts—especially that of the fingers and toes—was much thickened, and thrown into folds. These raised patches and folds of skin could scarcely be described as tubercles, either on his face or hands; those on his face rather resembled gigantic papules. The state of the skin on his left thigh is well illustrated in the coloured portrait which I have shown you. It was very similar to that of the skin of his upper arms. The white anæsthetic portions made up the larger half of the surface; their borders were always convex, showing that they were aggressive. *On these he could not feel when a pin was thrust into the skin. Between them the skin was thickened, and of a brownish purple, being also exceedingly tender.* The commencement of the change to the white condition appeared to be very gradual. On one occasion, whilst testing his power of sensation, I touched with the compass-points a part on the upper region of the thigh, which I believed to be yet normal; but, to my surprise, he said he could not feel. On looking more carefully I found that it was decidedly white, and had an indistinct margin; but the change was so slight that it might easily have escaped notice. There was no doubt about it when once seen, and I demonstrated it to several students who were present. The man stated that the disease had begun about a year and a half before. He had for nearly thirty years sailed regularly to and from Barbadoes.

His custom was to remain there about six weeks each voyage. During his stay there he always lived in his ship. He could not suggest any clue to the cause of his leprosy. He averred that he had never drunk spirits immoderately, nor ever suffered from syphilis. He was married, but had no family. He considered himself in excellent health when the disease began, and indeed "should be so still, if he could only get rid of the pain and numbness in his skin." His muscular force appeared to be fairly good. He had no bullæ nor any scabs.

You will notice especially the numbness of the patches in this case, and the hyperæsthetic condition of their margins. You will observe, also, that the intervening integument was dusky rather than of the red-brown which is usual in leucoderma; and that there was distinct difference in elevation between the white parts and the brown parts. This difference is never observed in leucoderma, the skin being neither swollen nor atrophied.

In concluding our lecture let me say a few words as to my reasons for bringing this somewhat out-of-the-way subject before you. In connection with the case which I have just detailed I was led to speculate as to the probable cause of the man's malady, that malady being typical leprosy. It could not have been induced in him by any hereditary tendency, for he had been born in a country in which, during modern times, leprosy is unknown. It could not have been exposure to cold and hardship, for the simple reason that none whatever had occurred. It could not have been the result of the slow influence of poor diet, for the man had always been able to get what he liked, had lived well, and considered that he had enjoyed excellent health. It was improbable that it was in connection with any specific malady, such as syphilis, our evidence on this point being that the observers living in leprosy districts have been quite unable to identify any such malady. That syphilis itself is

not the cause of leprosy, it is scarcely necessary to assert to any one conversant with English practice. You will observe that the man had been repeatedly into a leprosy district, he had been backwards and forwards to Barbadoes; and in the West Indies leprosy is endemic and prevalent. It appeared to me highly probable that he had partaken unwittingly during his frequent visits of some poisonous kind of food. I thought much over the matter, and could arrive at no other explanation that would fit all the facts of his case. Following up this thread, and keeping in mind the general fact that leprosy is limited to the sea-board, and that when it occurs inland it usually follows rivers, I could not help suspecting that this poisonous food was some product of water. That the cause is not in the air of the affected districts is made almost certain by the fact that, in places where leprosy prevails most severely, the Bergenstift of Norway, for instance, only certain classes of the inhabitants suffer. All breathe the same air, but all do not partake of precisely the same food. My suspicions as to the cause really being in connection with some poisonous kind of fish gained in strength, more especially from what I saw in Norway during a visit last year. In examining the evidence recorded by observers in India, Madagascar, &c., I encountered, to my disappointment, repeated statements as to the frequency and prevalence of leprosy in inland positions, and now and then with the specific statement that its subjects had not been fish-eaters. When we find, however, that the statistics of the prevalence of leprosy have included cases of leucoderma (and especially is this the case wherever reports are based upon the statements of natives), we feel compelled to allow a considerable margin for errors in diagnosis. My conviction is, that in India this source of fallacy has attained very large dimensions, and that many of the statistical statements on record are wholly devoid of value. In Norway, and in colder countries, leucoderma is an inconspicuous malady, and never

attracts popular attention, hence it is never, even by the untrained, confused with leprosy. In hot climates, as we have seen, it not only becomes very conspicuous, but the blanched portions of integument, being less able to resist the influence of the sun, are liable to vesicate and to show conditions which further favour error in diagnosis.

Although the confusion of leucoderma with leprosy is, I believe, one of the errors which has led to the statements by writers that the latter disease prevails amongst people who are not fish-eaters, yet I suspect that it is only one of several sources of fallacy. Probably other diseases besides leucoderma are still counted with leprosy by untrained observers; probably, also, the statement as to the absence of fish as an article of diet has been made in many instances on vague and insufficient evidence. My suspicion is that different fish vary much in their poisonous qualities, and it is well known in hot climates that some fish are poisonous at one season of the year and wholesome at another. We may then, I think, without any violence to probability, believe that under some conditions small quantities of special kinds of fish may be able to produce effects for which, under other circumstances, a long continued and almost exclusively fish diet may be requisite. Very probably also some of the forms of salted fish in common use in India and elsewhere may be much more poisonous than the fresh article, and thus it may come to pass that leprosy may in exceptional cases be found in populations living at a distance from either rivers or sea. It is these apparent exceptions which now require careful investigation; very possibly some of you may, in the future, have opportunities for throwing light upon them. I have endeavoured, in this lecture, to explain clearly one of the chief risks of error, and I hope you will see in the importance and interest of the subject a sufficient excuse for my having brought it before you.

LECTURE IV.

CAN ARSENIC CURE PEMPHIGUS?

Gentlemen,—We have discussed in previous lectures the diagnosis of pemphigus, and the maladies which have been somewhat confusedly put together under that name. We were able to come to the conclusion—one in which, indeed, almost all who have had much experience of the disease share—that there is at any rate one well-marked eruption which far excels all the others in importance, and which chiefly, if not solely, claims the designation. I refer, of course, to the chronic or relapsing form, "pemphigus diutinus" of nosologists, the one in which the blebs come out freely, are distributed symmetrically on various parts, and often over a large portion of the body; which often lasts long, and which almost invariably exhibits its constitutional origin in a marked tendency to recur. It is a very remarkable and peculiar form of disease, and one which always attracts the attention of those under whose observation it comes. In our last lecture I illustrated, by the citation of cases, most of the facts as to the natural history of the form of pemphigus to which I have just adverted. I now purpose to ask your attention to the discussion of one single question in reference to its treatment, and it is this: Can we, or can we not, claim for arsenic an almost specific virtue as regards its cure?

You must note that our decision upon this point is of wider importance than may at first sight appear; for if arsenic can, as I assert, in the most definite manner make

the eruption of pemphigus disappear from the skin, and in a wonderfully short time restore the emaciated patient to health, we surely have a fact which we may hope to make useful under many other circumstances. For, in all probability, the diathesis which permits the development of pemphigus, and the causes which induce its outbreak, are not by any means very rare or very special; and we may fairly expect that a remedy of proved power against them will also be found of efficacy under other allied conditions of deranged health. In addition to this, I think we may also claim that if we can prove that pemphigus will submit itself to arsenic, we gain a step in our conjectures as to the probable nature of a previously inexplicable disease. Maladies which are curable by the same remedy are probably in some sort of relation to each other as regards their causes, however different they may chance to be in external appearances. Thus, if both psoriasis and pemphigus are found to be invariably influenced for good by arsenic, we seem justified in the conjecture, that although their forms of outbreak are dissimilar, yet as to nature they are closely related. The same remark would apply, though perhaps less definitely, to several other diseases of the skin.

Now, so far as my own experience is concerned, I should have felt myself quite justified in doing that which indeed I have done many a time in the wards, telling you dogmatically that arsenic is the one remedy for pemphigus. As I find, however, that the opinions of some other observers do not, on this point, accord with my own, and that especially one renowned teacher—I allude to Professor Hebra, of Vienna—is still in the habit of expressing his conviction that we know of no internal remedy which exercises any influence over this disease, I feel it to be my duty to attempt a fresh and somewhat detailed examination of the facts.

In the 'Medical Times and Gazette' for February, 1854, I wrote a report on eighteen cases of pemphigus observed at

different hospitals, but chiefly under the care of Mr. Startin at the Blackfriars Institution for Skin Diseases, and some of the conclusions given at the end of that report were in these words—"That arsenic may be esteemed almost a specific remedy even in the worst class of cases. That arsenic does not merely repress the eruption, but remedies the unknown constitutional cause on which that eruption depends, always very much benefiting the general health of the patient. That it does not prevent the liability to subsequent attacks, but that such attacks are always much less severe than the original one, and tend, if treated by the same remedy, to diminish in intensity on each successive occasion." Since that report was written, now more than twenty years ago, I have seen a considerable number of cases of pemphigus, and, with the exception of one instance in which the mucous membranes were severely involved, and in which the patient died, I have not met with a single case in which the disease resisted this treatment. Some have been cured with greater rapidity than others, and some have required a little management as regards the apportioning of dose, &c., but in none did the arsenic fail to show its specific power, and in the end to produce a cure. Thus, instead of regarding pemphigus as a very serious, usually incurable, and often fatal disease, I have come to consider it as one of the most hopeful; and since there are few greater pleasures than the successful wielding of drugs, have been always very glad to receive a new case. At the time my report, from which I have quoted, was published, I certainly did not doubt that within a very few years the reputation of arsenic in this matter would be fully established, and I have since then been often much surprised and puzzled by the statements of some of my friends as to their own want of success. I was, indeed, obliged to add, as an appendix to that report itself, a case which had been mentioned verbally to me in which the arsenic disagreed with the patient, and did not cure the

pemphigus. In this case, however, and in some others of which I have since been told, I have been inclined to doubt whether the diagnosis had been accurate. Any suspicion on this score, however, cannot for a moment attach to the statements which come from the celebrated chair of Dermatology at Vienna, and I confess at once that I see no way of explaining the wide difference which there is between Professor Hebra's experience and my own. I will give you his statements in his own words :—

"In my essay upon Pemphigus, published in 1842, to which I have already several times referred, I gave the results of my own experience (then not very extensive) as to the treatment of the complaint. I stated that it could not be cured either by diuretics or drastics, nor, on the other hand, by tonics (such as bitters, quinine, or acids), full diet and wine. And now, at the end of twenty-three years, having again to express my opinion, I have only to confirm in every point that which I formerly wrote.

"For I even yet know of *no internal medicine* which has proved efficacious against pemphigus. In my experience no good whatever has resulted from the remedies above named, nor from any others; neither from arsenic, iodide of potassium, and the salts of iron, as recommended by English writers and by some Germans (Veiel, Lebert, and Plieninger); nor from long courses of mineral waters, including even the Mühlbrunnen of Carlsbad, which is particularly extolled by Oppolzer; nor, lastly from hydrochloric, acetic, and other acids. The use of the acids was first suggested by Rayer, who professed to have cured the disease by the continued administration of lemonades containing sulphuric and nitric acids; and Bamberger has advocated the same treatment, on the ground that the acid neutralises the ammonia which he supposes to exist in the blood of patients affected with pemphigus. I can, then, say with truth that I know no way of curing pemphigus by giving internal medicine.

The only treatment by which I have ever succeeded in diminishing and removing the bullæ, even for a time, and thus of apparently checking the disease, has been by *local* applications." *

It will be seen that these remarks of Professor Hebra's were written more than ten years (1865) after my report from which I have quoted. As my report was published anonymously in a weekly journal, I have no doubt that it never came under his notice, otherwise he would probably have given us more detail as to his want of success with arsenic. It is important to observe that his prognosis in chronic pemphigus is very grave. "At the commencement of a case of pemphigus," he says, "it is not possible to say with certainty what will be its termination." The favorable signs are, "that the bullæ, unless very numerous, are tense; that fever is absent; that the patient is not very advanced in years nor very debilitated;" but "a very bad prognosis should be given when the blebs are flaccid and but little raised, when they are present in large numbers, when they occur in an old subject, when febrile symptoms again and again show themselves, when there is loss of appetite, and when the bodily power fails. . . . *Cæteris paribus*, a pemphigus is less dangerous in its early outbreaks than when the patient has already gone through several attacks. . . . But in general one should be prepared to expect that pemphigus will in the end terminate fatally; and therefore the prognosis should always be guarded."†

From such statements as these we may gain some measure of the value which ought to be attached to any real remedy for a disease so formidable.

By others who have written on the subject since my report was published, very different opinions have been expressed, but nearly all speak far more favorably of arsenic than does Professor Hebra. Those who discredit the remedy the most

* New Sydenham Soc. trans., vol. ii, p. 396. † Ibid., p. 394.

are Professor Bazin and Dr. Dyce Duckworth. The following are some of the most important statements of fact and opinion which I have been able to find:—In Mr. Wilson's book, after the statement that treatment must be chiefly constitutional, that the digestion must be regulated, that tonics, bitters, mineral acids, &c., are valuable, there comes the sentence, "we have also derived good results from the use of arsenic;" but after this there follows, "if there be feverish symptoms we may find it necessary to have recourse to effervescent salines," &c.—expressions which do not imply any strong belief in the specific efficacy of arsenic. Dr. Hillier, Dr. Habershon, Dr. Gee, and Dr. Hilton Fagge have all recorded cases exhibiting the virtues of the remedy in a strong light, and have expressed corresponding opinions. My late colleague at Blackfriars, Mr. Nayler, writes—"My experience of the use of arsenic in this form of pompholix is that it is of the greatest service in the adult, but that in infancy or childhood it is powerless to prevent a relapse. Cases have come under my care in which, within a short time after apparent recovery, the disease has returned in its original state; and I have known other examples in which arsenic has been persevered in, but only kept the complaint in check." Dr. Dyce Duckworth has recorded in the 'St. Bartholomew's Hospital Reports' two cases in which arsenic either disagreed or "signally failed to cure the disease," and adds, "In my experience I have witnessed no benefit of any kind in these cases from the employment of arsenic." Professor Bazin, of the St. Louis in Paris, writing in 1862, says of pemphigus—"Its prognosis is very serious: originally and essentially chronic, it ends almost constantly in death." And at another place, speaking of its treatment, "This affection has hitherto resisted all therapeutic means. It has been in vain that, in the hope of stopping its progress, we have had recourse successively to alkaline and arsenical preparations, to small doses of tincture of cantharides, anti-

monials, &c." Bazin admits, with Mr. Nayler, that often his cases have improved for a time and seemed likely to be cured, but alleges that in the end they all relapsed. He appends a very interesting narrative of a man in whose case a great variety of remedies including arsenic were employed, and who retained good health, and often got all but well, but who in the end was not cured.

I will now proceed to bring before you, briefly but explicitly, the cases on which I rely as evidence in support of my proposition.

Let me, however, before doing so, add yet a word or two as to what that proposition is. I assert my belief that arsenic is a specific for the state of health upon which relapsing pemphigus depends. I do not include infantile pemphigus, which is a wholly different affair, and mostly syphilitic, nor do I include any ill-marked cases, respecting which the diagnosis is doubtful. The cases which occur in children (not infants) are often amongst the best marked, and are, of course, included, whilst those met with in the very old are often indefinite, and of uncertain character. I make no strong distinction between acute and chronic, since many of the latter were acute at first, and are simply half-cured cases, but I admit that there are conditions in the most rapid and severe in which the patient may possibly be too ill for the remedy to have a fair chance. Nor is it my assertion that arsenic will cure pemphigus without regard to dose or time; and should any one in the future publish cases in which it has failed, I must beg him to be kind enough to state in detail the doses and the length of the trial. Although I have not for many years, either at the London, at Blackfriars, or in private practice, had a single case which has not been cured, I have had several which resisted the remedy for a time, and which might easily have been recorded as failures. It occurs to me as possible that, after all, the main reason for the difference of my results as compared with those of

some others is, that my mind has been long imbued with an almost implicit faith in the remedy. I have believed that arsenic could cure pemphigus, and I have never thought of resorting to anything else. If the eruption resisted for a while, I have pushed the remedy, and increased the dose. In a case in this hospital a little girl did not get well until I insisted that the sister of the ward should see the child take her medicine; then the pemphigus vanished. In the case of a patient brought to me by Mr. W. W. Edwards, of Bromley, we soon reduced a severe and copious eruption to a very sparing one, and got the woman into good health, but for six months we could not make the bullæ wholly disappear. Finally, however, by a considerable increase of dose it got quite well. This was the most intractable case that I have had under care (if I except the one already noticed, which was rapidly fatal). Next, let me say clearly that I do not assert that arsenic will cure pemphigus beyond risk of relapse, but rather wish it to be distinctly understood that the remarkable proneness to relapse when the remedy is suspended, is one of the most positive proofs of its specific efficacy. In many cases the evidence of benefit is apparent within twenty-four hours, and in some, if the remedy be suspended, a relapse will occur within a period almost as short. This is a very remarkable fact, but you will find it illustrated, I think, in several of the cases which I am going to quote. To cure, you must persevere; to prevent relapse after cure, you must persevere. A half-cured case is, according to my experience, quite certain to relapse directly. Very probably it is this tendency which has induced some prescribers to distrust the drug. The patient may for a day or two have missed his medicine, and out comes the eruption again; and the surgeon, not being informed of what has happened, concludes that arsenic has failed, and prescribes something else. Precisely what I am suggesting once happened to myself, and it was with considerable difficulty

that I got at the real facts. But although arsenic does not prevent relapse in the early periods of treatment, or even of cure, yet I firmly believe that it does so to a large extent, if given repeatedly and long enough. Each relapse after an arsenical cure is less severe than the first, and more easily treated, and finally the patient ceases to be liable. I make this statement as the result of inquiries, years afterwards, as to the state of patients who had been cured, and I am also strengthened in it by the fact that in our large out-patient practice at Blackfriars our cured cases of pemphigus do not often return to us. At a further part of the lecture I shall cite the cases published by others in which arsenic is said to have failed, and I must now ask your careful attention to the following lengthy series in which it succeeded :—

1. In the first case, a married woman, aged twenty-four (Emily E., Case 1, 'Medical Times and Gazette,' 1854, p. 132), had severe and universal pemphigus at about the eighth month of her first pregnancy. Arsenic was not given until she had been under care a month, and had been confined; the eruption had already improved a good deal before it was begun, but fresh bullæ were still occasionally coming out. The cure was complete after six weeks' use of Fowler's solution in doses of one minim and a half three times daily, with colchicum wine, and an alterative pill, A year later she had a relapse; the same arsenical treatment was ordered, and "a very rapid cure resulted."

2. In Case 2 the patient, a boy, began to suffer from the disease when five years old, and from that time to the age of fourteen, when he was last seen, he had had many relapses. When eight years old he was first brought to Mr. Startin, and was then so ill that he had to be carried in on a bed, the eruption involving almost the entire surface. He had been under a great variety of treatment without benefit. Mr. Startin prescribed arsenic, and with the best results; and although during the next six years the boy had a relapse of pemphigus at every spring and autumn, he never failed to derive very speedy benefit from the use of arsenic. At the date of the last note (February, 1854) he had only a few bullæ about the mouth.

3. The next patient was a girl, aged seven, who had had severe chronic pemphigus for three years. She had had much treatment, but without improvement. She was completely cured by about two

months' treatment with arsenic combined with iron. She took one-minim doses of Fowler's solution three times a day for the first month, without benefit; but began to improve rapidly when the dose was increased to a minim and a half and combined with small doses of iron.

4. The next case (No. 4) was a fair-complexioned, cachectic boy of nine, who, when admitted in September, 1851, had been suffering more or less for two years. It was a severe case, and had had much treatment, having been at several hospitals and also under private care. It had furnished the subject for the portrait of pemphigus published in the best of our English atlases. He took the liquor arsenicalis in doses of one minim and a half thrice daily, without iron. In two months he was much better, and in another fortnight was perfectly well. He had a slight relapse four months later, but was soon cured by the same means. Three years and a half after his first admission, it is noted that he still remained liable to slight relapses on the genitals, which were not bad enough to bring him to the hospital, but that no severe relapse had ever occurred, and that his health was quite re-established.

5. In the fifth, a boy of nine had had mild pemphigus, uninterruptedly, but with exacerbations, for two years. He was perfectly cured after one month's use of the same prescription as in the preceding case—viz. one minim and a half.

6. The sixth patient was a labouring man, fifty years old, apparently in extremely bad health. His pemphigus was moderately severe, and had first come out seven months before admission. A month's administration of three-minim doses of the arsenical solution thrice daily cured him completely, and his health improved under it.

7. In the seventh case, a very anæmic servant-girl of twenty-five was admitted with severe pemphigus of one lower limb. She had had it (usually only on the legs) each spring and autumn for two years previously. In the present attack no improvement took place after a fortnight's treatment with iron, but rapid improvement followed the use of three minim-doses of Fowler's solution. She was, however, lost sight of before quite cured, and as the former attacks had usually subsided spontaneously after some weeks, the improvement in the present relapse may not have been due entirely to the arsenic.

8. Next comes the case of a fair-complexioned, healthy-looking girl aged nine years. Her pemphigus was severe and had lasted six months, in spite of treatment at various hospitals. She was cured

by one-minim doses of arsenical solution in a few weeks. A relapse a year later was quickly cured by the same means.

9. J. A—, a delicate, fair-complexioned boy, of nine years old, was literally covered by a most severe eruption of pemphigus, which had lasted, without abatement, for seven months, in spite of much treatment at hospitals. At the end of a fortnight's use of one and a half-minim doses of arsenical solution every bulla had disappeared, and he looked quite a different person. A single bulla afterwards formed on the arm while under treatment, but with this exception he remained perfectly cured while under observation.

10. The next case is a very satisfactory one. John B—, aged fourteen, attended the Skin Hospital with pemphigus, which had been present almost interruptedly for two years and a half. It had not seemed to be influenced by season. He was quite well after six weeks of arsenical treatment. Six months later he had a relapse, which was again cured in a few weeks by arsenic.

11. This case occurred in a little girl of seven, a fair-complexioned child. When brought to the Skin Hospital she was pale and emaciated, and covered all over by bullæ or their scabs. The eruption had been out for ten months, and during more than six months of this she had been an in-patient in a general hospital, where every kind of treatment, excepting arsenic, had been tried, but without avail. She began to improve during the first week after Mr. Startin ordered arsenic (mjss doses); a relapse occurred during the treatment, but after that she steadily improved, and was quite well in four or five months.

12. In the next case the recovery cannot be certainly put down to the arsenic, as the treatment was very imperfectly carried out. The patient was an infant, aged fifteen months, suffering from severe pemphigus of a few days' duration; she was well in about three months. Arsenical solution in half-minim doses had been ordered from the first, but the mother only gave it occasionally, and often omitted for several weeks at a time.

13. In the next instance, a man aged fifty-four was under the care of the late Mr. Joseph Tyler for severe pemphigus of several months' duration. For the first three weeks Mr. Tyler gave no arsenic, and the pemphigus increased. Then he ordered three-minim doses of Fowler's solution, and steady improvement followed, and in three months and a half the patient was all but cured. A relapse now occurred, apparently from exposure to cold, but perseverance with the remedy for another two months effected a complete cure.*

* The above cases will be found recorded in more detail in the

Case 14 was in a little girl of seven under my care at the Metropolitan Free Hospital in 1860. She had had a severe attack lasting four or five months, then an interval of freedom for a week or two, and then a relapse of six weeks' duration, for which she came to me. It was severe and getting worse. She was tolerably healthy looking, but languid and feeble. Two-minim doses of arsenical solution were given three times a day. Not a single fresh bulla appeared, and she was perfectly well in a fortnight. A month later, shortly after leaving off the arsenic, a slight relapse occurred, and several months afterwards another; both were rapidly cured by the same medicine, and she is known to have remained well for six months after the last-mentioned relapse. I have mentioned this case again in a lecture on Pemphigus in the 'London Hospital Reports,' vol. i, p. 163 (1864). It is stated that she had a relapse in October, 1863, and was cured in a week by arsenic. In March, 1864, her next relapse occurred, and I then showed her to the class during the lecture. Arsenic was given in three-minim doses, and she was well in a month. She then ceased attendance, and in three weeks again had a severe relapse, which was again cured by the same remedy in combination with iron. This time, however, the cure was not quite so rapid, but "the specific influence of the arsenic in preventing the formation of bullæ, and the tendency of the latter to return when it was suspended, were most convincingly demonstrated."

15. The next case is less conclusive. Elizabeth B—, aged five, had had pemphigus every spring and autumn, and also sometimes in very cold weather, for four years. It was not severe. She was better after a week's use of one-minim doses of the arsenical solution, very few fresh bullæ having appeared; she did not attend again.

16. The following one is interesting because we have subsequent notes of the patient's condition, and although the record of treatment is imperfect, we may consider it certain that he took arsenic. Alfred K— was eleven years of age when admitted under Mr. Startin's care, August, 1854. His pemphigus was then only of a fortnight's duration, and was moderately severe. There is unfortunately no note as to treatment or subsequent course at that date, but in 1861 I saw him again, and noted that formerly "he was cured at the Skin Hospital." He had had an attack in the early part of every winter since 1854; they were mild, and usually lasted from two to four weeks, affecting the hands, and occasionally the feet, but not occurring elsewhere. In June, 1867, he again came under my care at the London Hospital with an eruption of erythema annulare

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'Medical Times and Gazette,' New Series, vol. viii, pp. 131–135, Feb. 11th, 1854.

(multiforme) on the forearms and backs of the hands; a few patches had occurred over the tips of the elbows and on fronts of knees (psoriasis positions). The patches showed a tendency to vesicate at their edges, but there were no positive vesicles. The eruption had been out a week, and it is to be noted that he had for several weeks before been under medical (homœopathic) treatment for pain in the chest.

Case 17 contains detailed notes of the history of a little boy (age not stated) who had his first attack of pemphigus in July, 1859, and was taken to Mr. Startin after it had lasted ten weeks; he took arsenic and iron, and was well in three weeks. Seven or eight months later he was admitted with a relapse of a week's duration—rather a severe one; the same treatment was followed by almost complete cure in six weeks. On admission the urine contained a great excess of urea.

18. The next case reported is that of Louis I—, a healthy man of thirty-six, who was admitted with copious universal pemphigus, which had been out for fourteen weeks. Under the use of arsenic and iron he steadily improved for three weeks, when he left off the medicine, and immediately the eruption relapsed. "On resuming the arsenic he gained ground, and was soon well." Several months later no relapse had taken place.

19. Arthur L—, five years and a half old, was Dr. Ramskill's patient in May, 1860, for severe pemphigus. He had had it for two years, with frequent temporary recoveries lasting a month or so. Liquor arsenicalis in doses of a minim and a half had a rapid and decided effect, and the eruption was nearly well in three weeks.*

20. In a case which was under my care in December, 1873, at the London Hospital, a man, aged forty-four (George W—), had a severe eruption of pemphigus, which first came out some weeks after the occurrence of numerous epileptic fits. He had not previously had either fits or skin disease, but had for years been ailing with various slight complaints, and had once had "asthma." In childhood he had had rheumatic fever.

The eruption in this case was of unusual interest, because combining some of the features of herpes and of erythema multiforme with those of pemphigus. From the man's account it would seem at first

* These cases are published in more detail in my "Supplementary Report on Pemphigus," 'Medical Times and Gazette,' 1861, vol. i, pp. 223–226.

to have resembled urticaria. On admission, he had what looked like herpes on the lips and eyelids, and afterwards many similar patches and areas of herpetic vesications arose after having been preceded for a day or two by erythema. About ten days after the commencement of the herpetic patches, however, blebs exactly resembling those of pemphigus also appeared on various parts; some of them were very large. Later on some ringed patches of vesicles on a base of erythema appeared, somewhat like some forms of vesicating erythema or hydroa. At this stage all three types—the pemphigus, the herpes, and the vesicating erythematous rings—were present at the same time. The eruption continued to spread, fresh blebs and vesicles coming out as old ones dried up, and when he had been in the hospital rather more than three weeks he was almost covered with sores, and in a state of the most extreme debility and emaciation. He had hitherto taken only quinine and iron; for I had doubted as to the diagnosis of pemphigus. Finding that the disease still progressed, I determined now to try arsenic. He was so ill that I doubted much whether he would survive another week. The effect of Fowler's solution in four-minim doses was almost magical. From the day of its commencement no fresh blebs appeared, and those present began to dry up and to heal. He rapidly improved in general health also, and in a few weeks was able to leave his bed. Once, however, when he was nearly well, the arsenic was accidentally omitted for three days, and a few fresh patches came out on the face. He rapidly gained flesh, and when he left the hospital, three months after admission, there was no mark of the eruption excepting the dried remains of a recent bleb on one finger. He remained well from this time (March, 1874) to the end of June of the same year, when, after "catching cold," some blebs again appeared around the ankles, and from that date fresh bullæ continued to form for many months. During this period he was not under my care, and was not taking arsenic. I heard of him again in January, 1875, and he then had numerous blebs on the face, upper and lower extremities, and hands and feet. The disease had, however, since his arsenical cure given him but little trouble, and he had been under care at a distance from the hospital, taking steel, and not arsenic.

21. Thos. M—, six years old, was under care in the London Hospital in 1871 for rather severe pemphigus of six weeks' duration; the blebs were large, and some of them contained bloody fluid. The eruption began about a fortnight after an illness, which from description appeared to have been scarlet fever; this was confirmed by our finding on first admission that his urine was albuminous and contained blood-casts. He was admitted on October 3rd. Mr. Nettleship saw him on the 8th, and ordered two-minim doses of

Fowler's solution. On the 13th he was much better, and no fresh blebs had appeared. There are no later notes excepting to the effect that the eruption had already begun to improve somewhat before the arsenic was ordered.

22. (L. H., E. 184.) G. F—, aged four, began to suffer from pemphigus a month after an attack of scarlet fever at the age of about two years and a half. After the eruption had been out for fifteen months he came under my care at the London Hospital. He had had much treatment. The eruption affected the extremities chiefly, but a few spots were on the face. It was worst on the feet. There were a few blebs on the backs of the elbows. Fowler's solution in one-minim doses was ordered three times a day on August 17th, 1871. On the 21st it is noted that most of the blebs had dried up, no characteristic ones remaining. A few days later, however, some more appeared, and a later note states that successive crops came out for a time. He then got nearly well, till two or three months later (November), when another crop occurred, although he was still taking the arsenic, and had been doing so ever since first admission. No notes of treatment during this relapse—it was well towards the end of January, 1872; but he had a third attack in March of the same year, *i. e.* after having been well for about two months. At the end of May he was again under care for a fourth attack. The bullæ were on the penis.

23. (L. H., H. 73.) Mrs. D—, a remarkable healthy old woman of seventy-one, with scarcely a grey hair, began to suffer from pemphigus for the first time at the beginning of December, 1872. She was sent up from the London Hospital out-patients by Mr. Tay on December 27th, after the rash had been out for three weeks. It was tolerably copious, but none of the blebs were extremely large. It occurred on the chest, neck, arms, and forearms, buttocks, and thighs. There were a few on the hands, but none below the knees. For the first three weeks after her admission she was simply kept in the ward under expectant treatment. January 16th, 1873: "The eruption has got nearly well spontaneously, but a few blebs still continue to come out. There are now only two recent blebs, one on each forearm." To-day three-minim doses of liquor arsenicalis ordered. January 31st: "No fresh bulla has appeared since she began the arsenic, and all the old ones have dried off completely." The only probable cause of the pemphigus here was that the patient had been somewhat worried, for several months before its appearance, by business matters.

24. James McM—, aged six, admitted at the Skin Hospital on March 5th, 1872, with pemphigus around the mouth and on the

genitals. It had begun two years before, and he had never since been free for long; in the previous year he had been for five months under the care of a colleague, and had relapsed in three months after ceasing to attend. In the present attack various local remedies only were used for the first nine weeks of his attendance. He was then no better, and Fowler's solution was ordered in one-minim doses three times a day; this was on May 14th. On June 4th it is noted that he was "nearly well." A month later he ceased attendance.

25. Edward B—, aged thirty-eight, a policeman, was admitted at the Skin Hospital on August 23rd, 1870, with a bullous eruption on the forearms, thighs, and legs, and to a less extent on the back and around the navel. The bullæ were now about as large as peas, but were described as having been much larger; their contents were amber-coloured. He had never had it before, and said that it had come out after bathing in the sea. It had, on admission, been out about a month. He had had treatment, but although many of the blebs died away, others came out, and his general condition had not improved. Fifteen years previously he had had syphilis with rash. August 23rd: Ordered him three minims of Fowler's solution three times a day, and zinc ointment. October 4th: Has continued the medicine regularly. "The eruption is now nearly well. The arsenic began to influence it at once. Throughout the eruption he has not considered himself in bad health." Continue treatment. 25th: "Remains well." January 27th, 1871: He came again with a severe relapse on backs and fronts of forearms, lower part of abdomen, and inner sides of thighs, with a few on forehead, scalp, and upper part of trunk. The eruption in many parts occurred in rings of vesications surrounding a depressed and scabbed centre, the seat apparently of the first bulla. This relapse occurred when he was feeling perfectly well and on ordinary police duty. Ordered six minims of Fowler's solution three times a day, and no local treatment. He continued the medicine, with several gaps of a week or two, till January 31st, 1873. On December 15th, 1871, it is noted that there were "no bullæ now, or any eruption of any sort." May 7th, 1872: "A few blebs come out occasionally." After January 31st, 1873, he did not come until March 7th (interval of five weeks). It is then noted that "he says an occasional small blister forms. There is nothing to be seen now. He says one came last week on the penis." He attended regularly, again taking the same doses, till November 21st, when "no spots" are noted. Since then we have not seen him.

26. A married woman, aged about forty-five, residing at Beckley,

in Kent, was brought to me by Mr. Edwards, of Keston. She was the subject of severe pemphigus, and had suffered for some months. The bullæ were numerous and very large. Arsenic was prescribed, and with the immediate result that most of the bullæ disappeared. The disease was changed from a severe to a very mild form, but at this position the case remained for some time. The fresh bullæ which formed were very few in number, and always seemed to be produced chiefly by local irritation; thus, the pressure of her dress around the waist, or on one occasion that of her husband's hand on her arm in helping her from a carriage, brought them out. She was in good health, and able to go about as usual. We continued the arsenic and increased the dose, and finally, after, I think, about six months' treatment, had the satisfaction of seeing her quite free from the eruption.

All the above cases are from my own notes, and were more or less under my observation, some of them having been under the treatment of my colleagues, and others under my own. I must now, in order to complete my statement of evidence, bring before you very briefly such statements as I find recorded by those who have recently published reports on the subject. I have already cited opinions, and shall now confine myself almost exclusively to cases. You will find, I think, that some of the following are extremely clear and definite in their testimony to the efficacy of the remedy in question:

Von Veiel ("Report of Skin Diseases observed at Canstatt, 1855—1861," 'Schmidt's Jahrb.,' vol. cxvii, p. 296) found that chronic pemphigus "was best treated by a prolonged arsenical course, in the form of the Asiatic pills." (Quoted from 'N. S. Society's Year-book,' 1863, p. 176g).

Dr. Habershon narrates a case of pemphigus in a man æt. 54. It was confined to the legs, and the bullæ were large.

He was a gouty man; the fluid in the bullæ was, however, alkaline. Treatment was begun when the eruption had been out three months. Liquor arsenicalis in three-minim doses caused vomiting, and could not be continued; "other remedies were tried with partial benefit; the arseniate of iron was then given in the form of a pill, with

excellent effect, and he left the hospital well." ('Guy's Hosp. Rep.,' 1865, p. 232, series 3, vol. xi.)

Dr. Dyce Duckworth supplies us with the following:

T. L—, æt. 49, a gardener, admitted in February, 1873. His pemphigus had lasted for two years, and had never during that time been quite well. The bullæ appear to have been for the most part small. In May there was no marked improvement, and arsenic was given thrice daily during this month. In June it was thought not to be doing any good, and was therefore combined with iron, the arsenic being now reduced to five-minim doses twice daily, instead of three times. He improved considerably, and in August it was noted that he was "decidedly better and feels much stronger." ('St. Bartholomew's Hosp. Rep.,' ix, 109, 1873.)

Dr. Hillier gives the two following cases ('Handbook of Skin Diseases,' p. 149, 1865):

E. W—, a girl, æt. 5, came under care in May, 1863, for pemphigus. It had begun five months before, and successive crops had come out. No arsenic was given for the first two months of her attendance (*i. e.* till July). On July 8th, the eruption still continuing to come out, four-minim doses of Fowler's solution were ordered three times a day. "In the course of a fortnight," Dr. Hillier writes, "she was much better. The medicine was stopped, and the rash soon returned. It was again repeated, and with a speedily favorable result." During the next year she continued the arsenic, with occasional intermissions of a week or two, during which the rash usually returned. At the last note she had been well for six months.

A boy, æt. 7, was admitted at the end of November, 1863, for pemphigus mixed with patches of erythema circinatum. The pemphigus was quite characteristic, and some of the blebs were gigantic. The rash had begun two months before, with blebs. Ten days after admission (December 3rd) arsenic was begun in the form of Fowler's solution (three minims) with steel wine (two drachms) three times a day. Nearly three weeks later (December 21st), "not much better." 28th:—More bullæ; to take Fowler's solution in four-minim doses alone. On January 4th the Fowler's solution substituted by liq. arsen. chloridi in six-minim doses.* January 13th:—Improving.

* According to the British Pharmacopœia, the old liq. arsen. chloridi had only about one third the strength of Fowler's solution.

February 11th :—Much better; no fresh blebs lately. Dose has been increased to eight minims of the chloride. No fresh blebs came out till the middle of March, after the arsenic had been left off for a fortnight. Fowler's solution again given in four-minim doses, and three weeks later he was discharged cured.

Dr. Gee relates a case of severe acute pemphigus in a little girl, æt. 4, who had previously been in good health.

The eruption was very copious; it began as separate papules, which vesicated, and at one stage resembled herpes patches; they then coalesced, and became large bullæ. There was considerable elevation of temperature. On the thirteenth day of the eruption, liquor arsenicalis was ordered in three-minim doses every six hours. On the seventeenth day, although she did not appear better, it was noted that very few fresh blebs had come out, and that many threatening spots had receded without becoming bullous. On twentieth day, diarrhœa; arsenic stopped. No new blebs. Arsenic resumed on twenty-first day. Twenty-sixth day:—"Very much better; no fresh bullæ." Twenty-eighth day:—"No new blebs since twenty-third day." Forty-fifth day:—Arsenic stopped, no new blebs having appeared for nearly a fortnight. She was discharged, well, on fiftieth day (seven weeks). ('St. Bartholomew's Hosp. Rep.,' v, 119, 1869.)

Dr. Hilton Fagge gives detailed notes of a case, under Dr. Wilks, of pemphigus, in which the bullæ were irregular in shape, formed by the coalescence of smaller ones, and situated near the edges of irregular patches of red skin. He considers it a case of Hebra's pemphigus serpiginosus.

The patient was a boy, F. S—, æt. 13, pale and thin. He had been liable to the disease for four years, chiefly on the legs, but also on the mouth, and had previously been under Mr. Cooper Forster's care for "ordinary pemphigus." He was admitted on October 16th, 1867, and until November 21st local remedies of various kinds were carefully tried, without any internal treatment; they failed entirely, and fresh vesicles continued to be developed. On November 21st, liquor arsenicalis ordered in three-minim doses, and all local treatment

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The above change of treatment would therefore be equivalent, so far as the quantity of arsenic prescribed was concerned, to reducing his former dose by one half.

discontinued. On 26th there was great improvement, and no fresh vesicles had appeared. "The change effected by the arsenic within five days was extraordinary." The improvement continued. On December 12th there were symptoms of arsenical disagreement—headache, sickness, pain at epigastrium,—and the medicine was discontinued. 20th :—Some fresh spots came out, and these increased on successive days to a considerable extent; indeed, on the 27th a model of the case was made by Mr. Towne. January 4th, 1868 :—Arsenic resumed in same doses. "It appeared to have an immediate effect; the vesicles rapidly scabbed and dried up," and he remained well with one or two slight exceptions till the end of March, when the arsenic, although continued throughout, having been reduced in quantity, he had a definite relapse, especially on the genitals. Cessation of arsenic on April 14th was followed by another relapse, and he was well again on May 26th. During these relapses he took only two-minim doses. A third relapse occurred in June, a fourth in July (quickly cured by arsenic), a fifth in October, which was quickly cured by three-minim doses.

Dr. Fagge considers that this case deviated markedly in appearance from ordinary pemphigus, although agreeing with it in general character ('Guy's Hosp. Rep.,' vol. xv).

In the same paper is recorded the case of an old woman, æt. 69, admitted under Dr. Wilks's care, July 8th, 1868, for pemphigus of about three weeks' duration, and tolerably copious. Liquor arsenicalis, in five-minim doses, thrice daily, was given. July 13th :—Scarcely any fresh bullæ had appeared, and the old ones had dried. "Under the arsenical treatment she quickly recovered." ('Guy's Hosp. Rep.,' series 3, vol. xv, p. 336, &c., 1870.)

The cases which I have quoted illustrate, I think, in a manner which is beyond doubt, the proposition that arsenic is sometimes, at least, a most efficient remedy for pemphigus. We have seen it over and over again arrest the eruption immediately on its use; we have seen the disease return when it was suspended, and again cease when it was again given. Of the cases—thirty-three in number—twenty-six are from notes for which I am myself responsible, most of the patients having been under my own observation, but

some of the most conclusive as regards their testimony to the specific efficacy of the drug have been published by others. (See Dr. Fagge's, Dr. Hillier's, and Dr. Gee's cases.) The series comprises patients of very various ages—from infancy to old age—most of them being, however, as might have been expected, children a little under the period of puberty. As a general statement, I think it is true that it is about the latter age that the virtues of arsenic are most definitely and quickly shown, and that the older the patient, the more likely it would appear to be that the disease may prove somewhat troublesome. It is in children, however, that relapses may most certainly be expected, whilst in older patients it would seem that if a cure is once effected there is comparatively little risk of relapse. Some of the facts also favour the belief that in adult and almost senile periods of life the disease is somewhat more variable, both in its character and in its behaviour under treatment, than in children. Thus some cases show a tendency to spontaneous recovery (this is rare); others persist long, but in a mild form or in unusual positions only; and some are easily cured by iron or quinine. In reference to cures by the two last-named drugs I would remark that I think they decidedly lend support to the belief in the efficacy of arsenic, since they are remedies of the same class. It was a favourite doctrine of Mr. Startin's that in elderly persons iron should be substituted for arsenic, even in the treatment of such diseases as psoriasis, in which the efficacy of the latter is most undoubted. In several of the cases which I have recorded, advantage seemed to be obtained from combining iron with the arsenical. In children, however, I believe this is not so, and I can speak most positively as to having seen arsenic cure the eruption at once after iron and quinine had wholly failed. Nor do I ever recollect to have seen a well-marked case of pemphigus in a child manifest any tendency to spontaneous recovery; and were it not for my reliance upon

arsenic for their cure, I should quite join in the opinions expressed by Hebra and Bazin as to the usual tendency being to a fatal termination.

I may here ask your attention to the noteworthy fact that during the last ten or fifteen years—since the belief that arsenic is a specific has gained ground—we have had no fatal cases of pemphigus recorded. At any rate, I have not, after some search, encountered such ; and amongst those of my friends connected with the treatment of skin diseases with whom I have conversed on the subject, there seems a general and strong impression that pemphigus is a far more mild and tractable disease than continental authorities would have us believe. In particular, Dr. Duckworth has avowed this opinion to me, and has authorised me to mention it; and as it is from his pen, almost solely, in English medical literature that I find any record of definite disbelief in arsenic, I regard his experience on this matter as of much importance. Arsenic is now constantly prescribed for pemphigus, and it is as a result of this habit that the disease, even by those who have not found the remedy a specific, is now thought to be a mild one. Thus, in Dr. Duckworth's cases, arsenic had been given. Although in these the disease persisted in spite of the remedy, yet the patient remained in good health, and we are thus, I think, entitled to infer that the malady was much mitigated in severity by its use. The same appears to have been the case in a patient who was under Professor Bazin's care in the Hôpital St. Louis in Paris, and in whom good health was maintained under treatment, although the eruption was not wholly cured.

I must now give you such items of evidence as I have been able to collect which tend to force us to admit that arsenic is not a specific in all cases. As I have already stated, by far the most important, because given with most of detail, are those recorded by Dr. Duckworth in the 'St. Bartholomew's Hospital Reports.' They are as follows:

H. M—, a woman, æt. 30, had had chronic pemphigus for four months before admission, and was treated in the hospital for fourteen months with only partial benefit. "A prolonged trial was given in this case to arsenic, and it was found to be of no avail in checking the formation of bullæ." In the next volume of the same 'Reports' he gives the sequel of H. M—'s case up to May, 1874. She had then had a course of arsenic, but without apparent benefit, and at the end of the case he writes, "The prolonged use of arsenic has signally failed to produce any benefit." Dr. Duckworth has informed me privately that this patient, who is now in the country, still suffers from her eruption, but that she is otherwise in good health.

In the next case it will be seen that the eruption presents, as regards non-symmetry and the exemption of the greater part of the body, some unusual features. The patient was an old man. It is precisely in senile subjects that exceptional features occur, and that arsenic is every now and then found to fail.

T. S—, a cook, æt. 66, was admitted in July, 1871, with pemphigus upon the right leg and arm of four months' duration; it had affected other parts, but was, throughout, worst on right leg and foot. In speaking of the treatment in this case the writer says,—"Arsenic has proved of no avail, though persisted in for a long time and with increasing doses." ('St. Bartholomew's Hosp. Rep.,' vol. viii, p. 46 1872.)

In the next case, a girl, æt. 18, no note is made that arsenic was tried. Dr. Duckworth, however, in connection with the case says,—"In my experience I have witnessed no benefit of any kind in these cases from the employment of arsenic," and observes with regard to the preceding case "that no improvement was manifested till after iron was added to the arsenic." ('St. Bartholomew's Hosp. Rep.,' vol. ix, p. 109, 1873.)

It will be observed that in neither of the two cases in which arsenic failed to cure was the patient a child. The doses prescribed are not mentioned, nor the precise length of the courses of treatment, but we may feel quite sure the remedy was patiently and thoroughly tried. We are therefore obliged to accept Dr. Duckworth's first case as proof that there are exceptions to the statement that arsenic will always cure the eruption of pemphigus. His second case was so exceptional in several respects that I attach less importance to it; and in the third we have no statement that arsenic was tried. It would, however, have been extraordinary if it were true respecting a disease like pemphigus, which shows such wide possibilities of variation, that one and the same remedy should always manifest precisely the same efficiency, and I think you will agree with me in the belief that the amount of positive testimony in support of my proposition very far outweighs the negative.

In conclusion, I wish to mention, in order to complete the picture, a few cases in which pemphigus ended fatally. In the first of these I believe arsenic was never tried, and the same remark applies to the third and fourth cases. The second came under treatment when it was too late to hope for much benefit from any remedy, and when the mucous membranes were already severely affected. In the fourth case, also, there was no time for treatment, for the boy died a few days after Mr. Allen saw him. I introduce these cases here in order to show how severely and how rapidly fatal pemphigus may occasionally prove. It will be seen that they all occurred many years ago, and before the belief in the efficacy of arsenic was generally entertained. Respecting two of them, also, there was some doubt as to the diagnosis. In Mr. Allen's case the fact that the patient had a year before passed through an attack of a somewhat similar eruption seems almost conclusive against the theory which was suggested of accidental contagion from sheep.

Case 12 in my first report on pemphigus in the 'Medical Times and Gazette' (1854), is an instance of a very severe attack in a girl aged twelve, ending fatally after a duration of several months. She suffered from profuse diarrhœa, which resisted every remedy. There is no mention that arsenic was tried. At the autopsy the intestinal mucous membrane was found very pale, but otherwise healthy.

Another case in which death occurred in the course of pemphigus is mentioned in my clinical lecture on the disease in the 'London Hospital Reports.' The patient, a boy of fourteen, under Dr. Hughlings Jackson's treatment, came under care for "a very peculiar form of inflammation of the mucous membrane of the mouth, and, whilst under treatment for this, was attacked by pemphigus." Arsenic disagreed with him, and no treatment was of any use. He died exhausted after a long illness.

Two other cases, in which death occurred in the course of a severe bullous eruption resembling pemphigus, have been published by Dr. (now Sir George) Burrows* and Mr. Joseph Allen.† In both these cases it was supposed that the disease had been acquired by inoculation from sheep, but the facts in support of this scarcely appear to be conclusive. The first patient was a young man, a butcher, who was first admitted under Mr. Startin at the Skin Hospital, covered with scattered, small, pellucid vesicles, which had come out only the day before. I saw him then, and also a week later in St. Bartholomew's Hospital. The case was at first thought to be an instance of very severe varicella, but when I saw it the second time it exactly resembled pemphigus. Treatment was unavailing, and he died in a few weeks. Mr. Allen's patient was a boy, aged eleven, who died after a short illness (fourteen days) covered all over by very large

* See 'Medical Times and Gazette,' June 14, 1856, for an excellent clinical lecture on the case by Sir George Burrows.

† See 'Medical Times and Gazette,' August 1, 1857.

bullæ and vesicles; he had a year before had a similar but less severe eruption. The evidence of the ovine contagion was only that, before the second and fatal attack, he had been driving some sheep barefoot, having at the time a sore on one of his feet.

Probably it was a case of ordinary relapsing pemphigus of unusual severity. A peculiar feature, however, is that the conjunctivæ were much inflamed. There is no evidence in any of these cases that arsenic was tried.

There are several cases given in my list in which the state of the patient at the time the arsenic was commenced was so bad that there could be little doubt that death would soon have ensued but for its use. In Case 20, that of a middle-aged man under my own care in the London Hospital, I felt for some time doubts as to the diagnosis of the case, and thus delayed the use of arsenic. The man rapidly sank so low that death appeared to be probable.

As a last word, let me urge the importance of a very careful study of those cases of pemphigus in which arsenic does not immediately cure. Let them be recorded in the fullest detail, with the doses, length of course, and all particulars. The importance of the inquiry demands this. I would suggest, further, that if one preparation of arsenic fails, another should be tried. As I said at the beginning of my lecture, it is not solely with the treatment of a rare skin disease that we are concerned, but with the demonstration of a fact in therapeutics, which may prove to be of very wide application in practice.

Postscript.—I have stated at a former page that I have had no case which has proved incurable under arsenic. Since this lecture has been in type, however, I have had an elderly Jewess under care in the London Hospital, who died of lung disease after an acute outbreak of pemphigus. The arsenic restrained the eruption, but did not cure it. I shall publish the case in detail.

LECTURE V.

GENERAL CONSIDERATIONS RESPECTING PRURIGO.

GENTLEMEN,—We shall, I think, best introduce for study the various maladies which have received the name of "Prurigo" by recalling to mind a few general facts as to the irritability of the human skin.

In the first place there is no kind of doubt that in some persons the skin is much more irritable than it is in others. The stings of nettles, the bites of fleas or lice, the friction of woollen under-clothing, may each be borne almost without annoyance by some persons whilst they may cause intolerable irritation in others. It happens, I think, generally that those who are susceptible to one kind of irritant suffer also from others, and thus it might, perhaps, be more correct in many cases to say that we have to treat a pruriginous skin rather than a definite disease. Next let us also observe that the local and anatomical consequences of the same irritants are very different in different persons. Thus, in some a flea-bite will bring up a large urticarious wheal, in others it may be attended by a diffused erythematous patch, whilst in yet others, although the irritation may be great, there may be little to be seen excepting a red point. Thirdly, it is, I think, important to remember that pruriginous irritability of skin may very easily be cultivated, and that it will often persist for long periods after the cause which first evoked it has been wholly removed. It may also spread from the part in which it has been first excited to very distant ones. Thus, its existence even for a short time and over a limited area may

easily render the entire skin ever after much more susceptible and more prone to take on irritation.

I have often known patients who had been well cured of scabies a year ago still complain bitterly of the itching, and aver that their skins were susceptible to slight influences in a manner of which they had known nothing formerly. Minor degrees of the same thing are matters of everyday occurrence. Pruriginous irritability may also be cultivated by the very means which are intended to relieve it, and amongst these the habit of scratching stands chief. Many a person becomes the victim of an almost incurable prurigo simply because he has not strength of mind to divert his attention from the original pruritus, and, above all, to abstain from scratching. Thus, we find that a large majority of its victims are those who have but comparatively few claims upon their attention and time. They are the very young, who have no notion of self-control, or the aged, or those in no occupation, in whom the nervous system is left at liberty to concentrate its attention upon any abnormal sensation that may be present. Of course, I by no means wish to imply that our cases of prurigo occur only in these classes. My object is rather to insist that this malady, or symptom, is one that is capable of much increase under the conditions referred to.

Perhaps it may be convenient if we next enumerate some of the most common causes of irritation on the skin, for you will have gathered from what I have already said that I strongly incline to the opinion that many if not most forms of prurigo are of external origin. Now, chief amongst the external causes of itching we have the animal parasites. The pruritus which attends scabies is such a prominent feature of the eruption that it has given its name to it. That which attends the presence of pediculi on the body is also well known. I wish, however, to make the observation respecting both of these, that the degree in which prurigo is felt by the

patient is often quite out of proportion to the amount of the external cause. Thus, the accidental presence of a single pediculus may suffice to render the entire skin so irritable that the sufferer may be at a loss to know on what precise part his enemy is. The bites of bugs, fleas, gnats, flies, and the like, are also productive of prurigo, which may vary very much in different individuals, and of which, as just asserted, the effects may last long after the removal of the cause. Next amongst the common causes of irritation we must place the various kinds of woollen apparel worn next to the skin, and must remark that the influence of these is especially felt upon any sudden change. I fear I may seem to you to be dwelling upon very little matters, but it is, I am convinced, upon the right comprehension of the relative shares taken by such influences as these and the individual peculiarities in the nervous endowments of the skin that we may hope to really understand the various forms of prurigo and to be able to do something for their cure. You will be met also with an immense amount of prejudice on the part of your patients. Persons who have long suffered from prurigo, and who have finally thought it worth while to consult a medical man about it, are almost invariably very unwilling to believe that it can be due to some simple local cause, and they often almost resent your inquiries about such. Their incredulity and denials are usually perfectly *bonâ fide*, and arise from their inability to believe that a slight cause, which they know to be for the most part harmless, may now and then be productive of the most serious results. In any given case of prurigo your investigation must in the first instance be directed to the discovery, if possible, of a local exciting cause, and I cannot too strongly repeat my belief that in many instances such cause, although the real one, may have had only a very transitory application. It remains yet for us to ask what conditions of the general health may induce cutaneous irritability independently of local influences. In

another lecture I have entered in some detail into the consideration of the facts as to the production of pruriginous eruptions by varicella, vaccination, and certain other exanthems. We need not here do more than simply repeat that it is certain that these blood-poisons can produce eruptions which itch intolerably, and which, when cultivated, may last for very long periods. Not improbably there may be other poisons which have the same effect. It is well known that many articles of diet may produce urticaria, and urticaria is, after all, only a variety of prurigo attended by wheals.

In a future lecture I shall attempt a clinical classification of the diseases met with in practice to which the formidable name Prurigo is applicable. In doing this I am not sure that we shall not find it most convenient to classify according to the age of the patient, and to say that we have the prurigo of infants, the prurigo of adolescents and adults, and the prurigo of senile periods. The skin seems to differ a good deal in its susceptibilities at different ages, and considerable variations are also observed in the local results. Let me state that I am going to apply the term prurigo only to cases in which excessive itching is the first and principal feature. It is important at the same time to recognise that pruriginous irritability of skin may become an important complication in many other forms of disease. Thus, you may have a pruriginous eczema, pruriginous pemphigus, or more rarely pruriginous psoriasis.

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Note.—The latter half of this lecture is omitted, in order to avoid repetition in subsequent ones.

LECTURE VI.

ON PRURIGO IN INFANTS AND CHILDREN.

Frequency of the Affection.—Its Chronic Character.—Sometimes Urticarious, but mostly Lichenoid.—Its relation to those Forms which Vesicate.—Its possible Causes.—Although persistent usually Cured in the end.—Mr. Wilson on Lichen Urticatus.—Treatment.—Summary.

Gentlemen,—In the preceding lecture we made some general observations on the nature of prurigo; we will now direct our attention to pruriginous affections as we meet with them in infants and young children. Cases of this kind constitute a very considerable proportion of the out-patients at hospitals for skin diseases.* Pale-faced children are frequently brought to us with the skin of the body rough over with papules, some of which are congested, others pale, and many of which show the effects of scratching. There is often a history that the eruption has already lasted a year or two, with periods of improvement, or it may be even of cure, and that it has finally resisted all sorts of treatment. The

* Dr. Bateman, who gives only a very imperfect account of it, says that "it is peculiar to children," and "continues with great obstinacy for many months." In the same chapter he has the following passage:—"This combination of inflamed papulæ with intense itching unites the characters of the lichen and prurigo; an union which it must be allowed is likewise *not unfrequent in young adult persons.*" Here he would seem to refer to the cases which I shall describe in the next lecture under the term prurigo adolescentium or acne-prurigo.

mother usually complains bitterly that the child cannot sleep, but is engaged in scratching itself all night long; and she will add that the skin, which is, perhaps, pale in the daytime, becomes red under the influence of warmth and bed. Certain minor differences will be observed in different cases, but they will chiefly concern the size of the papules and the degree of urticarious congestion which attends them. In some cases they will be hard, rough, and dry, "like a nutmeg-grater," the characteristic condition of lichen; whilst in others they are of larger size, like half-developed wheals of urticaria, with, perhaps, even some tendency to vesication. It is but seldom that you see on any part a tendency to pass into eczema. There is one class of cases which is distinguished from the others by features which we cannot mention as minor ones. I refer to those in which positive vesication takes place, and in which the palms and soles are often affected. These latter, I believe, will be found almost invariably to have a history which favours the idea that they have been caused either by chicken-pox or vaccination. The child's mother, although often not at all suspecting that chicken-pox has occurred, will tell you that the eruption came out suddenly and freely over the whole body, that there were spots on the face and scalp, and that many of them were either little blebs or looked as if they would become so. Now, the rash of chicken-pox is, I believe, not unfrequently abortive, and whenever I get the history of a sudden and general outbreak of an eruption, which a few days later underwent a decided alteration in character, I always suspect that it was at first an exanthem. This sudden outbreak is not, however, the history which we obtain in the majority of cases of prurigo in infants. In most instances we are told that the eruption began by degrees, getting better and worse, getting well, perhaps, in winter and being worse in summer; and when to these facts we add that in these there are no spots in the soles and palms, and

that those which are on the trunk show little or no tendency to vesicate, we have established a tolerably clear distinction between the two groups of cases.

I have next to try to assign some cause for the second group. My belief is that in very many cases the eruption is simply the result of flea-bites on a pruriginous skin. This cause is almost always repudiated with emphasis by the child's mother. But when we remember how often in children who are not pruriginous we see the skin speckled all over by little petechiæ which are easily demonstrated to be flea-bites, there is nothing very improbable in the suggestion that the copious eruption of prurigo may have the same cause. In old-standing cases where the skin has been much scratched, and in which many lichen papules of long duration are present, it is not always easy to find proof of the cause suggested; but it may nevertheless be often done when fresh red wheals are present. If, however, a case chance to come under notice in which the disease is really of quite recent origin, the investigation is much easier. I have repeatedly seen such children brought to the Hospital for eruptions of a few weeks' duration, of the true cause of which the parents were of course in total ignorance, and in which by the aid of a lens each papule could be conclusively proved to be the remains of a flea-bite wheal. It is the fact that only in a few persons does the flea-bite cause a wheal, which misleads the nurses. If you have it stated by the nurse that the eruption was at first suspected to be due to bites, and that it is always worse in summer (*i. e.* when fleas are abundant), the suspicion in question is much strengthened. I am not at all sure but that in some cases varicella or vaccination may act as the predisposing cause and induce an irritability of skin which much increases the result of local influences. Thus a child may have varicella-prurigo in the first instance, and may recover from it, and may subsequently be attacked

by another form, or without any period of recovery the one may pass insensibly into the other. These mixed cases may not improbably be much more frequent than we suppose. You will find a good example of the case of Walter T—, in the lecture on *Rashes following Varicella.*

I have before me a large series of notes of cases of prurigo in children which have been under care at the Skin Hospital during the last few years. Those which bear upon the subject of its connection with varicella, &c., I have thought worthy of publication in another lecture, and I doubt whether it would serve any useful purpose for me to give you the details of many others. They resemble each other very closely in most points. In nearly all there is the history of commencement at a very early period of life, but seldom under three months, and very often between six months and a year. From the fact that we get exceedingly few cases in children more than six years old we may infer that the disease usually gets cured or wears itself out in time, and that the malady is really one to which infants and young children are especially liable. In a certain number of my cases it appears probable that scabies was the exciting cause, and in a few others lice were either suspected or proved to be present.* In a large majority, however, there was no reason to suspect the presence of either of these obvious causes of itching, and we were obliged to choose between the hypothesis of constitutional cause and the suspicion that the bites of other insects may have been the cause. It would be a great pity to admit prematurely and without evidence that there is such a thing as a purely constitutional prurigo in infants, since it might easily lead us to

* An almost ludicrous instance of the loose way in which special names are sometimes used is afforded in one of our atlases, in which the portrait of a boy, æt. 12, is given to show "prurigo vulgaris," and that of his mother, a woman of 50, "prurigo senilis;" and it is stated that both suffered from scabies and that the mother was covered with lice.

neglect the very measures of treatment or of prevention which are of real importance. That children are liable occasionally to urticaria is well known, but true urticaria from internal causes in early life is very rare, and I believe that it is not usually very intractable. Further, it is quite certain that the diseases we are now considering are not urticaria. A certain number of these cases resemble lichen and are not attended, or only very sparingly, by the presence of wheals or of blotches which look like bites. But in these there is very often the history that in the earlier stages, it may be many months ago, the eruption was of a much more active character and the occurrence of wheals much more frequent. It may be suspected, therefore, that they represent only the last stage of the disease, and that in them the original cause has been long superseded. The chief question which we have to ask is, How far is it probable that in the beginning of the case the spots which looked like bites were really such? I am not in a position to pronounce any positive opinion on this point, but in order to assist in its investigation we will now consider in a little more detail the cases which most closely resemble the results of bites.

Of these I will quote the details of one which was well marked and in which some facts in the history appeared to give support to the supposition that the bites of bugs or fleas might be the real cause, whilst others as decidedly opposed it.

Master D—, a rather delicate-looking boy, æt. 2½, was brought to me from Aylesbury by my friend Mr. R. W. Wilcox, under whose care he had been. When stripped we found that he was covered with wheals and patches of erythema and scratches. One might have thought that he had been very severely flea-bitten. The spots were on all parts of his limbs and trunk, but not on his face. Here and there, where much scratched, there was some tendency to purulent crust, but, as a rule, abruptly defined patches of raised erythema were the prevalent type. These patches were irregular in form, and

none of them had the whitish rim which usually characterises the wheals of urticaria. In the centres of some of them I thought that I could make out a little puncture, as of a bite, and I was much inclined to believe that really bites must be at the bottom of it. The boy was of fair complexion, thin and pale. His mother stated that the irritation produced was most trying, and often kept him awake at nights. His history was that the spots first showed themselves about a year ago, in March, 1866. They came out one night on his legs and arms, and his mother thought that he had been bitten, and made search accordingly, but without result. His father had the day before returned from London, and this caused the more suspicion. For a while they continued to appear chiefly during the night, but after a time fresh crops would come out in the day as well. He had an older sister and a younger brother, and neither of these nor any of the servants about him ever showed any form of eruption. He was living at a farm-house, and had every possible attention given to his diet and dress. Various remedies had been tried, but with no advantage.

We ordered that the boy's nails should be kept close cut, that his hands should be gloved or muffled at night, that he should use a sulphur bath every evening, and that he should take arsenic and cod-liver oil.

He was brought to me again in about six weeks with the statement that he had much improved in health, and that for the first month the disease had appeared very much better, but that latterly it had relapsed. He was looking better, had gained flesh, and the rash was not nearly so copious as it had been.

Some months later I heard from Mr. Wilcox that the disease had proved very obstinate, but that it had at last got well. A Harrowgate water-bath which I ordered did no good in the long run, and the final cure occurred under the use of a prescription of Mr. Startin's, consisting of steel internally and a spirit lotion for the skin.

Mr. Wilson, at p. 187, says of the lichen urticatus of Bateman, "It is extremely well marked." "The spots at their first appearance resemble great bites or bug bites." "When rubbed or scratched the pimple becomes more prominent and bleached like a wheal of urticaria; and instead of subsiding remains for several days." He describes the black blood crusts which result from scratching, and says that the eruption is successive and may cover the body and

limbs with pimples in every stage of progress. Mr. Wilson's experience of the intractability of the disease also fits closely with my own. He writes, "The eruption is obstinate in its nature and often lasts for many months." He quotes one case as an illustration, and says of it, "Each pimple when it does not subside at once continues for about a fortnight, but as fresh ones are continually appearing, the eruption has now been prolonged without amendment for three months." His patient was a girl three years and a half old, delicate, but healthful in her functions. The narrative states that she had been subject to the eruption "from the age of ten months."

It is obvious that in the above extract Mr. Wilson is speaking of a case exactly similar to the one which I have narrated, and it is equally certain that the descriptions given by many authors of "*Lichen urticatus*" have been drawn from precisely such. Is it not very singular that one observer after another who has looked carefully at the fresh spots has been puzzled to tell whether they were bites or not? Mr. Wilson would not appear from his expressions to have entertained any serious suspicion that they were really bites, and I may admit that in my own case and in many others I was at the time forced to abandon it. The mother of my patient, indeed, would not hear of it. The child, she said, had suffered from the eruption for a year; nobody else in the house had it—it was impossible that it could be from bugs or fleas; and, besides, there were, she was sure, none of either in the house. I was forced, as on many other occasions, to admit the improbability in the face of such facts, but now in reverting to the case I cannot get rid of a suspicion that very probably it was so after all. Of course, we must suppose a very peculiar susceptibility of skin and remarkably persistent results; that the child had been bitten in any inordinate degree is beyond supposition. If such was really the cause, in all probability the number of

the insects was but very small. When, however, we make due allowance for the remarkable capriciousness of these diminutive plagues, how they will bite some people and not others, and for the extreme variability as to resulting irritation in different skins, we shall, I think, find it wise not to throw aside our suspicion until more proof of its inadequacy has been afforded. It is well known that of elderly persons whose skins are covered with lice not, perhaps, one in a hundred ever suffers to any serious extent from prurigo, and it may be the same with the bites of other insects. I believe that fleas, as a rule, irritate young persons more than adults, and that the aged suffer little or nothing from them. It is only a minority who suffer from the bites of bugs, and of those who do, many are only liable to be bitten in certain places. I have several times seen elderly men who were bitten only or, at any rate, suffered irritation only, on the bald scalp. Facts like these must be kept in mind if we wish to avoid an undue scepticism as to what is possible in relation with this source of irritation.

I have said nothing as yet as to the treatment of these very troublesome cases. I have never found any advantage from special forms of internal medication, but whenever a child is out of health it is obviously wise to prescribe tonics and to give cod-liver oil and nutritious diet. These will not, however, cure the prurigo, and although many of those who have suffered from the disease for long periods become emaciated and shrivelled, you will every now and then meet with the worst type of the disease in children who appear quite healthy. Some years ago we used to think at the hospital that the sulphur bath was the most efficient remedy, but latterly it has been superseded by baths containing tar. From these in many cases we have obtained excellent results, but the disease, it must be admitted, is still very liable to relapse. Washing the skin with diluted spirits of wine or a rather strong solution of the Liquor Carbonis Detergens (one

part to four or five of water) is often very effectual in allaying the irritation. The parents must, of course, be instructed to prevent scratching, and to use the "insect powder" in the bed.

It is time now that I brought this lecture to a close. Briefly to sum up, I think we may hold that it is proved beyond all doubt that the eruption of varicella often induces an extremely pruriginous state of skin, and is followed by a rash which may persist for many months. This rash, which is often confused with the other forms of infantile prurigo, may usually be distinguished from them by observing that it is to a greater or less extent vesicular. Next, it is probable that vaccination not unfrequently leaves the skin pruriginous, its eruption being, however, less definitely vesicular than that which follows varicella. Thirdly, that in addition to the vaccination and varicella forms of prurigo, we have in infants other very intractable pruriginous eruptions the true cause of which it is difficult to assign. It seems very probable, however, that in a large majority, if not in the whole of these, the exciting causes are local ones, and often connected with the bites of one or other of the insect pests.

APPENDIX TO LECTURE VI.

STATISTICAL AND TABULAR STATEMENT OF CASES.

The appended table comprises 116 cases of pruriginous affections in young children, being all that were under my care at the hospital during five years—1869-1874. I had it put together in the first instance, and now print it, in the hope that the detailed comparison of cases may result in some further insight as regards the causes of these troublesome maladies. A summary of the table will be found at page 99, showing the different heads under which the cases may be placed as regards possible cause, and also giving other information as regards the influence of season, &c.

Cases of Prurigo in Young Children treated at the Hospital for Skin Diseases during 1869—74.

Name. Reference. Date. Number.	Age at commencement. / Age at admission. Duration.	Parts affected and description of eruption. Registered diagnosis.	Remarks, with suspicions as to cause.
Alf. Vernon, 1869, Sep. 7. (Bound letters, p. 187.) Pub. in detail B. M. Jour., Lect. Nov. 1875 1	9 mos. / 2 Duration 15 mos.	Body and limbs. Vesicular on palms and soles. None on face, backs of hands, genitals, or flexures of large joints	Strumous upper lip. Long fine hair on body. Began suddenly with clear vesicles; was called chicken-pox. No contagion. Under care 12 mos. Temporary improvement, but relapsed.
Saml. Bristowe, 1869, Oct. 12 (p. 195). Pub. in detail *Ibid.* 2	7 mos. / 15 mos. Duration 8 mos.	Legs chiefly, then soles and hands, and face. Flexures nearly free. Papules, vesicles, pustules	Came directly after vaccination; the doctor said it was chicken-pox. No contagion; the only one affected. Under care 18 mos.; condition varying.
Wm. Chapman, 1870, June 14 (p. 203) 3	18 mos. / 2 Duration 6 mos.	Universal eruption; worst on limbs; least on face, hands, and feet, and trunk. A single bulla, size of large pea, on foot; no small vesicles	Under care 6 weeks.
John Emery, 1870, July 26 (p. 207) 4	10 mos. / 16 mos. Duration 6 mos.	Chiefly extensor surfaces. Papules and urticarious wheals	An elder sister, æt.; 4, has had a similar eruption since she was 1 year old, and which gets well in winter. Under care 6 weeks.
Geo. Taylor, 1870, Aug. 9 (p. 211) 5	6 mos. / 8 mos. 6 weeks	All over the body. Lichenous spots; skin rough. Began as urticaria apparently	Has not been vaccinated. Under care 6 months. Some improvement.
Susan Bellinger, 1870, Sept. 20 (p. 219) 6	Early infancy / 5 Several years.	Eruption reported to come out at night; probably urticaria. Now only scars of scratching	Probably urticaria. Under care 4 months, and very much better.
Elizth. Burgess, 1870, Oct. 11 (p. 227) 7	3 mos. / 2 1¾ year.	Not copious. Some rather large inflamed vesicles. More come out when she is warm. Began on the buttocks	Delicate skin. Under care 15 months, and discharged well. No contagion to or from the other children.
Arthur Wood, 1870, Nov. 29 (p. 231) 8	1½ / 2½ 1 year.	Eruption of small papules, most abundant on extensor surfaces. Distribution irregular. Urticaria described	Was called and treated as scabies, without benefit at first. No contagion to or from the others. Said to vary much on different days. Discharged quite well after 2 months. Attendance.
Charlotte Mason, 1870, Dec. 16 (p. 235) 9	— / 1 year 1 week.	Porriginous spots and ulcers on various parts after chicken-pox	Child had chicken-pox 1 week ago; the spots have suppurated and ulcerated. A sister had had varicella a week before. Only under care 3 weeks. No note of final state.

Name. Reference. Date. Number.	Age at commencement.	Age at admission.	Duration.	Parts affected and description of eruption. Registered diagnosis.	Remarks, with suspicions as to cause.
Jas. Quinlan, 1871, Feb. 28 (p. 239). Pub. in table B. M. Jour., Lect., Nov., 1875 10	6 mos.	7 mos.	6 weeks	All over the trunk and extremities, but avoiding the flexures	Began as modified smallpox. Under care 8 to 9 months. During treatment she once went for 2 weeks to the country, and the eruption died off; as soon as she returned to London it reappeared.
Anne Cridland, 1871, March 3 (p. 243). Pub. in detail *Ibid.* 11	2	3½	15 months.	"*Lichen prurigo-urticans*"	"Has been liable to it since varicella at æt. 2 years." Only attended once
Mark Swan, 1871, March 7 (p. 247) 12	2 mos.	6 years	5¾ years	Over the whole body, also scalp, cheeks, backs of hands, between fingers	Pale complexion. Began on face and scalp, and from report seems to have been eczema or porrigo at first. Since then never quite free. Attended twice.
Rose White, 1871, May 5 (p. 251) 13	2 weeks	3 mos.	2½ months.	"*Lichen prurigo*"	Attended 6 weeks.
Fredk. Manger, 1871, May 9 (p. 255). Pub. in detail *Ibid.* 14	1	1¾	9 months	...	Began like chicken-pox, but the doctor said it was not that disease. Has never had chicken-pox. No contagion. Has persisted since first appearance. Under care 4 mos. Much benefit by sulphur bath.
Harriet Richardson, 1871, June 6 (p. 259) 15	—	13 mos.	Since aged 4 days	"*Lichen prurigo*"	Under care 2½ months.
Chas. Bennett, 1871, June 9 (p. 263) 16	3	4	1 year	"*Lichen prurigo*"	Attended 6 weeks.
Harriet Mead, 1871, June 13 (p. 267) 17	4 mos.	1½	14 months	General eruption	Attended 2 weeks. Much relief by sulphur baths.
Emily Diggins, 1871, June 27 (p. 271) 18	3 mos.	10 mos.	7 months	"*Lichen urticatus*"	Attended a month.
G. W. Crawley, 1871, July 14 (p. 275) 19	3 mos.	1¾	1¼ year	"*Lichen prurigo*"	Attended only once.
Caroline Baker, 1871, July 7 (p. 279) 20	—	2	—	Back and forearms; perhaps elsewhere. Lichen papules with scratches	No proof of pediculi, but clothes are clean. *Father* has ova on scalp. Attended 6 weeks. Some relief by sulphur bath.

Name. Reference. Date. Number.	Age at commencement.	Age at admission.	Duration.	Parts affected and description of eruption. Registered diagnosis.	Remarks, with suspicions as to cause.
Sarah Ellis, 1871, July 14 (p. 283). Pub. in table *Ibid.* 21	6 or 7 mos.	2	1½ year	Cheeks and upper and lower extremities, both backs and fronts. At the flexures resembles dry eczema. Trunk free. Very irritable	Began after being vaccinated at æt. 6 months. Got well for 2 months in summer; thought to be rather worse in cold weather. It is always dry. Under care 3½ months. Relief (temporary) by sulphur bath.
John Lawrence, 1871, July 18 (p. 287) 22	1¾	2	3 months	Extremities	Had it also slightly a year ago, in summer. Attended 3 months (till Oct. 24th).
Henry Barnett, 1871, July 25 (p. 291). *See below Case* 63 23	—	4	No note	Over the whole body. Cheeks, forehead, chest, fronts and backs of hands, *excepting the flexures*, which are free. None on soles or palms	On forehead and cheeks looks like simple acne. Is probably sebaceous. Under care 3—4 months. Relieved by sulphur bath.
Fredk. Scholfield, 1871, July 25 (p. 295) 24	1½	2½	13 months.	Face, chest, back, and extremities	Followed measles. Attended 2 months.
Alice Lake, 1871, Aug. 1 (p. 299) 25	2	3½	1½ year	Body and limbs. Irregularly distributed	Probably more an urticaria. Description of large wheals; when seen a varying amount of scratched lichen with one or two wheals. Varied much during her 7 weeks' attendance.
Henry Williams, 1871, Aug. 8 (p. 303) 26	1	5	4 years	"*Lichen prurigo*"	Attended only 2 weeks.
Laura Nicholls, 1871, Aug. 22 (p. 307) 27	5 mos.	4	3½ years	Trunk and upper and lower extremities, including fingers and toes. None on face	Chiefly lichen, but a slight tendency to fluid effusion when scratched. Began like "nettle-stings" or "gnat-stings." A baby, æt. 10 months, is beginning to suffer from same. Attended only once.
Geo. Humphrey, 1871, Aug. 25 (p. 311). Pub. in table *Ibid.* 28	3 mos.	14 mos.	11 months	Trunk, face, forehead, and extremities. Flexures avoided. Has been in palms	Began directly after vaccination at æt. 3 months. Never had chicken-pox. Attended 3 months. No note of final state.
Ada Purchas, 1871, Aug. 29 (p. 315) 29	1 year	16 mos.	4 months	Not very copious; chiefly lichenous, but some spots surrounded by erythema and look like bites	Had "tooth-rash" at æt. 2 months. Under care 2 months.
Mary Holliday, 1871, Sept. 5 (p. 319) 30	2	2½	6 months	Trunk and all the extremities, including hands	Had just come from the country to London when it began. Under care 2 months.
Emma Dennis, 1871, Sept. 8 (p. 323) 31	2	4	2 years	Trunk and all the extremities; very few on hands. None on face or flexures	Lichen, with round erythematous spots like bites. Fair, rosy cheeks. Began after measles; had none before. Under care 1 month.

Name. Reference. Date. Number.	Age at commencement. / Age at admission. Duration.	Parts affected and description of eruption. Registered diagnosis.	Remarks, with suspicions as to cause.
Wm. H. Smith, 1871, Oct. 3 (p. 327) 32	3 / 4 14 months	"*Lichen-prurigo*," with a few pustules	No pediculi, nor any reason to suspect them or other parasites. Attended only twice.
Arthur Dean, 1871, Oct. 27 (p. 331) 33	8 mos. / 9 mos. 3 weeks	Shotty papules with vesicular heads	Attended only twice.
Louisa Evans, 1871, Nov. 17 (p. 335) 34	2 / 3 10 months	Scalp, face, trunk, and all the extremities; none on feet, very few on backs or palms of hands; none at flexures. Lichen, with wheals, pustules, and some vesicles. Many look just like bites	No pediculi or other parasites. Another child has no eruption. Has had slight eruption for a very long time, but not like this. This has got worse last 3 weeks. Attended 6 weeks. Some relief by sulphur bath.
Beatrice Gabriel, 1868, Oct. 16. (Bound letters, 1868–70, p. 159) 35	— / 8 mos. No note	Vesicular and pustular eruption confined entirely to soles, and not spreading at all during a considerable period. Slight lichen-eczema on arms	Resembled scabies somewhat, but did not spread. No contagion. No note as to varicella. Attended 2 months.
Rosina Childs, 1869, Feb. 19 (p. 163). Pub. in detail *Ibid.* 36	14 mos. / 18 mos. 4 months	Trunk, extremities, palms, and soles, and some on face. Shotty papules becoming vesicular. At a later stage there were pustules as well. Flexures free	Began all over the body at once in December. The doctor said it was smallpox. Much itching. Attended 5 months. No note of final state; but little benefit during first 3—4 months. Used sulphur baths, &c.
Louisa Brown, 1869, April 27 (p. 179) 37	1½ / 1¾ 4 months	Pale papules on back, abdomen, thighs, and a few on arms. Reported to be wheals at night. Copious; prurigi-nous	Began directly after scarlet fever, 4 months ago. Attended only 3 weeks.
Edwd. Barfoot, 1869, May 11 (p. 183). Pub. in detail *Ibid.* 38	3 mos. / 16 mos. 13 months	Trunk, limbs, soles, and between fingers, face, and forehead; a few on scalp, which are porriginous. Flexures avoided; front of chest and abdomen sparingly affected. Shotty papules, with a small vesicle on top; firm and prominent. Many leave scars; most leave stains. Pruriginous	Pale and out of health. Began after vaccination at æt. 3 months, and was called "glass-pock" at first. Has varied much in degree, but never been quite well since it began, though several times nearly so. Attended 2 months.
Moses Davis, 1869, June 1 (p. 187) 39	2 mos. / 15 mos. 13 months	Cheeks, forehead, backs of arms, some on fronts of wrists, palms, and soles. Vesicular on palms and soles, elsewhere white papules and large red spots slightly raised	No contagion. Attended 6 weeks.
Wm. Payne, 1869, June 8 (p. 191) 40	6½ / 9½ 3 years	Lichen of face, backs of arms, backs of hands and fingers, shoulders, and a few on legs. None on thighs. Papules and abortive pustules, sometimes eczematous on face. Pruriginous; neck free	Every spring and summer for 8 years. Well in winter. No contagion. Pale, full face. Symmetry marked. It leaves scars. A case of *Penman's disease.*

Name. Reference. Date. Number.	Age at commencement.	Age at admission.	Duration.	Parts affected and description of eruption. Registered diagnosis.	Remarks, with suspicions as to cause.
Elizth. Birch, 1869, June 22 (p. 199) 41	4 days	3 weeks	2½ weeks	Lichen rash like small shot; no fluid on pricking, but each has a shining white pimple, and linen said to stick to skin. Universal, including scalp, palms, and soles	Attended 5 months, and was vaccinated. *Vaccination not followed by any new eruption.* Four months after ceasing attendance came again with eczema behind ears.
Sarah Richardson, 1869, June 22 (p. 203). Pub. in detail *Ibid.* 42	6 mos.	11 mos.	5 months	Scalp, palms, and soles, only specified. Abortive vesicles, which afterwards become inflamed and sometimes suppurate	Began soon after vaccination at æt. 6 months; had watery heads, and mother took it for chicken-pox. Vaccination did not "take." Attended only twice.
Sarah Tosland, 1869, July 13 (p. 207). Pub. in detail *Ibid.* 43	5 mos.	1½	14 months	Thighs (back and outer sides), soles, backs of hands, not palms. Formerly some spots on face. Lichen, with wheal-like spots	Began in summer; came out gradually; mother thought it chicken-pox. No pediculi anywhere; mother has often looked also. No contagion to eight others. Was better in winter. Attended 2 months. Considerable benefit; sulphur bath.
Annie Jeffrey, 1869, July 30 (p. 211) 44	—	15 mos.	—	Irregularly scattered on almost all parts except scalp; some on soles and palms, and a few on face. Pruriginous spots beginning like flea-bites or nettle-stings, also some urticarious wheals	Probably was scabies in first; this was the doctor's diagnosis. Attended 2 months. No contagion.
Bertha Smart, 1869, Aug. 10 (p. 215) 45	"At birth"	2	Nearly 2 years	Body and limbs, including feet and hands, but palms quite and soles nearly free. Lichen spots, but they are said to be like bug-bites or nettle-stings at first	Probably began as scabies, caught from elder child, who, like patient, has had an eruption almost from birth. Mother and father also had it, and mother still not quite well. Nearly well in 3 weeks with sulphur ointment.
Thos. Ralley, 1869, Aug. 31 (p. 219) 46	16 mos.	17 mos.	1 month	Pruriginous lichen all over body, worst on arms and legs; fingers and backs of hands, but not palms; one or two on soles. Not vesicular. Some spots on head.	Fair skin, irritable, and bites cause wheals. Pediculi on head; none found on clothes. Attended 6 weeks. Sulphur ointment and bath; "very much better."
Martin Lewis, 1869, Aug. 31 (p. 223). Pub. in table *Ibid.* 47	About 3 mos.	2½	About 2 years	Copious rash of scratched lichen all over; not vesicular. Much pruritus	Said to have been present since vaccination. Ova of pediculi on head. Attended only once. No contagion.
Arthur Barratt, 1869, Feb. 19 (p. 227) 48	1	6	5 years	Copious on limbs and nates; less on trunk and face; scalp, palms, flexures of joints, all quite free. Has had a few on soles. "Hebra's prurigo"	No contagion to 5 others. Worse in warm weather, but never quite well. Has never been vaccinated. Attended for 4 months 2 years ago; present attendance several months, with interval. At one visit pediculi found on both head and clothes. Sulphur not used.

Name. Reference. Date. Number.	Age at commencement.	Age at admission.	Duration.	Parts affected and description of eruption. Registered diagnosis.	Remarks, with suspicions as to cause.
Edith Pashley, 1869, Sept. 17 (p. 235) 49	4 mos.	2¼	2 years	Copious; parts not specified except face. Begin as bite-like or wheal-like spots; then papular and ecthymatous. Much itching	Some pediculi on head; none on (clean) clothes. Does not wear flannel to skin. Mother had urticaria for short time in childhood. Attended 6 weeks. *Eruption dated from vaccination.*
Isabella Brown, 1869, Sept. 24 (p. 239). Pub. in detail *Ibid.* 50	5 mos.	1	7 months	General and copious; soles affected; a few on face and scalp. Flexures nearly free; none on palms. Vesicular and becoming somewhat impetiginous	Came soon after vaccination. Attended 2 months, and was "nearly well;" for last month used sulphur ointment.
Walter Seymour, 1869, Sept. 24 (p. 243). Pub. in detail *Ibid.* 51	—	1	No note	Copious; vesicles and papules, some pustules. Limbs, slightly on face, palms, backs of feet	Said to be chicken-pox at first, and described as clear watery spots. Attended 2 months without real benefit. Sulphur not used.
Jessie Wilson, 1869, Oct. 29 52	9 mos.	3	2¼ years	Pruriginous lichen with very small spots	No evidence of pediculi on head or (clean) clothes. Attended 5 weeks. Using sulphur bath and ointment, and was then "all but well."
Geo. Woollard, 1869, Oct. 29 (p. 251) 53	1	1½	6 months	Not copious and not vesicular. Papules on soles	Some other children in family have had some similar spots. Attended only once.
Charlotte Holly, 1870, Feb. 18 (p. 255) 54	2	2	3 weeks	Face, back, and arms. "Lichen pruriginosus"	Attended two months.
Arthur Mannering, 1870, April 26 (p. 259) 55	6 mos.	2¼	1¾ years	Very copious, especially on backs of limbs; palms affected. Flexures and flexor surfaces avoided	Has been constantly under treatment whole time. Was called "red-gum" at first. No contagion. Attended 3 months. No better. Sulphur very little used.
Walter Thompson, 1869, April 2 (p. 263). Pub. in detail *Ibid.* 56	1¼	1½	3 months	Face and all the limbs, including palms and soles. Avoids flexures and parts where skin is thin. None on scalp or between fingers, or on forehead. Vesicular. Very pruriginous	No contagion. Began 3 weeks after vaccination. Vaccinated at 15 months. Attended 4½ months, taking arsenic and zinc ointment. Was nearly well at 6 weeks, and remained so till discharged 6 months later (April, 1870). Again under care with slight relapse. Same parts chiefly affected, and also psoriasis positions where the eruption resembled psoriasis.
Florence Wilson, 1870, July 29 (p. 275) 57	11 mos.	1¼	4 months	Legs, arms, chest, back. Copious; vesicular, papular, and urticarious	Sulphur bath gave much relief. Attended only twice.
Henry Morris, 1870, Aug. 9 (p. 279) 58	1½	3½	2 years	Back, chest, and extremities	Attended only once.

Name. Reference. Date. Number.	Age at commencement. / at admission. Duration.	Parts affected and description of eruption. Registered diagnosis.	Remarks, with suspicions as to cause.
Adelaide Genese, 1871, Aug. 29; 1873, May, 6. (Unbound) 59	2 / 4 — 2 years	Extremities, back, and chest. Face free. Rough lichen spots	No contagion. Has not had chicken-pox. Under care twice; first time was well in 2 months (Oct. 31). Eruption always gets well in winter.
Arthur Roberts, 1871, Sep. 19 60	— / 2¾ — 1½ year	Tolerably copious. Back and legs; scratched	Was like "blisters" at first. Attended 8 months. Better in the winter. Sulphur throughout.
Emilie Kitchen, 1871 Nov. 24 61	— / 3 — Some months	Lichenous pustular eruption	Attended 3½ months, and quite cured. Sulphur bath and ointment.
David Forster, 1871, July 21 Pub. in table *Ibid.* 62	8 mos. / 3 — 2½ years	Lichen prurigo with wheal-like spots	It is well in winter. Doctor called it "glass-pock" at first. Vaccinated æt. 9 months, but relation between it and origin of rash not clear. Attended 11 months. Sulphur. No parasites.
Hy. Barnett, 1872, Aug. 23. (See former notes?) Case 23 63	— / 5	Entire body and limbs, including face; excepting flexures, palms, and soles. Copious, small, scratched papules. No wheals	Attended some months ago. This is a relapse. This time attended only three times. Sulphur bath.
Julia Holloway, 1872, Sept. 20 64	Few weeks / 1¾ — 1½ years	"*Prurigo infantilis*"	Skin always rough to touch. Attended only once.
John Lawrence, 1872, May 3 65	2 / 3 — 1 year	Back, extensor surfaces of all limbs. Papules, pustules, and erythema	Always worse in warm weather. No contagion. Attended 4 months without permanent good. Sulphur bath.
Albert Levi, 1872, Nov. 29. Pub. in table *Ibid.* 66	5 mos. / 5½ — 5 years	"*Lichen prurigo*," now ecthymatous and eczematous	Began 7 weeks after vaccination. Attended 4 months.
Hy. Adlett, 1872, Aug. 27 67	6 mos. / 2½ — 2 years	Back, chest, legs, and slightly on thighs. Copious. Hands and feet very few	Attended only twice.
Amelia Hollington, 1871, Sep. 15 68	5 mos. / 2½ — 2 years	"*Lichen prurigo.*" No details	A younger child has a similar rash beginning; elder ones free. Attended for nearly 2 years, with intervals of several weeks and months occasionally. At last note it remained only on backs of forearms. Sulphur bath.
Paul Rourke, 1872, Aug. 13 69	— / 1¼ — No note	Copious, small spots, pruriginous	Attended 3 weeks.
Georgiana Langton, 1872, Aug. 13. Pub. in table *Ibid.* 70	2 / 2¼ — 3 to 4 months	"*Prurigo*"	Began as large blisters, like "vaccination marks" or "chicken-pox." Attended 1 month.

Name. Reference. Date. Number.	Age at commencement. / Age at admission. Duration.	Parts affected and description of eruption. Registered diagnosis.	Remarks, with suspicions as to cause.
Eugena Elsey, 1872, July 30 71	2½ / 2½ 3 weeks	Extensor surfaces of limbs, head and face	No contagion. Attended only twice.
Algernon Keyte, 1872, Aug. 6 72	5 mos. / 2½ 2 years	Trunk and all limbs; one or two between fingers like bites. Vesicular papules and urticarious wheals	Attended 6 weeks.
Marian Conisbee, 1872, Aug. 6 73	2½ / 2½ 2 weeks	Extensor surfaces and face	Attended 2 months. Suphur bath.
Alfred Strickland, 1872, Aug. 6 74	1½ / 2½ 1 year	Papules, vesicles, and wheals	Began in summer. Attended 3 months. Sulphur bath.
John Fletcher, 1872, Aug. 9 75	5½ mos. / 7 mos. 6 weeks	"*Lichen prurigo*"	Attended 5 weeks. Sulphur bath.
Fredk. Tottem, 1872, July 23 Pub. in table *Ibid.* 76	2½ / 3 4 months	Trunk, face, and forehead, extensor surfaces of limbs. Very copious, papular, with some pustules. Flexures avoided	Began "like smallpox;" others thought it chicken-pox. Passed into present state after being out about 6 weeks. No contagion. Did not begin on fingers. Attended 2 months. Sulphur.
Sidney Lee, 1872, June 18 Pub. in table *Ibid.* 77	2¾ / 3 3 months	"*Lichen prurigo.*" Avoiding flexures and fronts of forearms	Began like chicken-pox, and two doctors said it was a bad case of that disease; now dying away. Did not begin in warm weather. Attended only once.
Wm. Wearing, 1872, Oct. 8 78	1½ / 1¾ 6 months	"*Lichen urticatus*"	Attended only twice.
Harriet Bond, 1872, Oct. 1 79	2 mos. / 2½ 2¼ years	Body, hands, and feet. Papular; no vesicles. Moderately copious	Began on feet. Attended 3 months, and got much better. No sulphur; Ung. Hyd. c. Pl.
Ernest Barker, 1872, Nov. 8 80	1½ / 4½ 3 years	Now scratched. Ecthymatous prurigo on extensor surfaces. None between fingers or toes	No contagion. Attended 2 months. Sulphur bath.
Charles Bell, 1872, May 31. Pub. in table *Ibid.* 81	14 mos. / 14 mos. 2 weeks	Ulcerating vesicular rash. Worst on feet, but little on body. Hands and arms free.	Began 2 weeks ago as "chicken-pox."
Amelia Tegg, 1872, May 24 82	7 mos. / 10 mos. 10 weeks	Chiefly on parts covered by clothes; some on occiput.	No contagion. Began with illness and eruption taken for smallpox. Had been vaccinated some months before. Attended only twice.
Jas. Scott, 1872, April 30 83	3 / 3 1 month	"*Lichen prurigo*" on back and slightly on arms	No evidence of pediculi. No history of previous disease of any kind. Attended only once.

Name. Reference. Date. Number.	Age at commencement.	Age at admission.	Duration.	Parts affected and description of eruption. Registered diagnosis.	Remarks, with suspicions as to cause.
Fredk. Cords, 1872, April 30 84	2¼	2½	7 weeks	Back. Copious small lichen spots; a few on backs of hands. Some pustules. Flexures free	No evidence of pediculi. Had no eruption in infancy. Attended 1 month, and again once some months later.
Jas. Batchelar, 1872, Feb. 6 85	3 mos.	3	2¾ years	All over the body. "*Prurigo*"	Relapsing ever since æt. 3—4 months. Attended 1 month.
Alice Morgan, 1872, March 5 86	1 mo.	4 mos.	3 months	"*Strophulus*"; papular eruption, cheeks, and body	Began before vaccination. Attended only once.
Mary Russell, 1872, March 5 87	2	3	1 year	Back only specified. Papules and pustules	Attended only twice.
Jessie Morgan, 1872, March 8 88	—	1½	No note	Chest, upper part of back, shoulders, legs. Large erythematous spots, with a small vesicle in centre. Urticarious	Began while in country, and was attributed to midge-bites. Attended 2 months.
Ada Cornis, 1872, May 3 89	7 mos.	11 mos.	4 months	Extensor surfaces, including dorsum of hands and feet, fingers and toes. Face, forehead, and flexures free. "Erythematous lichen"	Attended 4 months. Some relief from sulphur bath. Pale and feeble, but fat.
Wm. Welch, 1872, May 7. Pub. in table *Ibid.* 90	3½ mos.	6 mos.	2½ months	Scalp, body, and extremities covered; legs very bad. Papules and large pustules. Flexures free	Began 2 weeks after vaccination, and not till after the arm had healed. No proof of scabies. Pale and ricketty Attended 7 weeks.
Sydney Woolford, 1872, Jan. 2. Pub. in table *Ibid.* 91	6 mos.	15 mos.	9 months	Back, buttocks, face, extremities. Copious; lichen and pustules	Vaccinated at 5 months. The rash came out a month later. Attended 4 months. Sulphur bath.
Sidney Murray, (Imperfect) 92	No note	No note	No note	Patches of pruriginous lichen; head, neck, buttocks, fronts of elbows	Thin and delicate. No pediculi found on head.
Jessie Ward, 1873, Jan. 28 93	1½	3	1½ year	"*Prurigo Infantilis*"	Attended twice, and was much relieved by sulphur bath; was then unable to come from illness. Nine months later came again.
Louisa Barrett, 1873, July 18 94	2 mos.	14 mos.	1 year	Back, extensor surfaces of limbs, abdomen; a few deeply placed in palms. Rough lichen spots, not much elevated	No note of vaccination. The rash is better in winter, but not well. Attended 3 months. Sulphur bath.
Laura Bulmer, 1873, May 27 95	—	1½	No note	Back, chest, abdomen, extensor surfaces of limbs, forehead, and under chin. Small spots and vesicles, some on erythematous bases	Attended 2 months. Tar bath.
Edwd. Lillywhite, 1873, May 13 96	1¾	2	2 months	Loins, arms, &c. Not abundant	Suffers much if bitten by bugs or fleas. Attended 6 weeks. Sulphur bath.

Name. Reference. Date. Number.	Age at commencement.	Age at admission.	Duration.	Parts affected and description of eruption.	Remarks, with suspicions as to cause.
Edith Harris, 1873, April 25 **97**	3 mos.	11 mos.	8 months	Back, thighs, &c. Papules and abortive vesicles, with erythematous area	Came out suddenly, and has persisted with variations. No note as to vaccination, but it began at the vaccination time (æt. 3 months). Attended 2 months. Tar bath.
Alfred Cotton, 1873, April 22 **98**	2¼	2½	2 months	Rather severe. "*Lichen urticatus*"	Attended 1 month. Sulphur bath.
Edith Rowe, 1873, Oct. 31 **99**	3 mos.	2½	2¼ years	No note	No note of vaccination, but it began at the vaccination time. Attended 5 weeks. Sulphur bath.
Mary J. Bird, 1873, Oct. 24 **100**	1	5	4 years	No note	Has had much treatment before. Attended only once.
Margt. Wood, 1873, Oct. 14 **101**	About 6 mos.	3½	About 3 years	Lower part of back, neck, hands, and feet. Face free	Every year since she was a baby; worse in summer. Attended 5 weeks. Sulphur bath.
Alvina Weldon, 1873, Sep. 30 **102**	—	1½	A few weeks	Back and extremities. "*Ecthymatous prurigo*"	Attended 2 months. Sulphur bath.
Eliza Hutchinson, 1873, Aug. 15 **103**	—	6 weeks	—	Vesicles with congested bases. Vesicles are large	Attended 3 weeks. Diagnosed as "*Strophulus.*"
Julia Jewell, 1873, Feb. 21 **104**	2	2	6 weeks	Back, backs of forearms, and of hands. Abundant scratched papules	Attended 1 month. Sulphur bath.
Fredk. Colborne, 1873, Jan. 7 **105**	3	4	1 year	Back and cheeks. Small scratched spots	No evidence of pediculi. Attended 3 months, and was relieved. Sulphur bath.
Harry Cotton, 1873, July 25 **106**	2	2½	6 months	Back, extensor surfaces of limbs. Copious small scratched spots. Not urticarious	Began to scratch on his hips; then spots came. Attended 2 months. Sulphur bath.
Fredk. Davis, 1873, July 22 **107**	—	14 mos.	—	Rash resembling the ordinary lichen-prurigo	*Pediculi vestimentorum* on body flannel. Mr. Tay notes "the first I have ever found on an infant."
Caroline Duffell, 1873, Jan. 14. Pub. in table *Ibid.* **108**	8 mos.	10 mos.	2 months	Buttocks, legs, loins, feet, thickly covered by papules, pustules, and urticarious spots. None on hands, face, or flexures	Vaccinated at 7 months old. Rash began a month later. Attended 3 months. Sulphur bath.
Wm. Ellis 1874, Oct. **109**	6	7½	1½ years	Extensor surfaces, and at some of the flexures. Soles and palms free	Attended 3 months and again once after 3 months' interval. Sulphur lotion.
Mary Hulls, 1874, Jan. 6 **110**	—	8	No note	Small pruriginous spots. Fingers not affected. Very little to be seen	Two others have it. Probably pedicularia, but no lice found.
Geo. Hann, 1874, July 21 **111**	7½	8 mos.	2 weeks	Copious on limbs; less on trunk; some on neck and scalp. Large papules with abortive vesications on them and erythema. Cheeks erythematous	Pale, fat, lively. Resembles varicella, but not umbilicated. Attended only once.

Name. Reference. Date. Number.	Age at commencement. / Duration.	Age at admission.	Parts affected and description of eruption.	Remarks, with suspicions as to cause.
Richd. Bathurst, 1874, June 30 Pub. in table *Ibid.* 112	1½	2 (6 months)	Copious and severe; pustular and leaving scars; urticarious	Began like smallpox. Is a pale child. Attended 8 months. Sulphur bath. Had previously used sulphur bath without benefit.
John Brown, 1874, July 7 113	3½	3½ (3 months)	Severe, urticarious, and leaving dark stains	Attended only twice. Sulphur bath.
Ernest A. Perrin, 1874, July 21 114	—	4 mos. (—)	"*Prurigo infantum*"	Attended 1 month.
Jane Axford, 1872, Sep. 30 115	5½	6 (9 months)	Numerous small spots and some urticarious wheals	Attended 12 months. Sulphur bath the whole time. Several times quite well for a short time during the treatment. After a year's interval she came again for 2 months, and was discharged well.
Edwd. Heath, 1875, Feb. 5 116	2½	2½ (2 months)	Loins, backs of forearms; a few on wrists and backs of fingers. Fronts of elbows free	"The chicken-pox variety." Attended only twice. Sulphur bath.

Influence of season (hot weather).

Dates of admissions (*months*) of cases of prurigo in children, exclusive of those due *directly* to pediculi or scabies (*i.e.* with pediculi on them, or *recent* scabies).

Month.	1869.	1870.	1871.	1872.	1873.	1874.	Totals.
January . .	0	0	0	1	3	0	4
February .	2	1	1	1	1	0	6
March . .	0	0	2	3	0	0	5
April . . .	2	1	0	2	2	0	7
May . . .	1	0	2	5	2	0	10
June . . .	4	1	4	1	0	1	11
July . . .	2	2	7	2	2	3	18
August . .	3	2	6	8	1	0	20
September .	4	1	4	2	1	0	12
October . .	2	1	2	2	0	1	11
November .	0	1	2	2	0	0	5
December .	0	0	0	0	0	0	0
Totals . .	1869=20	1870=10	1871=30	1872=29	1873=15	1874=5	109

Total admitted . . .	109	
In the 6 cold months:—November, December, January, February, March, April . .	27	(25 %).
In the 6 warm months:—May, June, July, August, September, October . . .	82	75 %).
	109	

Facts as to cause.	*Total.*
Began within a short time of vaccination. Cases 2, 21, 28, 38, 42, 47, 50, 56, 66, 90, 91, (97 ?), (85 ?), (99 ?), 108	15
Began as chicken-pox or variola, or was said to have been like them, &c., but in no relation to vaccination. Cases 1, 10, 11, 14, 36, 43, 51, 62, 70, 76, 77, 81, 82, 112, 116	15
Probably began as scabies. Cases 44, 45	2
Pediculi or other insects probably or certainly the cause. Cases 20, 53, 88, 107, 110	5
Other children in the family suffered from similar eruption, but no reason to suspect a parasitic cause. Cases 4, 68	2
No cause assigned in the notes, but resembling chicken-pox cases in their general features. Cases 35, 39, 57, 72, 74, 95 (103 ?), 111 . .	8
Other cases, and a few of Pennman's disease, including a few probably of urticaria, and many incomplete cases. Cases 3, 5, 6, 7, 8, 12, 13, 15, 16, 17, 18, 19, 22, 23, 25, 26, 27, 29, 30, 32, 33, 34, 40, 41, 46, 48, 49, 52, 54, 55, 58, 59, 60, 61, 63, 64, 65, 67, 69, 71, 73, 75, 78, 79, 80, 83, 84, 86, 87, 89, 92, 93, 94, 96, 98, 100, 101, 102, 104, 105, 106, 109, 113, 114, 115 . .	65
Followed measles or scarlet fever. Cases 24, 31, 37	3
	115

LECTURE VII.

WINTER PRURIGO (PRURIGO HYEMALIS).

Description of the malady.—Illustrative case.—Relations to Hebra's prurigo.—Case which approached the latter.—Its association with general irritability of skin.—Case.—Treatment.—Postscript. Dr. Duhring's anticipation of the author's views.

GENTLEMEN,—I wish to describe to you this evening a certain group of well-marked cases in which the skin is made irritable by cold. A man who has gone about through the summer with his skin quite comfortable finds himself, as soon as the first threatenings of winter weather occur, troubled by irritation in various parts, and often of a severe character. Year after year the same thing happens, until he begins to expect his tormentor, or possibly he has learnt how to anticipate and prevent it. This form of prurigo probably affects first and most severely certain special parts: the calves of the legs, the outsides of the thighs, the forearms, and the outer parts of the upper arms. It usually attacks the trunk last, and but slightly. It is not, in the first instance, attended by any eruption, but only by a general tendency to *cutis anserina*. If, however, the sufferer give way to the temptation to scratch, he will be able to find certain isolated points which itch intolerably; and on these, after use of the nails, little pimples appear. Sometimes I have been told that these points felt "like little seeds in the skin, which it was absolutely necessary to dig up with the nail." These are the true

prurigo-papules, and possibly are developed in connection with nerve-papillæ. In addition to them there is often more or less tendency to roughening of the surface by lichen-spots (thickened orifices of hair-sacs). Ultimately, in bad cases, the skin becomes rough and harsh, and there are seen a number of little blood-stained crusts. In many cases, however, in comparison with the patient's loudness of complaint, there is surprisingly little to be found. Now and then patches of eczema are produced, or porrigo or ecthyma rash may result. I shall, however, best convey a good idea of the malady, or rather of the liability, by relating to you some cases; and I will select first a mild one.

W. T—, æt. 45, is a London collector in good health, but thin and rather bilious. He has all his life suffered from that kind of feeble circulation which allows the extremities to become very cold. He never has chilblains or chaps; but his hands and feet are usually dry, somewhat shrivelled, and very cold. His feet, he says, are often icy. He scarcely ever perspires, and can take vigorous exercise with much pleasure and advantage. In boyhood he did not ail anything from his skin; and it was, indeed, not until about fifteen years ago that he first began to suffer. He then, in winter weather, found the calves of his legs very irritable, and affected by spots which were aggravated by scratching. Afterwards his thighs, in their outer and posterior parts, became affected; and then it spread in greater or less degree to the entire surface. From that time to the present he has suffered with varying degrees of severity every winter. He assures me that in summer he is perfectly well, but he dreads the first advent of cold weather. It is not always the coldest weather which makes him worst; for, if it be cold, dry, and clear, without wind, he does not suffer so much. Wind and draught are his chief enemies, and they make his skin "creep and itch all over." He has been obliged to adopt all sorts of precautions to diminish the influence of cold; wears wash-leather next his skin and woollen over it, and high Wellington boots for the protection of his calves. He sleeps between blankets, fearing lest the cold sheets might induce the prurigo and keep him awake. By these experiments he keeps himself in a state of tolerable comfort, and has usually very little to show on his skin. When seen in March, 1873, I noted that there were a few scattered black blood-crusts, but no papules, and no long excoriations from scratching. The same was the state of things in

December, 1875. During the intervening summers he had been perfectly well. I must ask you to keep in mind, as to this patient, who is a good example of the class which affords the subjects of winter-prurigo, that he is thin, chilly, bilious, and has a feeble circulation. With the exception of advising the use of a tar-wash to all affected parts, I was unable to do more than counsel, in the way of precaution, sedulous attention to the class of expedients which he was already in the habit of using. He had previously consulted several specialists, but with no definite result. It was clearly a case for management in the way of dress rather than for drugs.

The severe and lifelong form of prurigo described by Hebra, and for which he has claimed the name "Prurigo" to the exclusion of all others, has the peculiarity of being made worse by cold. It is not impossible but that the severe Vienna winters, and the biting character of the winds to which the Austrian capital is liable, may account for the apparent fact that prurigo assumes there features much more formidable than those which attach to it in London. In another lecture I shall show that we do not in English practice meet with many cases which fit well with Hebra's description. Our chronic cases either are made better by winter, or, if the reverse, have not begun in childhood: two points which are amongst the more distinctive features of Hebra's disease. In this instance you will see that the man, now forty-five, began to suffer for the first time in his life at the age of thirty. Nor have his sufferings from the disease ever in the least approached in severity Hebra's description; nor, although his tendency still persists, does there seem reason to apprehend its increase.

I might quote to you many cases like the one I have detailed, for winter prurigo is not uncommon. I do not think, however, that I should be able by doing so to give you any clearer impression of its distinguishing features. I will, however, read to you the particulars of one other case, which differs from most, and comes very close to the prurigo of Hebra. From the latter malady it chiefly differs in its minor degree of severity.

Prurigo in an old man more or less since childhood: the eruption aggravated by cold.—James C—, æt. 66, was under care at the Hospital for Skin Diseases for a year and a half in 1872-73, on account of prurigo of varying severity. The parts affected were the sides of the neck and insides of the thighs, with a few spots at times on the fore-arms. The eruption was not copious at any time while under observation. At one time there was an eczematous patch above the ear. On inquiring as to the duration of his malady he told us that from early life he had had an irritable skin. In boyhood he often used to scratch the insides of his thighs till they bled, and also frequently suffered from what he thought was nettle-rash; the latter form of eruption he used to attribute to bites of fleas, gnats, &c. He never could bear flannel next his skin. His prurigo had always been worse in winter than summer, and was worst of all during one winter that he spent in Quebec, where the cold was intense. With regard to time of day, he stated that his itching was generally worst just after getting up in the morning. In respect to treatment he said he had once derived some benefit while under medical care in Belgium. He had often suspected that he had lice, and had looked for them repeatedly without success; and there seemed no reason for suspecting their presence while he was under care. He said that bugs did not annoy him particularly. It seemed probable that he had transmitted an irritable condition of skin to some of his children, for two of them were said to have had bad "scald-heads" at the age of two or three years. The treatment used for this old man did not have much effect on his very troublesome skin disease. Temporary improvement was followed by fresh crops of papules; and at his last visit in October, 1873, it is noted that a fresh outbreak had occurred. I have not been able to learn anything about him since then. It is probable that the prurigo on the thighs was aggravated, and to some extent kept up, by the presence of large varicose veins in that part; but this condition had not been present until long after his disease had become established. The treatment was much varied, the most constant element being the *lotio sulphuris*, which was continued throughout the greater part of the time. The tar-lotion was tried for a short time, but apparently did not suit, as it was soon changed again for the sulphur.

In the following case the influence of change of climate and of alterations of temperature is strongly marked. In some respects it coincides closely with Hebra's descriptions.

Edward Butler, æt. 32, was under observation from the beginning of 1866 to the end of 1868. His occupation had been varied, sometimes a baker, sometimes a sailor, and he had lived for fourteen

years in Canada. His complaint was a prurigo with intolerable itching, and with some eczema as the result of scratching. It was worst on his thighs, and, indeed, was often limited to them, but sometimes occurred also on the backs of the forearms. His account was that his liability began at the age of ten, and that he then suffered from it very severely and over almost the whole body. It continued for about six years, when he went to sea and got rid of it. He then had a period of fourteen years' immunity as a sailor in Canada, when he returned to England and resumed his occupation as a baker, and again began to suffer. He had always been worse in winter than summer. He stated that he was extremely susceptible to the influence of cold, and that when engaged in the bakehouse this susceptibility seemed to be increased. On one occasion however, whilst engaged as a sailor at Liverpool in the winter, the eruption was freely out. He was admitted on January 16th, and we prescribed arsenic in six-minim doses. This produced an outbreak of herpes zoster on the right side of the chest a fortnight later. During the summer of 1866 he was well, but he returned to us on November 30th with a relapse. The papules in all respects resembled those of lichen. In November of 1868 he again made his appearance, the eruption having again come out severely on his thighs. He stated that he had spent the greater part of the preceding winter in Devonshire, and had suffered during the whole time severely from the eruption, but in the summer had got quite rid of it. He had now a few spots at the back of the right wrist.

The following case in some respects resembles the preceding one, but it will be seen that there was a much more copious eruption. We have a lichen-prurigo rash made worse in winter, but probably it ought rather to rank as a prurigi-nous example of lichen ruber (lichen-psoriasis).

Charles Challice, æt. 28, a healthy married man, had been liable for many years to the occurrence of a few scattered spots on his thighs and arms during winter. His first severe attack was three years ago (1866). During the next winter (1867) he attended at this hospital from January to March; and from March till the middle of October (during a very hot summer) he was perfectly well. In October it again came out severely. The spots consisted of papules, varying in size from a split pea to that of a shilling, deeply congested, almost copper coloured, and very slightly scaly. They never become moist. They cover the arms as low as the wrists, and slightly also the backs of the hands. They occur also on the whole

of the trunk, back and front, and on the upper parts of the thighs. On the arms they are equally abundant on both surfaces. On the back the patches looked very much like the remains of a papular syphilide. They were everywhere arranged with accurate symmetry. He complained that they itched much from cold, and there was general evidence of scratching ('S. H. A.,' 94).

I feel sure that this is essentially, as suggested above, a pruriginous example of relapsing lichen-psoriasis (lichen ruber of Hebra). In some of the best-marked examples of the latter there is a history that the patient had for years before the more severe outbreak been liable to occasional and slight attacks. (See cases in the lecture on Lichen-psoriasis.)

It is doubtful whether the following case properly belongs to this group, although the patient was worse in winter. From the nature of his occupation he was exposed to more heat in winter than in summer, and it seemed probable that heat was the exciting cause.

A man named Offord was under care in April, 1870, for a pruriginous eruption, which he said always left him in May and always troubled him through the winter. He explained this by the fact that during the whole winter he worked in a malting-house, and that during the summer he was engaged in out-of-door occupations. The eruption was most severe on his thighs and legs, but it occurred also on his forearms, arms, and neck, and a little on his back. It consisted of scratched papules with small blood-crusts. He denied having ever suffered from lice, and we could find no ova. Neither his wife nor his children had suffered. The irritation had often kept him awake at night. He considered that the eruption began as little bumps, from which the heads got scratched off. He wore flannel next his skin, but the parts covered by it were those least affected.

Winter prurigo in its milder forms is, I suspect, a very common affection; and not a few who read this lecture will probably, from personal experience, be able to confirm my description of it. It is not, however, very often that it rises

to such a degree of severity as to induce its subject to seek medical advice. In certain cases it acquires a very troublesome complication in a tendency to eczema, as well as in liability to irritation, not only from cold, but from the very measures likely to prevent its influence.

When a prurigo patient is unable to wear flannel on account of the aggravation caused, and unable to come near a fire for fear of exciting eczema, his case becomes very difficult to manage. Such a case is at present under my observation. The gentleman who is its subject tells me that in boyhood he suffered from somewhat irritable skin, and that he well recollects having the popliteal spaces cracked and sore every winter. He believes, however, that this was caused rather by standing with his back to the fire than by cold. His mother had psoriasis, and at least one brother suffered severely from eczema; whilst several of his own children have had slight forms of the latter. He is himself, like the subject of my first narrative, thin, bilious, of feeble circulation, and liable to suffer much from cold extremities. In boyhood the change from summer to winter clothing always annoyed his skin, but it was not till middle life that the cold itself began to cause prurigo. For the last five winters he has been liable, with the first onset of cold, to prurigo on the legs and some other parts, and with gradually increasing severity; and during the last two he has been obliged to keep at a distance from fires, on account of the smarting and tendency to eczema which fire-heat always causes. Formerly he used to roast himself with impunity. Being engaged in avocations which compel him to mix much with the poor and dirty, he has once at least had scabies, and on several occasions been temporarily troubled by lice. Although these have always been quickly got rid of, yet they have occasioned extreme irritation; and he believes that these accidents have had their effect in augmenting the permanent irritability of his skin. He is always quite well in summer,

with the exception that now and then, in consequence, apparently, of excessive perspiration, he has had eczema between the nates and on the inner sides of the thighs. There appears reason to fear that, in his case, both the eczematous and the pruriginous liabilities are likely to increase, and that the utmost care will be requisite to prevent his becoming severely affected. Washing with the tar-lotion, applications of boracic acid ointment, and the use of abundant warm clothing (from the irritation of which the skin is protected by silk or some soft material), seem to be the most helpful measures.

One other case I must adduce because it is an example of winter prurigo in a young girl. As a rule the malady seems to me to be rare in the young, and rare also in the female sex. From the prurigo which is made worse by heat (æstivalis) women suffer frequently.

Winter prurigo, beginning at æt. 10.—Eliza T—, æt. 15, admitted in March, 1872, for an eruption which had troubled her every winter for five years. She stated that it had occurred on her thighs and fronts of legs, and that in the last winter it had attacked the arms for the first time. Once it had occurred on the chest. It was a papular rash attended with much itching, but never producing any scab. It always got well in warm weather. She was admitted in March, and in June she was nearly well. On September 27th she returned, stating that she had been quite well for two months, but that it was now returning on her arms and legs. During the winter of 1873 she took arsenic in doses of a minim and a half, and used dilute sulphur ointment, and although not well, she stated that she had not for some time suffered so little during winter. In June, 1874, she had no spots to show, but said that a few transitory ones still occasionally appeared at night.

It will be seen that we have here another example of prurigo relapsing in winter, and, like most of the cases of which that statement is true, it began on the lower extremities and was for long almost confined to them.

I have been careful to mention to you all the little details of the symptoms and supposed causes at work in these cases,

because it is only by the correct appreciation of these that we can in any degree understand them. Winter-prurigo is not so much a disease as a liability. It is by a susceptibility to annoyance from slight and common sources of cutaneous irritation, which do not hurt the majority, that its sufferers are characterised; and it is by obviating these that we must hope to cure them. As to the efficiency of any internal remedies, I really have nothing that I can say with any confidence. Several of my patients have thought themselves better whilst taking arsenic; but, as one of those who spoke most definitely on this point afterwards told me that the homœopathic "*arsenicum*" suited him yet better than my prescription, I felt obliged to distrust his evidence. Let me insist that the utmost care is necessary in accepting conclusions on this point; for the disease varies with every change of wind, and may sometimes disappear spontaneously when mild weather suddenly succeeds to cold. As regards tonics and dietetic measures, I have but to say that the more you can invigorate your patient, and especially the more you can fatten him, the less will he suffer from cold and the prurigo which it induces.

Postscript.—In the autumn of 1875 I read a short paper on winter prurigo before the Hunterian Society. It was not until the discussion which followed that I became aware that Dr. Duhring, of Philadelphia, had accurately described the same malady and given it nearly the same name. I have since read Dr. Duhring's paper with much interest, and find that we agree in almost all details. I have preferred to leave my text as it was written in the first instance, since the correctness of our conclusions is much supported by the fact that two observers working quite independently have arrived at exactly the same results. Dr. Duhring's paper will be found in the 'Philadelphia Medical Times' for 1874, under the title of "Pruritus Hyæmalis, an undescribed form of Pruritus."

Priority of publication rests undoubtedly with him. Respect for Hebra's claim that the term "prurigo" shall be restricted to a life-long and incurable malady, aggravated but not caused by cold, and improving but not getting well in summer, has prevented Dr. Duhring from using the name which I have prefixed to my lecture. My own views on this point will be sufficiently explained hereafter. For me "pruritus" is the symptom common to all forms of "prurigo," and the latter term is applicable to any malady of which itching is the paramount symptom and cause of aggravation. We must classify our prurigos according to their causes or clinical similarities, and I cannot admit that we have—in English practice at least—any one malady, causeless and incurable, which can claim pre-eminent right to the name.

It may be of interest to add that in the discussion after my paper two authorities in dermatology severally quoted his own case as an instance of winter prurigo, and expressed strong opinions as to the frequency of the affection. A few days later I received from a much respected member of our profession the following interesting note:

December 29th, 1875.

My dear Mr. Hutchinson,

I have just read your lecture on "Winter Prurigo." I have been subject to the disease for many years, and after having employed various modes of treatment without avail, I some four or five years since tried the local application of glycerine, and with complete success. Since then I have again and again had recourse to the same remedy, and with the same satisfactory result. I communicate this fact to you, thinking that it might interest you.

I am,

Yours faithfully,

Jon. Hutchinson, Esq. ———.

LECTURE VIII.

IS HEBRA'S PRURIGO MET WITH IN ENGLISH PRACTICE?

Prof. Hebra's description of Prurigo.—His assertion of frequency.—Rarity in England.—Resemblances and differences in English cases.—Test of treatment.—Primary lesion.—Groups of Prurigo cases.—Importance of the topic.

GENTLEMEN,—In Hebra's work on skin diseases you will find a valuable chapter on "Prurigo."* As the result of long study of the local causes and clinical history of cases attended by persistent skin irritation, Hebra has arrived at the conclusion that there is a not uncommon form which is wholly distinct from all the rest and for which he claims the term "prurigo" to the exclusion of all others.† He teaches that this malady has its origin in the nerve-structures of the skin and that it occurs quite independently of local irritants;‡

* See vol. ii of the New Sydenham Society's Translation.

† Hebra considers that the term prurigo as used by Willan and others since his time includes several different conditions; he specifies four classes of cases, but reserves the term prurigo for the first only, since none of the others are skin diseases proper, but only symptoms. Prurigo he defines as "a peculiar cutaneous disease, characterised by intolerable itching, and by the development of small papules of the same colour as the healthy skin or only somewhat redder, corresponding with Willan's descriptions of *prurigo mitis* and *formicans*."—P. 256, vol. ii.

‡ After excluding numerous local and general conditions as causes of prurigo, he says, "From all this it is clear that we cannot ascribe the origin of this malady either to any external disturbing influence upon the skin nor to any of the internal constitutional states above mentioned, but must pronounce it to be in the strictest sense a

beginning spontaneously and invariably in early life,* and that there is nothing in the way of diathesis or health condition which can be suggested as its cause.† He further

disease of the skin in itself." He prolongs the chain of causation back to a hypothetical change in the nutrition of the papillæ, and supposes "that in a case of incipient prurigo the epidermic cells are from some cause or another not properly developed at certain points of the cutaneous papillæ, while a minute drop of intercellular fluid (blastema) collects above the normal quantity; the latter, acting as a foreign body, will of necessity push up the layer of cuticle which covers it, and thus form an elevation, a papule; while at the same time its presence will act as an irritant upon the papilla beneath. But it is well known that the nervous system of the *tactile papillæ*, when irritated, does not cause the sensation of pain, but one peculiar to itself, and known as itching; this feeling produces in its turn an imperative desire to scratch, and the injury to the skin thus caused leads to the further effects which have been already so often and so fully detailed in other parts of this work." Again, "It will not be difficult to maintain that the drop of blastema, exuded in a wrong place or in wrong quantity, which composes the contents of a pruriginous papule, will work as a constant irritant upon the nerves of the papilla and thus produce continual itching; just as in another case a greater quantity of exuded fluid presses more strongly upon the subjacent cutis, and no longer produces the feeling of itching, but that of pain."—Pp. 270 and 271.

* ". . . . Prurigo is never congenital, but commonly appears during infancy in the form of wheals like those of urticaria, first usually on the legs, and disappears from time to time, to take possession of the patient while still in early childhood (five to seven years), only varying in form or intensity during the whole of the rest of life. The opinion that prurigo first appears in adult life is therefore incorrect. Every attack has its origin in infancy, though in a slight papular form, which gradually assumes the character of so-called *P. formicans* with advancing years."—P. 268.

† "How far well-known general diseases may contribute to prurigo I cannot certainly determine; for in more than a thousand cases which I have had occasion to observe there have been strong, robust, well-built, and well-nourished persons, as well as broken-down, emaciated, and cachectic ones, or even those who bore evident marks of tuberculosis, rachitis, or scrofula. Although, therefore, we admit the occurrence of prurigo in those affected with general dyscrasiæ, we cannot allow the hypothesis that it stands in immediate depend-

asserts that although it varies at different periods of the year and is sometimes much relieved during hot weather,* and may also be considerably benefited by local treatment,† yet that it is essentially incurable.

He speaks of this malady as if it were tolerably common, and says that he has seen a thousand cases, and his description of it is most graphic and complete. Itching is of course its most prominent symptom, but is always preceded and attended by papules. These papules are sub-epidermic, as big as hemp-seeds, and differ little if at all from the colour of the skin. They may appear on all sorts of places with, however, a definite tendency to prefer certain regions, and with the exception that the palms and soles and the flexures are never attacked. The skin is liable, as might be expected, to secondary changes in the later stages of the disease and when the scratching has been long continued. Thus it will become discoloured by pigmentation, eczematous, or thickened by

ence upon the latter;" p. 269. He remarks, however, that "Manner of life and occupation have only so far influence in producing this disease as it undoubtedly occurs almost exclusively in poor subjects and those ill-nourished in childhood, and so most often in foundlings and beggars' children. Those who have enjoyed a good physical education in early youth, and have always been properly fed according to their age, suffer very rarely indeed from prurigo."—P. 268.

* " . . . . Prurigo is usually aggravated during winter and remarkably alleviated in summer, especially when the thermometer stands high. At that time there is usually increased activity of the skin, so that patients who during winter either do not sweat at all (even when in bed and in well-warmed rooms), or else only in the armpits and genitals, will find their prurigo much alleviated and the whole skin in a pleasant state of perspiration."—P. 268.

† "My own observations . . . . have taught me that there is no internal medicine and no special regimen which can influence prurigo in even the slightest degree, either for better or worse." "External remedies alone are of any use in prurigo."—P. 273. Of the local remedies he finds sulphur either in ointment or bath, and tar in bath, employed repeatedly and for a long time, the most efficacious; "*tar* and its compounds, including *creosote*, must be admitted among the active remedies against this disease."—Pp. 275–6.

chronic œdema; but these conditions, when they occur, are always secondary to the original malady. The terms in which the incurability of the malady is asserted are very strong. "He may do whatever he pleases, his malady will follow him to the grave. Only those who are unacquainted with this disease in its entire extent can assert that it is with difficulty curable. No, it is not with difficulty curable, for then it might under certain conditions be cured; it is incurable. Hence all that the physician can do is to use means by which the sorely tried sufferer's lot may be rendered more tolerable and he be prevented from falling into utter despair."

Hebra considers that his disease corresponds pretty much to Willan's descriptions of *Prurigo mitis* and *formicans*, and he asserts that it is a disease of the skin itself, and discredits the hypotheses which would associate it with the nervous system or the blood, equally with those which would assign it to local irritation. As I have already said, he insists that the first stage is papular, and states that he would prefer to use the term "pruritus cutaneus" for other conditions in which itching precedes the development of papules. It is, perhaps, needless that I should add that he of course draws the strongest line of demarcation between this disease and the large majority of those which have been described under the name of *prurigo senilis*, and which are, as a rule, due to the irritation of lice.

We must receive anything which comes from the pen of such an acute observer with the utmost respect and consideration, and if we differ we must do so with great caution. Yet in again bringing before you this summary of Hebra's description of the prurigo which may not improbably in future bear his name, I feel bound to state in the first place that I suspect that some of its features are too sharply drawn. At any rate it has been a matter of much surprise amongst English observers in dermatology that we meet

with exceedingly few cases which at all closely fit with the definition of Hebra's prurigo. In infancy we have a considerable number of patients in whom the malady seems to be threatened, but although they are often very intractable cases, yet we believe that, as a rule, they get well in the end; at any rate they do not return to us in adult age. Then on the other hand we do meet with certain cases which closely correspond in most points to Hebra's description, but which have begun much later in life, and have had perhaps a duration of only a year or two. As a minor matter I may add that some cases in other respects the most closely resembling the disease in question which I have ever seen, differed from Hebra's statement as to the influence of season in that they always displayed a strong tendency to improvement in winter. Indeed I believe I might say, to sum up, that I have scarcely, although carefully on the look-out for many years, seen a single example of severe prurigo in an adult with the history of its having existed from infancy. One of the two cases which I detailed in last week's lecture is still uncured, and it is quite possible may prove incurable. Should it do so, it will I believe come the nearest to conformity with Hebra's descriptions of any that I have ever observed. But it must be noted that the eruption did not show itself in infancy, but with the first menstruation at the age of eight.

Now, the question of the identity or otherwise of these several maladies seems to me to resolve itself into this: are they really due to the same cause or class of causes? If they are, we shall find them occurring in the same class of patients and remediable for the most part by the same methods of treatment. A name is nothing if it does not help us either in prognosis or in treatment. If it merely attaches itself arbitrarily to some one prominent feature which, although indeed very conspicuous, is after all the common property of a number of really different things, it is in danger of becoming an incumbrance rather than a help. I have been told by

gentlemen familiar with the practice of the Vienna *clinique* that the cases which I call "winter prurigo" are really the prurigo of Hebra, and that the facts that they do not begin in children and that they almost invariably get quite well in warm weather are by no means important. I am told also that cases such as that of Pennmann and of Harriet Smith, in which the eruption is worse in summer, often gets well in winter and affects the face by preference, are also, in spite of these discrepancies, well-marked examples of Hebra's prurigo; and lastly that the very numerous cases of pruriginous lichen in infants are also instances of Hebra's prurigo in its first stage. But if we are to widen the term so much as this it seems to me that the description to a large extent loses its clinical value. It becomes no longer true that Hebra's prurigo is a disease which always begins in infancy, that it is usually made worse by cold, that it affects the face only secondarily, or that it is incurable. We find, on the contrary, that those examples of it which begin in infancy result in recovery (although admittedly after long periods of treatment); that those which are most intractable (cases of the Pennmann and Harriet Smith type), although they sometimes begin in infancy, very usually do not appear till after puberty, are made worse by heat, cured by cold, and usually have the face first affected.* The cases have in common the features that the eruption is difficult to treat, very prone to relapse, and for the most part very pruriginous. Here their similarity, in the main, ends, and I am not at all sure that we might not find the solution of the matter in admitting the simple fact that when once the skin has been made very irritable over a long period, by whatever cause, it becomes

* The two cases which I have mentioned, Pennmann and Smith, are the most severe which I have had under treatment, and come perhaps the nearest to Hebra's descriptions. For the full proof of the assertions made in the sentences above I must refer the reader to my lecture on Summer Prurigo, or the *Relapsing Prurigo of Adults*, which contains the narrative of many other cases.

very liable to take on the same condition again;—*once pruriginous, always pruriginous,* seems to be the thread of connection which runs through the subject. This seems to me the point for the appreciation of which we are chiefly indebted to Hebra, and it is undoubtedly an important one, although I cannot help thinking that his expressions in respect to it are much too strong.

My remarks as to the differences which exist between the several groups of prurigo cases have thus far had reference chiefly to their clinical history, but if we take also the question of treatment we shall find my inferences, I think, fully borne out. You cannot prescribe for "Prurigo" in one and the same manner, if it is to include all these different groups. The cases which result from varicella or other exanthems may be expected to gradually wear themselves out, and so far as we yet know the most that the prescriber can do is to alleviate the itching by the use of tar baths and by preventing scratching. They are uninfluenced by weather or climate. The sufferer from winter prurigo will be quite well if you can send him to a warm climate, and he will be very much helped, even through an English winter, if you insist upon his wearing double-thick woollen clothing. The sufferers from the relapsing prurigo which is aggravated in the summer, must avoid exposure to heat, and especially protect the face from the sun, and in not a few cases the liability to this form seems to be diminished by the use of arsenic. It would seem, indeed, to be allied in part to the acne of puberty and in part to the dartrous state. The pruriginous lichen of infants is to be cured by preventing the child from scratching, by the use of the Persian powder to prevent the attacks of fleas, &c., and by spirit or tar lotions. Thus you will see, I think, that the question whether we consider prurigo as a peculiar malady, the cause of which is unknown and the course of which is uninfluenced by treatment, or whether we rather regard pruriginous irritability of skin as a sym-

ptom which may be evoked in connection with several very different causes, is not without its important practical consequences. One is, indeed, almost tempted sometimes to think that it would be more convenient to deny that there is any malady deserving the name of "prurigo," and that we ought rather to think of pruriginous irritation as a symptom which may attend a large number of different skin diseases. If, indeed, we are offered no alternative, if we are not to be allowed to append qualifying adjectives to the word, but are to speak of prurigo as a clinical entity in the same sense as we speak of psoriasis as one, then I unhesitatingly avow my conviction that it would be better to forget it.

We must say just a few words as to the primary skin lesion which attends cases of prurigo, or rather, perhaps, we ought to say the different kinds of lesions which are present in pruriginous cases. Hebra makes it an important point in the description of his disease that there are minute papules which are not developed by scratching, but which precede it. Although, as has as been well suggested by Dr. Hilton Fagge, it is almost impossible to feel certain on this point, since we scarcely ever see prurigo cases before the skin has been scratched, yet it is highly probable that this statement is, to some extent at least, true. Very intelligent patients suffering from prurigo will say that they are able to discover on a surface of skin which is quite pale, little, intensely irritable spots, which when once found it seems almost a matter of necessity to try to dig out with the nail. The suggestion of Hebra that such spots are really inflamed nerve-papillæ, with possibly a little effusion over their summits, is one which is well worthy of being kept in mind. It is these which, when surmounted by a blood-crust, resemble so exactly the results of bites of lice. But by far the majority of the minute papules which are present in prurigo cases are, I cannot have the least doubt, of the nature of lichen. We have defined lichen to consist of pro-

minent hair-follicles, with more or less of growth—to be, indeed, a morbid aggravation of the physiological state *cutis anserina*. On pruriginous skins at different times, or often at the same time, you will see all gradations from the slightest form of *cutis anserina* to the most developed lichen. No one can, I think, doubt that there are lichen spots which are irritable, and which, in many instances, induce scratching. Acne is, as we have said, a disease of almost the same structure as lichen, but with more tendency to accumulation of secretion in the sebaceous glands and to inflammatory processes. As might be expected from this fact, we have a distinct form of prurigo which occurs in the acne positions (face and shoulders) and at the acne age (puberty and after), and assumes a decidedly acne type.

You must allow me, then, to repeat that, as the result of careful inquiry extending over many years, I am unable to identify any cases that will fit exactly with the Vienna description of "prurigo." We have, of course, many cases which accord well with different parts of that description, but none to which it applies as a whole. In the first place we have fortunately none which in the least approach it in degree of severity and in resistance to treatment, none which are protracted from childhood through the whole life. The cases which most nearly approach this feature are those in which the eruption is benefited by cold weather, and in which the face is always a part principally affected. In this group also the pruriginous element is by no means intense. The cases to which I have given the name of winter prurigo agree with Hebra's description in that they are always worse during cold weather, but they depart from it very widely in the facts that the lower extremities are usually first and most severely affected, that the liability never begins in childhood, and that the patients are not only better but quite well in summer. It is very probable that this disease may assume in the cold of a Vienna winter a far more aggravated type,

and may thus afford the larger number of the examples to which Hebra's statements apply, but it is remarkable on this supposition that we have no mention of the absolute immunity during hot weather. We have in London practice plenty of cases of intractable prurigo in children (lichen pruriginosus of authors), but although in many examples of this we are quite unable to boast of having really seen our patients cured, yet we have every reason to believe that they do get ultimately well. At any rate, we do not find these cases return for advice at later periods than those of early childhood.

The following may, perhaps, be found a fairly accurate grouping of the cases of prurigo as met with in English practice. Of course I put wholly aside the numerous cases in which the irritation of the skin is due directly to the presence of parasites,—scabies, and morbus pediculosus. Although I have little doubt that attacks of these maladies do sometimes lay the foundation of chronic and persistent prurigo—of cutaneous irritability which may persist for years after the cause has been removed—and which may then deserve a change of name and take position under that of the disease which we are investigating, yet it would be extremely inconvenient to confuse them so long as their phenomena are in direct relation with a special cause of this nature. After, however, we have relegated all forms of pedicularia (comprising almost all that were formerly known as *prurigo senilis*) to their proper position, there will still remain a considerable number of cases of prurigo proper, or prurigo without parasitic cause, and these I would propose to group as follows :

Group I. *Cases in young children or infants which have resulted from varicella, vaccinia, or measles.*—These cases are tolerably common and are severe. They may be diagnosed by their history, and by the existence of small bullæ and pus-

crusts and the formation of vesicles on the palms and soles. They are very intractable, but get well in the end.

Group II. *Cases of severely pruriginous lichen in infants and young children.*—These are yet more common than the preceding, and every out-patient clinic affords abundant examples of children covered over back and loins, and often on extremities also, with itching lichen-spots which have been scratched and abraded. These also are difficult of cure, but are usually very much benefited by treatment. They are almost always worse during summer (the flea season), and there is often reason to suspect that the eruption is in large part due to the bites of insects—fleas, bugs, or gnats. These cases might be supposed to supply examples of Hebra's prurigo in its earliest stage, but we have no reason to believe that any considerable proportion of them are protracted into adult life.

Leaving the period of childhood, we find that young adolescents are liable to a peculiar form of prurigo, which in some features resembles acne, and which is almost invariably liable to exacerbation in summer; of these cases we constitute—

Group III. *Prurigo of adolescents and adults, relapsing in summer.*—This eruption affects the face and arms, and although it may extend over the whole surface of the limbs and trunk it is always most severe on face, arms, and shoulders. Its pimples are but slightly developed, and erythematous congestion of the skin is always conspicuous. It does not usually itch excessively, but it is always more or less scratched, and always leaves scars. Although more common about the period of puberty, it may begin in childhood or in adult age. Some of these cases approach very closely to Hebra's type, but the summer aggravation, the severity with which the face is affected, and the seldomness with which it begins in infancy, are important differences.

Next we have, as constituting—

Group IV, *winter prurigo,* comprising cases in which the skin is made pruriginous by cold. These patients are always well in summer; they are usually thin and of feeble circulation and very prone to *cutis anserina* on exposure. The eruption never affects the face, and almost always begins on the lower extremities. It is seldom or never seen in the very young.

Very closely allied to the winter prurigo group we have another, which may be suitably known as the—

V. *Persistent prurigo of adults and aged.*—This differs in nothing from Hebra's type excepting in that it is rarely a very severe malady, and that it does not begin until past middle life. It is for the most part a disease of the aged. The following case may be cited to illustrate this form.

The Rev. C. M— consulted me because I had been fortunate enough to cure of a most troublesome prurigo an elderly lady with whom he was acquainted. His case, although by no means a severe one, presents some interesting features. He is about sixty years of age, an inheritor of gout, from which he has suffered mildly; thin, and of rather feeble circulation. When a boy he had eczema intertrigo behind the knees and a troublesome itching rash on his shins, but it got well, and he did not again suffer until three years ago. He once had something like nettle rash from drinking beer, but is not liable to much irritation from the bites of fleas. His present inconvenience consists in a general irritability of skin, which is worst on his legs. There are no spots, but he says that when he begins to scratch he always succeeds in finding little itching points which afterwards develop into papules. These often bleed from his scratching. He insists after deliberate argument that the scratching really gives him great relief, and that it would be useless to attempt to abstain. The prurigo is not very severe, and it never keeps

him awake at night. He has not observed that articles of diet influence it, or that-fire heat makes it worse. It has persisted now for three years, being worst in winter, but by no means absent in summer. There is some irritation of the scrotum, but no actual eczema.

I may observe that in several other cases of this type I have obtained the history of eczema of the popliteal spaces in childhood, and in some of more or less of skin irritation generally, thus more nearly completing the picture which Hebra has given. In none, however, had the symptoms in childhood been in any degree severe, and in all they had been soon cured, and a long interval had occurred before the senile attack.

In the case of an officer in the army, who was sent to me by Dr. Meadows, the prurigo was rather severe, and had lasted several years, but there was no history whatever of symptoms in boyhood.

In the following we seem to have a connecting link between constitutional or dartrous eczema and Hebra's prurigo.

Sarah Hobson, æt. 49, admitted in April, 1869, gave the history of having suffered from itching eczema in the flexures in childhood. At the age of fifteen she got rid of it, and had no skin disease until her present trouble began three years ago. On the backs of her hands and on both legs just above the ankles, and thence upwards to the thighs, were patches of eczema, which itched excessively. Between the patches the skin was harsh and pigmented; the nails were roughened. Boils had occurred and had left scars. She had sometimes been confined to bed by it, and during the whole three years it had never been quite well. The case is, perhaps, rather pruriginous eczema than prurigo proper, but it is interesting to note that it affects the prurigo positions rather than those usually attacked in eczema.

The following case, one of the very few in which with a history extending over many years lice were discovered, may suitably raise the question whether the parasites ought to be

considered as more than an accidental complication. It will be seen that the eruption occurred on the face, and to some extent on the arms, parts which do not usually suffer from the irritation of lice. Yet it is quite possible that in some cases a general pruriginous state of skin may be set up by their presence, which may involve parts not actually infested. This theory is, I think, by no means improbable as the true explanation of a certain number of the cases of relapsing prurigo.

Hannah Collins, æt. 18, admitted July, 1872. Had been liable to relapsing prurigo since the age of two years. It had been very changeable, but never got quite well. It affected the extensor surfaces of the upper and lower extremities, and the face and back; a few spots occurred on the fingers. Lice were found on her head and in her clothes.

Richard Morris, æt. 12, has been liable to prurigo every summer for four years. It is slight on the body and worst on the arms and legs. It was a mixed papular and pustular eruption, and very much scratched. It was stated to have begun between the fingers. The skin of the outer surfaces of his thighs and arms was thickened and dry. There were lice in abundance on the head, but none were found on the clothes. The suggestion made in the preceding case as to persistent irritation from lice may here possibly apply to that of scabies.

Thus, then, under one or other of these five headings:—I. Varicella prurigo; II. Lichen-prurigo of infants; III. Relapsing or summer prurigo of young persons; IV. Winter prurigo; V. Persistent prurigo of adults; I think we should be able to group pretty easily all the cases occurring in English practice in which prurigo is a disease of the cutaneous surface generally. I have left aside for the present those in which it is a local malady, as, for instance, the prurigo pudendi and prurigo of the anus. Although put together, we have in these several groups of cases all the features which Hebra enumerates, yet I must protest that they are clinically very different from each other, and that we do not observe any in which they are combined in the same patient.

Before concluding I have to remark that although these groups include, I think, the chief maladies which deserve the distinctive epithet of prurigo, yet that a pruriginous element must be expected in many other maladies which do not obtain or deserve that name. Eczema-lichen, lichen ruber, acne, and even psoriasis itself, may be each in turn more or less pruriginous. When they are so the primary eruption at once receives important modifications, and special measures of treatment are required. I have recently had under care a most terrible case of pruriginous eczema, in which it would be hardly too much to assert that the man scratched himself to death. He used to tear his skin incessantly, and had produced by doing so lines of scar and great indurated wheals of an almost keloid character. Yet his skin was also universally eczematous, and he had been seen by almost every dermatologist in London with that diagnosis. The disease had begun rather suddenly in middle life, and had been attended by intense prurigo from the first, which lasted without abatement till the time of his death, three or four years later. His sister, older than himself, suffered also from winter prurigo, and was constantly scratching, but had no eczema. In many cases of eczema in children the itching which attends the eruption becomes an important cause of its aggravation.

I have lastly to express a hope that I shall not be considered to have indulged unduly, in the present lecture, a controversial spirit. No one admires more than I do the vigorous powers of observation and zest for the discovery of truth which are displayed in the writings of Professor Hebra. If I have seemed to address myself to an attempt to rectify his descriptions it has been chiefly because I found his graphic chapter on prurigo a very convenient text from which to start. I cannot, however, conceal my belief—indeed, I have already expressed it—that the chapter in question is not applicable to English experience. Instead of admitting that there exists a causeless and incurable malady, to be

known as PRURIGO, which is for the most part unconnected with other skin diseases, my endeavour has been to show that there are certain definite causes of skin irritation to which these maladies are attributable, and that it is more consistent with clinical truth to break up the group of maladies described under this name into several smaller ones, each associated with something peculiar as regards cause or concomitant conditions. How far I have succeeded in my attempt I must leave to you to judge. The classification at which I have arrived is, it must be asserted, by no means unimportant in practice, for the different groups of cases require very different methods of treatment. Nor is prurigo, although fortunately in its severe forms a rare disease, in any degree to be regarded as unworthy of detailed study. It may easily spoil the happiness and mar the usefulness of a large part of a life, and if we can succeed in any degree in increasing our knowledge of its causes and the modes of its prevention neither our time nor our trouble ought to be grudged.

LECTURE IX.

SUMMER PRURIGO.

PRURIGO ÆSTIVALIS, *seu* PRURIGO ADOLESCENTIUM, *seu* ACNE-PRURIGO.

A form of prurigo hitherto undescribed.—Special characters.—Pennmann's case and portrait.—Differences from Hebra's prurigo.—Harriet Smith's case.—Other cases.—Comments.

GENTLEMEN,—I have had much difficulty in finding a name which should be even tolerably appropriate to the disease which we are about to consider. I am not aware that it has been named or described by authors. Its prominent features consist in its tendency to relapse, or to continue with but slight intermissions over many years and in spite of all treatment, to affect by preference the face and the upper extremities, to be worse in summer weather, and to commence usually at about the age of puberty. It is generally more or less pruriginous, but not by any means intensely so, and the eruption consists of small red papules which look as if they were about to form pustules, but which never do so (abortive pustules). Unless they are scratched no ulceration takes place and no crusts form. Although, however, there are no crusts, yet minute scars are constantly produced. On the cheeks there is usually a good deal of diffuse erythema, much more than is shown in the portrait which I now exhibit.

In the boy who was the subject of this portrait* the disease affected the trunk as well as the upper limbs and face, but in most cases the eruption is limited to the face, neck, and upper extremities. The disease differs in some marked features from that known as Hebra's prurigo. *First,* the pruriginous element is very much less marked and the erythematous much more; *secondly,* the face is always affected and the lower extremities less than other parts; and *lastly,* whilst Hebra describes his form of prurigo as being always worse in winter, the reverse is the fact in this malady.

It would appear to have some alliance with acne, and on the face might easily be mistaken for that disease, but none of the spots ever pass into acne pustules, nor does it restrict itself, on the *trunk*, to the acne positions. Probably it has supplied part of the material from which the descriptions of *strophulus pruriginosus* were given by the older writers, and the *lichen urticatus* of Bateman may possibly have included some examples of this malady in its earliest stage.

The portrait which we have before us is that of a boy named Charles Pennmann, and was taken in August, 1867, when he was under my care in this hospital. At the conclusion of the lecture I shall produce the lad and show you that his skin disease has at length quite disappeared. He is now under my care for another malady. The portrait was taken when he was thirteen years of age. He had been the subject of an eruption almost from infancy. It was believed to have begun at six months old. For a long time it always got well in winter and relapsed in summer. He was covered from head to foot with the spots, all his extremities being affected, the palms of the hands and soles of the feet alone being exempt. The spots were everywhere scattered, not arranged in patches. They presented conical elevations of a light red tint, and in the centre of some of them were minute accumulations of fluid. Most of them might be described as abortive pustules, for

* See Plate XXXVIII of the New Sydenham Society's Atlas.

they looked in the early stage as if threatening to become definitively pustular, whilst but few really did so. The skin when he first came to me was marked all over with very shallow white cicatrices which the eruption had left. He had never had smallpox. The eruption showed but little preference as regards different regions. It was, however, especially copious on the cheeks, forehead, and back of neck. He was thin and his skin was somewhat harsh and brown, but he considered himself in good health. The eruption did not seem to occasion him any great annoyance; he said that it itched only at night and gave him no trouble in the daytime. He asserted that usually it got quite well in the winter, only coming out in warm weather, but on the present occasion his attack had begun at Christmas and had persisted during four months of cold weather. He did not notice any difference in his general health.

The following note records the state of the lad several years later.

"He has grown well and appears to be in good health. The eruption is at present out only on the backs of his arms, slightly on the forehead and over the buttocks. His skin is everywhere spotted with small cicatrices, most of them very superficial, but so abundant that on his chest, back, and arms a marbled appearance is produced. His mother, who comes with him, states that the first outbreak in infancy occurred after measles, and was supposed to be a "measles rash." She says also that it has at times covered the whole surface of the body with the exception of the flexures of the joints and the palms and soles. He has always had it less on the legs than elsewhere, and the parts most severely affected have been the face, backs of the hands and arms. He has had repeated bad attacks since the portrait was taken, although on the whole the disease appears to be getting milder. For two months at midsummer of this year the eruption was very freely out, and his legs were so much swollen that he was obliged to stay at home. As a rule he continues regularly at his work and suffers but little inconvenience from his eruption. He complains somewhat of irritation when he is hot, and he habitually scratches, but he states that he is never kept awake at night by itching."

You will see from this that this case differs somewhat from the statements which I have made as regards the general facts as to this malady. It began very much earlier than is usual, and it has affected a greater extent of surface. The parts which were exempt are almost precisely the same as those which escape in "Hebra's Prurigo," with the difference that in the present case the face and the back of the neck are severely affected. We must note also that whilst in the disease described by Hebra the skin becomes dense, hard and thickened, and there is often a marked tendency to eczema, these phenomena are wholly wanting in this patient.

In further proof that the case does not fit with the Vienna malady I now produce the patient. Hebra asserts in the most explicit language that the prurigo which he describes is absolutely incurable. This young man, however, although now only twenty-three, has got quite rid of his complaint. It had been slowly declining for some years, and at present his skin is quite free. It is, however, spotted all over with minute white scars, not so deep as those of smallpox, and producing a very curious appearance. He is now under care for strumous disease of both testicles. So much had his appearance altered by the cure of the eruption that I did not in the least recognise him until he reminded me of his identity.

The next case which I shall bring before you is one which in some respects approaches nearer to Hebra's type. In it we have a tendency to eczema, and the patient is as yet far from cured. Here again, however, we must note that it is a summer malady, and further, that it did not begin in infancy. The patient had a clear skin until she was eight years old. Her first menstruation had occurred before any spots showed themselves. Thus, it would appear to connect itself with the adolescent period.

Case of very severe prurigo, which began at the age of eight, and has now persisted with increasing severity for five years. Summer exacerbations; tendency to eczema; face affected. Œdema of lower extremities.

Harriet Smith, æt. 13. In this instance the history, which is given with great intelligence and clearness, is that the child had a perfectly clear skin till the age of about 8½ years, that she was not liable to irritation from fleas, that she had had chicken-pox at 5, and had had nothing unusual after it. When she was 8 years and 6 months old she menstruated for the first time, and very shortly afterwards began to suffer from an eruption on her arms. At this time she was accustomed to have the arms bare. The weather was hot, and the first suspicion was that the eruption might have something to do with the heat. From the first it itched very much, so that the child's mother used to tie up her hands to prevent scratching. She got better in winter, but it did not quite leave her. It relapsed again the next summer, but continued for two years or more quite confined to the arms. Next it extended to the shoulders and trunk, and then passed over the body. It is only for the last three or four years that it has affected the face.

At the present time (October 30th, 1875) she is very much better, partly in connection, probably, with the time of year, and partly from treatment with the tar baths. During the past summer she was for two months in the London Hospital (under a colleague); the eruption was very bad, worse than ever before when she went there; it had been getting worse every summer.

The eruption avoids the parts where the skin is thin. Thus, the flexures, the sides of the neck, and the adjacent parts of the chest, are free. It is very severe on the shoulders, backs of the upper extremities, the whole of the back, on the hips, and on the whole of the lower extremities excepting the popliteal spaces. On the face it is severe on the sides of the cheeks and below the ears, whilst it extends with slighter severity over the whole of the front of the face and forehead. It was formerly present severely on the backs of the hands, but is now nearly well there. It extends also on to the whole of the dorsal surfaces of the feet. It does not affect with any special severity either the fronts of the knees or tips of the elbows, though a few spots are seen there. The palms, soles, and scalp, have always been quite free. The eruption is modified at such an early stage by scratching that it is difficult to say with confidence what its original type may have been. It consists at present of small papules with ill-defined borders, which are either simply abraded or covered by a thin adherent scab. Amongst these papules are everywhere numer-

ous white superficial scars. The skin is discoloured and harsh, and at some parts decidedly thickened. On the lower extremities there is decided thickening of the subcutaneous cellular tissue, so that a line is seen where the tops of the boots press, above which the whole leg is equally swollen.

The spots have always been very liable to bleed when scratched. No evidence of pediculi now, but at one time she had some on the head, but without relation to the disease. There is no history of skin diseases in the family, and she is the only one out of seven children who has any eruption.

The child has been under much medical treatment, and three years ago was an out-patient for a long time at one of our largest hospitals. She has already derived great benefit from the use of a tar bath every night, and now sleeps fairly.

Her mother considers that the condition described in the above notes is the best that she has attained in the summer for several years past. Although much better in the winter, she has never got quite well.

This case bears in most respects a very close resemblance to that of the lad Pennmann. It differs from that case chiefly in that the pruritus has been far more severe. In Pennmann, although the irritation was worse at night, he was never kept awake, and in the daytime he had no itching whatever. In Pennmann the disease had begun in infancy, whilst in this girl it did not occur till the age of eight. In both cases the entire exemption of the palms, soles, and scalp, and the comparative freedom of the flexures and other parts where the skin is thinnest, are to be specially observed. Again, in both cases we have the strong statement that the disease is worst in summer and comparatively if not absolutely well in cold weather. In both the skin of the back is marbled over by superficial white scars. In both there has been a tendency to inflammatory œdema of the lower extremities when the eruption is severely out. In Pennmann's case it was suggested that the disease was consequent on measles, but in the case of the girl there is no such hypothesis, and the evidence is clear that it began on, and was for a considerable time restricted to, the upper extremities, and that it only

spread after a considerable period to the rest of the surface. We may note that this latter fact is tolerably conclusive as to the disease not having begun from the irritation of lice, for it attacked the arms first, the parts which would almost certainly have been avoided by these parasites. The evidence in the girl's case is yet stronger than in that of the boy in favour of the supposition that the disease is a pure prurigo, and that the papules, pustules, scabs, and other evidences of inflammation of the skin are secondary, and due almost wholly to the patient's scratching. In neither case has there been at any stage any tendency to the formation of wheals, as in urticaria. The degree of chronic thickening of the skin appears to be in proportion to the scratching, and is much more marked in the girl's case than in that of the boy.

I will now read to you brief detached notes of some other cases which illustrate my assertions respecting this class of affections.

A sugar refiner from Whitechapel named Samuel Hoop was under care in July, 1870, for a pruriginous eruption on the legs, forearms, and face, which he said always got well in winter. There were a few vesicles mixed with the prurigo spots.

Mary Ashton, a married woman, æt. 29, suffered for a second time during the summer of 1870 from a pruriginous eruption in the arms, chest, thighs, and legs. It affected her face slightly. It had been well in the winter.

William Hopkins, a coke dealer, æt. 24, came under care in March, 1870, having then suffered from relapsing prurigo for six years. The eruption was to some extent eczematous, and although it affected the backs of the limbs most severely the flexures were not quite exempt. He considered that it was worst in spring and autumn, but it never got quite well either in winter or summer. The skin of the lower extremities was rough and dry, and the eruption bore evidence of much scratching. His face was free when I saw him, but it had formerly been affected. The eruption, which was almost general, was only slight on the chest. He asserted that the little red spots, which were the first stage of the eruption, became white when rubbed. A sister and himself had suffered from "bad heads" in childhood, but in the interval he had been quite well, and his sister still remained so.

I cannot state the termination of this case. In some features it resembles a case of pruriginous eczema which I shall have to relate hereafter, in which, after several years of suffering, death occurred.

A girl named Sarah Smith, æt. 14, under care in 1869, had a symmetrical papular eruption covering the face, arms, and hands. It was just like Pennmann's, and was more severe on the face than elsewhere, and affected the backs of the arms more than the fronts. The itching was only slight. It was quite symmetrical, and had been present with summer relapses for three years. It was stated that two of her brothers older than herself had suffered from a similar rash for about the same time.

This history might suggest the probable existence of a parasitic cause, but the severity with which the face suffered seemed to negative this. After two months' attendance under treatment by arsenic and the lead and mercury ointment the notes state that she was nearly well.

Robert Stole, a harness maker, æt. 19, attended at the hospital in August, 1869. His eruption was a prurigo, and was, he said, always worst in hot weather and almost well in winter. It occurred chiefly on the arms, but was present also on the trunk and outsides of thighs. He did not wear woollen next the skin. The notes do not state how long he had suffered, but imply a duration of several years. We found pediculi on the head, but none in the clothes.

My next case is one of the longest duration which I have to mention, the patient having suffered for twenty years; still, however, it had not begun in infancy, and it was a summer rash, not a winter one.

Mary Ann Wood, æt. 33, a widow, applied in July, 1869. She had suffered from her eruption every summer since she was thirteen years of age. She was most positive as to the influence of season, asserting that she was always well in winter. She inherited gout, and had suffered from a single attack last winter. The eruption covered thickly the fronts and backs of the arms, backs of elbows, and backs of hands. There were some spots on the forehead, and a considerable number on the fronts of the thighs and legs. It did not occur at the flexures. The case differed from most others which I have seen in that the face was but slightly affected. The woman

described the itching as having been considerable at times, but the disease did not by any means appear to have embittered her life. She had been married and had borne children, and had never observed that the eruption was worse during pregnancy or lactation. She was stout, but not florid.

A girl named Jane Bewick, æt. 22, was under care in September, 1869, for a copious eruption on the face, which had been much scratched, and which differed from acne in that the whole skin of the face was more or less inflamed whilst there were no comedones and no pustules. My notes state that it was exactly like Pennmann's case. She had a few spots on the backs of the hands, and had formerly had it on the legs also. She had been liable to the eruption on the face for five years, and had always been much worse in summer. A year previously she had been under care at Guy's. At the time of her application at Blackfriars the eruption was complicated by urticaria, the wheals of which were as large as halfpence (possibly from bites). She took arsenic and used a lead and mercury ointment, and in a month was "a good deal better."

The following case, although an example of severe and long-persisting prurigo, differs from Hebra's type in that the face was first affected and always suffered most severely, that the eruption got almost well in winter, and that it did not begin till the age of eight.

Harriet Adams, a milliner, æt. 17, first came under our notice on June 25th, 1869. She was then suffering from an eruption which affected the face, arms, and to a slight extent the chest, but from which other parts of the body were free. It was stated to have first appeared when she was eight years old, and to have then shown itself on the arms and face. Her face was now covered by an eruption in part papular and in part eczematous, and it was raw from scratching. On the arms the papules looked exactly like those of prurigo senilis (from lice). No wheals could be found, but she stated that the spots "began as bumps." There were no vesicles nor any papules which were free from evidences of scratching. Her mother spoke positively as to there having been no eruption in infancy or after vaccination. Two other older children and seven younger had remained free from skin disease. As a rule, it was asserted the skin would become quite clear in winter, but during the last winter she did not quite lose the eruption. My notes state that the eruption exactly resembled Pennmann's. There were no spots on the fronts of elbows, but few on the fronts of arms, and not many on the

shoulders. On the backs of the hands it came as low as the knuckles. We were told that on one occasion she was two months at the sea-side and got quite well. Arsenic in three-minim doses was prescribed and a lead and mercury ointment, and was continued with intermission for more than a year. My last note is July 21st, 1871, that is, two years after her admission. She considered that she had on the whole been better for the treatment, but she had varied much, and had never been quite well on the face. When the arsenic was given in six-minim doses the eruption improved, but the remedy disagreed with her stomach. Tar lotions and the bismuth lotion had also been tried. The eruption had always been at its worst in hot weather.

Catherine Draper, æt. 16, came under care in June, 1871, with an eruption of "lichen prurigo," which affected her face, forehead, backs of forearms and arms, and front of chest. This was her second attack, and had lasted one month. Her first had occurred just a year ago, had lasted all the summer, and got well when the cold weather came. Her mother asserted that there had not been the least eruption in infancy or childhood. She attended until September, and took arsenic and used ointments. She was then much better, but not nearly well.

Mary Henning, æt. 22, has been liable to a relapsing pruriginous eruption for the last ten years. It comes out badly every spring and autumn, and when it leaves her her skin becomes perfectly sound. The eruption resembles that of Pennmann, but with a more decided tendency to urticaria, having sometimes "bumps or wheals as large as half-crowns." It affected chiefly the face and arms, but sometimes occurred on the back and chest and fronts of legs. Her first attack occurred very suddenly one summer, and came out freely. She remained under care from March 15th, 1870, with intervals, till April 1st, 1873, during which time she took arsenic, alkalies, quinine, &c. &c., freely, and used a great variety of local applications. She was never wholly free from the rash for more than a week or two at a time, and there was no reason to believe that the arsenic did any good. She had taken it sometimes in six-minim doses, and her own impression was that it made the skin more irritable. She was always best in cold weather, and several times during winter her rash was reduced to a few isolated spots. The last note, on April 1st, 1873, records her admission for a copious outbreak which had then lasted a fortnight, and states that she had been all but well. (I have no subsequent note.)

Eliza Martin, married, æt. 38, has suffered from relapsing prurigo

for five or six years. It affects the face, arms, body, and slightly the lower extremities. She had it first the first summer of her residence in London, and she states that she always gets rid of it if she goes into the country.

The following case supplies an example of Pennmann's prurigo beginning on the face.

Kate Newman, a girl æt. 11, admitted in May, 1869, had been subject to an eruption just like Pennmann's for eighteen months. Her face was covered with papules, many of them scratched and capped by a blood-crust. It had itched much. It had never occurred in other parts than the face, and here it avoided the eyelids and was only sparingly developed in the forehead. It affects the ears and the parts behind them. It was usually worse in hot weather. She was in good health, and there was no history of skin diseases in her relations. She attended from May to July, and took arsenic, and used lead and mercury ointment without any benefit.

I need not, gentlemen, trouble you with more cases. Those which I have quoted must, to those who have had patience to follow me, have sufficed to illustrate most of the assertions with which I commenced. You will, I think, sympathise with me in the difficulty in finding a suitable name. Although aggravated by heat and often quite well in winter, yet it is, as we have seen, by no means an exclusively summer malady. In its broad features, however, it contrasts strongly with winter prurigo, and thus the name suggested may be found appropriate, at any rate provisionally. You will see that we want more facts, that is, more completed cases, such cases, for instance, as that of Pennmann, extending over many years, and giving the final result. When these are collected we may be able to give a more accurate description of the malady and to find, perhaps, a better name. In the mean time we will beware of forcing our facts into any artificial uniformity. No two cases are exactly alike, and for the obvious reason that in all mixed causes are at work.

LECTURE X.

ON THE NAILS AND THE DISEASES TO WHICH THEY ARE LIABLE.

Uses of the nails.—Their structure.—Names given to different parts.—The true nail-root.—Various modifications in nutrition.—Enumeration of the principal diseases to which the nails are liable.

Gentlemen,—The nails are modifications of the skin at the ends of our fingers and toes, which adapt them to special purposes, or perhaps it might more accurately be said that they are the modified remains of structures which served special purposes in our shoe-less and tool-less progenitors. The nails are of comparatively little use to us; for, however great might be the loss in beauty to the fingers, the substitution of a firm pad of tactile skin in the place of the nails would probably be a decided gain to a considerable proportion of our highly civilised communities. To many quadrupeds, however, the hoof is of the utmost consequence as a protection for the foot, and to other animals the claw and talon serve very obvious purposes in the acquisition of food and the construction of dwellings. Thus, as might be expected, we find very considerable modifications assumed by these appendages in different classes of our "poor relations."

In man the nails consist of curved plates of horny epidermis, which are firmly attached to the upper surface of the

ends of the fingers and toes.* They are to a considerable extent transparent, and allow the colour of the parts beneath to be seen through. The sides of the end of the digit are not completely covered by the nail, nor is the nail attached to the digit quite up to its end. Excepting at their free ends the nails are everywhere embedded in the surrounding skin, and at their root a thin narrow band of modified epidermis is prolonged forwards on their surfaces. Under the nail is a florid papillary layer (modified *rete mucosum*) to which is due the colour that, in a state of health, is seen through its transparent substance. According to the colour and abundance of the blood in this layer will be the tint of the nail, and it may vary, as the lips do, between extreme pallor or dusky lividity, and the bright pink hue of health. I am not aware that it ever becomes pigmented, or that it ever shows any other changes of colour excepting such as are to be explained by the state of the circulation. When other peculiarities of colour are observed they are probably always in the nail-substance itself.† An exception to this statement occurs, however, at the roots of the nails, where a narrow crescent of the papillary structure is much whiter than the rest, and this whiteness being seen through the nail gives origin to the appearance known as the *lunula*. The lunula is largest in the nail of the thumb, it decreases on each succeeding digit, and is often scarcely to be found in the nail of the little finger. It differs much in size in different persons and in different races. In the Negro it can with difficulty be identified.

We must next, for convenience sake, give names to the different parts of the nail. The term *body of the nail* is a convenient expression for the nail itself; the part of the finger on which it rests is the *nail-bed;* the part from which

* The nail-substance consists of epidermal scales modified in form and firmly cemented together; all the scales are nucleated.

† The nail-bed is pigmented in the Negro.

it grows is the *matrix;* the part first produced is the *root* of the nail; its anterior projecting part is its *free edge;* lastly, the overlapping layers of skin which in part conceal its root and sides are the *nail-folds.*

It is convenient to think of a nail as a gigantic flattened hair, the walls of the follicle of which are wanting on one side. Imagine the folds of skin which overlap the borders of the nail so prolonged across it as to meet and conceal all excepting the free edge and you will then form a clear conception of what is meant; the nail would then resemble a hair which had been cut off close to the mouth of its follicle. Just as hairs grow only from their papillæ and not at all from the sides of the follicle, so it is with nails; the papillæ at the root of the nail—*i. e.* at the point just behind the lunula and for the most part covered in by the posterior nail-fold—are the structures by which alone the nail is formed. Over its bed it slides gradually on, adhering pretty firmly, but receiving little or no addition to its substance.* This physiological fact is of much importance in reference to diseased conditions, and more especially must the surgeon keep it in mind in certain cases in which it is desired to entirely prevent the reproduction of a nail. It is absolutely necessary under such circumstances to cut out the papillary root, and it is not necessary to do more. Removal of the nail-body and nail-bed will not prevent its growth if the root be left, whilst removal of the nail-root will cause the nail to fall and wholly prevent its re-growth even although the body and bed be left *in situ.*

We have now cleared the way for the more easy examination of the morbid conditions which the nails present. As might be expected they share in the changes of health which the body undergoes, and more especially are they likely to

* It, I believe, is to Biesiadecki that we are indebted for this distinction between the true *matrix* and the *nail-bed.* ('Stricker's Histology,' New Sydenham Society's Translation, vol. ii, p. 262.)

suffer when the skin, of which they are parts, becomes diseased. The same influences which cause skin-diseases produce also changes in the nutrition of the nails. They share in the tendency to inflammation of the skin which occurs in the exanthem, or secondary, stage of syphilis, and are probably, though in a much slighter and more transitory way, affected during the short-lived skin-affections which characterise small-pox, measles, and the other specific fevers. In eczema of the hands we usually have eczema of the nails; with common psoriasis we find psoriasis of the nails, and in the rare disease known as pityriasis rubrum the nails never escape. There are also certain other cases in which the nails alone are diseased, and in some of these we find it difficult with any degree of confidence to infer a constitutional tendency. Not a few of this latter group are probably for all practical purposes local maladies, *i. e.* they are excited and, indeed, caused by local influences, although, like all other local diseases, when once evoked they are, of course, modified by the pre-existing peculiarities in the health of the patient. In this latter category I have to mention onychia maligna, the various forms of ungual whitlow, some of which approach closely to that disease, certain persistent thickenings and alterations of structure of single nails which occasionally follow slight injuries. These local affections of the nails may be known to be local only, as we know other local maladies, by the fact that they are often single, and that even when multiple they are rarely, and, as it were, only by chance, symmetrical, whilst in all truly constitutional diseases a tendency to symmetry in their local manifestations is the rule.

There remain yet unmentioned certain symmetrical and general nail affections which have not been associated with any special diathesis. Respecting these we shall have to examine evidence in favour of the belief that they are manifestations of the dartrous (psoriasis) diathesis, that they are,

in fact, examples of psoriasis of the nails without psoriasis of the skin.

It may perhaps be convenient if we here delay for a while before proceeding to a description of the various diseases mentioned, in order to enumerate the several different types of change by which the nails may display the results of disturbance of their nutrition. The first and simplest of these is perhaps a loss of the normal transparency, which may occur in patches or over almost the whole body of the nail. Its commonest form gives rise to the conspicuous white spots so often seen in the nails of children and delicate persons who are in the habit of picking the nail at its root and thus injuring its soft structures. These white patches, known popularly as "flowers" or "lies," travel onwards with the growth of the nail, and finally emerge and are cut away at its free edge. Next we must notice changes in the surface of the nail as regards its smoothness, and resulting either in an increase of the natural longitudinal fluting* or in the formation of transverse lines. The latter are often seen after illnesses, and they mark probably slight arrests of growth or very temporary attacks of congestion at the root of the nail. These transverse markings, like the white spots, are carried forwards with the growth of the nail. Sometimes the presence of several at one time may denote the

* Let it be observed that this longitudinal fluting begins at the matrix of the nails, and is caused by the arrangement of the papillæ there; it is not due to the rows of papillæ on the nail-bed. Healthy nails show signs of a fibrous structure, the fibre-bundles running in the length of the nail, and being recognisable by a slight degree of whitish opacity. These lines are much more easily distinguished in the free part of the nail. Whoever will examine his thumb-nail with a lens will observe that as soon as a nail leaves its bed at its free end a number of fine lines become visible, like the teeth of a very fine comb; these may be traced backwards into the body of the nail, where, however, they are much less conspicuous. Whenever in disease the nail becomes opaque and loosened this fibrous arrangement is exaggerated.

occurrence of repeated relapses of febrile action during an illness. Both the conditions just described are superficial, either on the surface of the nail or just below it, and are due to causes acting on its surface. When, however, the matrix is diseased the whole substance of the nail suffers, and it may be changed into a thick, rough, opaque, fibrous-looking structure, with probably the accumulation of more or less epidermis under its free end in the form of dirty grey flakes. With these changes the nail almost always loses its firm hold on the nail-bed, and becomes detached in more or less of its extent. In describing cases of disease of the nails it is important to note where the changes begin, whether at the free edge, at the sides, or at the root. It is more usual for disease to begin at one corner of the free edge than anywhere else, and to extend thence along one side to the root. In some cases accumulation of epidermis under the nail, chiefly, of course, at its free border, is the principal feature; the nail is detached by it and lifted up, and, as a result of being separated from its bed, becomes opaque, dense, and fibrous. Non-adhesion of the nail to its bed is a not infrequent consequence of inflammatory attacks, or it may be the first indication of disease, as in psoriasis affections. When this happens the nutrition of the nail always suffers; it becomes opaque and malcurved. As its source of growth lies almost entirely in the matrix, the nail may still advance forwards almost as quickly as usual, but it cannot maintain its healthy state.

I shall conclude this lecture by a seriatim enumeration of the diseases of the nails. Some of these I must be content to mention briefly in this place, but the more important we will consider in greater detail in the next lecture.

1. Onychia, Ungual whitlow, or suppurative inflammation of the nail-bed, is often seen after injuries, but may occur without known cause. It is usually single, and whenever

multiple a constitutional cause, syphilis for example, must be suspected. It is not uncommonly the result of contagion of some pus-secretion or of slight injuries to the edge of the nail from pricks with (poisoned?) pins and the like. It is common on the fingers of nurses who have to dress children suffering from porrigo. The "foot-rot" of sheep (not the "foot-and-mouth disease," which is a totally different thing) is a form of ungual whitlow originating usually in over-walking on hot roads, and then transmitted from foot to foot, and from sheep to sheep, by direct contagion. It often causes the hoof to exfoliate. It is curable by acting upon the theory of its causation here suggested, isolation of the affected animals, paring of the hoof, and the application of some pus-destroyer. Ungual whitlows never become epidemic amongst ourselves because the conditions favouring contagion do not exist.

2. Onychia maligna.—A partially specialised form of ungual whitlow met with chiefly in strumous or syphilitic children (particularly in the latter). In this form of disease much inflammatory expansion of the finger end occurs, and a very painful and irritable sore results. The nail is much enlarged, especially in width, and becomes loosened in parts, whilst it adheres in others. It is easily cured by any remedy which destroys the vitality of the cell-layers on the surface. Thus a single dressing of the acid nitrate of mercury or of liquor arsenicalis is often enough if efficiently applied to every part; the removal of the diseased nail being an essential preliminary. The two facts that onychia maligna is never curable by constitutional medication and is never multiple are against the belief that constitutional states take any chief share in its production. The morbid action never spreads far beyond the margins of the nail-bed. After cure by the means suggested a good nail is reproduced.

3. "In-growing toe-nail."—In this we have another

modification of ungual whitlow, which is met with almost exclusively on the nail of the great toe. It is, no doubt, commonly due to pressure from the boot causing the side of the nail to irritate the adjacent skin. As soon as any degree of inflammation has been set up the conditions aggravate each other, the inflamed nail expands and grows laterally against the raw surface now unable to tolerate any pressure. No doubt, also, as in onychia maligna, the secretion produced is in itself a source of irritation; and since to these conditions we must in many cases add the continued annoyance of the boot, and not seldom the occurrence of other accidental violence, a combination of influences is produced which may well account for the troublesome nature of the malady. But the picture is not yet complete, for I must still add that this condition rarely happens to those who are in good health, and that very often there is a history of syphilis. The treatment must be conducted with reference to all the several factors of causation.

4. *White specks in the nail-substance.*—These, as already noted, are usually caused by injury to the surface of the nail near its matrix. Picking back of the nail-fold is a common cause. It is certain, however, that they depend in part upon peculiarity in the state of health of the individual. They are common only in the young, and are often coincident with similar white spots in the teeth. Those who show them in unusual degree and number are, I think, seldom in robust health.

5. *Transverse lines on the surface of the nails after disturbances of general health.*—It has been observed that during febrile ailments and various other more or less acute derangements of health the nutrition of the nails suffers. A record of each relapse or exacerbation, permanent during the life of the nail, is left on its surface in the form of a transverse furrow. As the age of an oyster may be reckoned by counting the ridges on its convex shell, so in these cases may the

number of relapses and the relative duration of the intervals be estimated.*

Dr. Wilks in his original short article on this subject ('Lancet,' January 2nd, 1869, p. 5) infers from the known rate of growth of the nail being equal to two full lengths a year, that furrows on the middle of the nail indicate an illness three months before. He mentions the case of a gentleman in whom the furrow formed on the nails as the result of a very severe diarrhœa attended by much prostration. Another patient with heart disease showed the markings after the occurrence of an illness. A third showed some distinct lines on his nails a few weeks after an acute attack of chest disease, which ended in phthisis.

The markings are caused, writes Dr. Wilks, "by a slight furrow, which is found more especially on the middle of the nail, and more distinct on that of the thumb. They point, no doubt, to a sudden arrest of the nutritive process during the time of the illness, and herein lies the interest of the observation."

My colleague, Dr. Langdon Down, in 1870 communicated to the Pathological Society the case of a gentleman on whose finger- and toe-nails two distinct sets of transverse *white* lines appeared after he had been twice much out of health from severe overwork; the symptoms were great prostration, intermittent action of the heart, and ulceration of one cornea. The nail marks corresponded in position to the respective dates of these two attacks, which occurred within a few weeks of each other.†

6. Psoriasis of the Nails or *Psoriasis-onychitis*.—This condition presents several forms, chiefly distinguished from each other by reference to their several causes—

* M. Beau, Dr. Wilks, Dr. Hillier, Dr. Hilton Fagge, and Dr. Down, have all recorded interesting observations in reference to this subject.

† 'Path. Transactions,' vol. xxi, p. 409, 1870.

1. Psoriasis of nails in association with like disease of the skin.
2. Psoriasis of nails without psoriasis of the skin actually extant, but with probably a predisposition to it.
3. From an inherited taint of syphilis.
4. From an acquired taint of syphilis.

Psoriasis being one of the most important of the diseases of the nails, I shall leave its detailed consideration to next lecture.*

7. Chronic Onychitis in Association with Eczema of the Fingers.—This is very common, and consists, as might be expected, in changes which are chiefly on the surface of the nail. The nail fold at its root is implicated in the eczema, and hence a roughening in pits and lines of its upper surface.

As a rule eczema of the nails is always secondary to eczema of the skin. A case in which it seemed probable that we had to do with eczema of the nails without eczema of the fingers was under my care in August, 1872. The

* Dr. Richardson in his 'Asclepiad' has given us an excellent description of the symptoms and appearances in different stages of psoriasis of the nails. His patient was a woman, æt. 47, the subject of common psoriasis. The nail disease did not come on till her psoriasis had been out for nearly three years. The skin disease and the nail disease were both rapidly cured by a course of arsenic apparently without local treatment. An excellent chromo-lithographic plate accompanies the case. He narrates another case in which the internal use of Fowler's solution effected the cure of a disease of the skin and nail of one finger of a man æt. 38; the disease was apparently an eczema. In both these patients local treatment had previously failed. He concludes that "the evidence in respect to the treatment of this disease of the nails is thus strongly in favour of arsenic as the remedy. This view in some measure removes the hypothesis of the invariably syphilitic origin of the disorder, and shows, at all events, that there may, as in lepra, be two sources, one of which is not directly of venereal growth" ("On a Diseased Condition of the Nails," Richardson's 'Asclepiad,' vol. i, p. 30, 1862).

patient was a publican in excellent health, 34 years of age. He himself attributed it to irritation to his fingers in his occupation, which chiefly consisted in "mixing beer," yet he had never had any eczema of the hands. The disease began by irritation under the fold of skin at the nail-root. Only three nails were affected, those of the two little fingers and of the left forefinger.

8. Chronic Onychitis in Association with Pityriasis rubra.—This association is well illustrated in one of the plates published by the New Sydenham Society, of which I show you here the original drawing. Pityriasis rubra is a rare and very peculiar malady. We know nothing of its causes, and most of what we know of its course may be summed up in the following statements. In certain adult persons a state of persistent congestion of the whole integument with exfoliation of epidermis may occur, the patient becoming everywhere of vivid red colour, and the epidermis peeling off in large flakes. Where the skin is thick, as in the palms and soles, the epidermal flakes may accumulate in layers like the leaves of a book, sometimes making up a thickness of half an inch or even more. The disease is chronic, prone to relapse, and often attended by great debility. For our present purpose we are concerned with this malady only because in it there is usually much disease of the nails. The changes consist in opacity of the nail, with deposit of epidermis between it and its bed. When the skin-disease subsides the nails participate in the benefit. In these cases the nails are implicated as parts of the general integument, the whole skin being affected; it is, however, remarkable that they should suffer so severely. I have rarely seen nails so much thickened and deformed as in some of these cases.

9. Chronic Onychitis in Association with Pityriasis palmaris.—It is only in certain peculiar forms of psoriasis

(or pityriasis) palmaris that the nails suffer. When the disease of the skin is confined entirely to the palm, it is, I think, rare to find the nails in any way involved. Thus in the common forms of syphilitic palmar psoriasis they escape. There is, however, a severe form of this malady, occurring chiefly in elderly persons, which involves both feet and hands, and which often affects the fingers as well as the palms, and may even extend to the backs of these parts also. In these cases the nails often suffer severely, becoming thickened and uplifted by epidermal accumulations much as in *pityriasis rubra*. An excellent cast showing this state of things is in the museum of the London Hospital. It was taken from the foot of an elderly gentleman in whom this state of things had come on in association with certain nervous symptoms. It is perhaps not improbable that in such instances, although the skin of the trunk and limbs with the exception of the hands and feet is unaffected, yet that the malady is closely related to *pityriasis rubra*.

10. Syphilitic Psoriasis of Nails.—When nail disease occurs in connection with syphilis, it is most frequently in the secondary stage, *i.e.* the stage at which the skin-rash is present; and like the skin-rash it is generally, I believe, a transitory affection. Although it is by no means a common manifestation of secondary syphilis, I could quote to you a tolerable number of cases in which the nails suffered at this period of the disease.

The sketch which I now show exhibits the finger nails of an old woman who at the time the portrait was taken had a general syphilitic rash and iritis, her primary disease having occurred six months before. Almost all her nails were affected, and, as in other forms of psoriasis of the nail, the disease began at the free border and spread towards the root of the nail.

You will see that the sketches show the anterior two

thirds of the nails opaque, rugged, thin, and broken, whilst the lunula and adjacent parts are almost healthy. Cases such as this make it evident that the nutrition of the nail can be very materially interfered with by influences which do not primarily affect its matrix.

11. Parasitic disease of the Nails, Tinea unguium.—Under this head are comprised diseases of the nails in connection either with favus, ringworm, or other forms of tinea of the skin. Sometimes masses of growth accumulate under the nail, and bear some resemblance to a favus cup; but more usually, both in ringworm and favus, the nail substance is infiltrated and made opaque and fibrous. Tinea of the nails may occur at any age, but is far more common in early childhood than later. In all cases of chronic thickening of nails in children the microscope should be used. I shall on a future occasion devote a lecture to this group.

LECTURE XI.

DISEASE OF THE NAILS IN CONNECTION WITH THE PSORIASIS DIATHESIS (DARTROUS).

Meaning of the term dartrous.—Nail disease occurring in those who suffer from chronic psoriasis.—Its peculiarities.—Cases of Mr. G— and others.—Case of nail-shedding.—Case of nail psoriasis without skin disease.—A peculiar form of chronic multiple onychitis with thickening of the nail substance.

Gentlemen,—I use the term dartrous diathesis, as many of you are well aware, to denote that state of constitution which causes liability to common psoriasis and allied diseases. I propose in the present lecture to inquire as to the peculiarities and frequency of those diseases of the nails which appear to be thus related. You must not suppose, when we speak of psoriasis of the nails, that we mean a state in which the nails become covered with scale-crusts, for no such state is ever seen. What we do mean is, that form of chronic inflammatory change in the nails which attends psoriasis of the skin. It will be safest for me to describe to you this affection from cases in which it occurs in actual association with undoubted psoriasis of the skin, otherwise it might be possible to apply this name to forms of nail-disease having no real affinities with what we mean by psoriasis. If, however, we are able to identify, beyond doubt, a variety of nail-disease as more or less peculiar to those who have psoriasis of the skin, then we shall be justified in assuming that it is in connection with the same cause; and when we meet with such a condition of the nails

alone and without any psoriasis of the skin, we may suspect with plausibility that it is an indication of the same state of health.

One of the best cases which I can bring forward for your study of psoriasis affecting the nails is that of Mr. G—, a gentleman in good health, who has never had syphilis, and who has suffered severely from common psoriasis for many years. The peculiarities of his nail-disease are as follows:— The affection is for the most part symmetrical, and affects many of the nails both of his hands and feet. The disease begins by a little patch of discoloration under the free corner of a nail. It is at first pink, but rapidly loses that tint on account of the opacity of the nail-structure which prevents the bed from being seen through it. The nail substance from being white soon becomes of a dirty brown, and the patch extends down one or both sides of the nail to its root. Meanwhile the diseased part of the nail becomes loose, and more or less of epidermis accumulates between it and its bed. In many instances this accumulation is but little, and a long strip of discoloured nail is all that is observed. The diseased portion is hard and brittle. Mr. G—, who is a farmer, complains that he cannot lift sacks for fear that his nails should catch and break, and says that his toe-nails cut through his socks. The nails vary as regards pain and tenderness; formerly they were not very troublesome, but of late the relapses have been attended by great soreness. Mr. G— is always well influenced by arsenic, of which he has taken long courses. His psoriasis has often been quite cured by it for a time. His nails are always better when the psoriasis is better; they, however, but rarely get quite well, and they soon relapse when the arsenic is left off; he thinks he has often noticed them to be worse within a few days of an interruption of the treatment.

I believe that Mr. G—'s nails offer us fair specimens of

psoriatic onychitis in its more common form, but we must allow for a certain range of deviation from type. Thus in some there may be much greater thickening of the sub-ungual epidermis, and more ruggedness and breaking-up of the nail-structure. In Mr. G—'s case the nails remain almost smooth on their surface. The toe-nails usually suffer most.

Another well-marked example of psoriasis of the nails occurring in association with psoriasis vulgaris of the whole trunk occurred in the case of Mrs. S—, a lady aged thirty-nine, whom I have seen several times during the last eight years. Her psoriasis was extremely severe and affected the scalp, trunk, and extremities. As in the case of Mr. G—, she was always influenced for good by arsenic, but like him she was never able to leave it off for long. Her nails were affected symmetrically, and were I believe usually the last parts to get well.

You must not suppose that disease of nails is a common complication of psoriasis; it is, on the contrary, a decidedly rare one. We see, however, not very infrequently, nails more or less like those above described, but in persons who have no skin-disease. A gentleman of middle age whom I see occasionally has shown several indications of the dartrous diathesis, but has never had positive psoriasis. The skin of his elbows has occasionally been rough and dry, and he is liable to a form of eczema intertrigo of the scrotum. His mother suffered for many years from well-characterised psoriasis. When about forty-two this gentleman lost the nails of the second toes, symmetrically, and within a week or two of each other. Without the slightest pain the nails became discoloured and loose and finally fell off, a perfect nail being reproduced afterwards. Three years later similar changes occurred in the nails of his great toes. It is to be noted that his finger nails never suffered in the least. He was in fair health throughout, and looking at his ante-

cedents I cannot help suspecting that his nail-shedding was a minor expression of the dartrous diathesis.

A case clearly corresponding in its local characters with true psoriasis of the nails occurred without general psoriasis of the skin in the following case. We may note in it a tendency to spontaneous recovery in some nails, whilst others were attacked. The conditions were quite different from those of onychitis with thickening. The case was that of a gentleman, æt. 28, from America, whom I saw in November, 1874. At different times all his finger-nails, excepting three on the left hand, had suffered. Those of the right had always been the worst. His toe-nails had never been affected. It seemed to be essentially a chronic inflammation of the nail-bed. The nail became opaque and loose at about its mid-length, and, as he expressed it, would not adhere to the flesh; the loosening occurred first at the middle, and at the edges the nails still adhered. Neither the thickening nor the roughening was great in degree. The nails were never shed entire, but would break up in fragments and so fall away. There was no history of skin disease. He had never noticed that season made any difference, but whenever out of health the nails got much worse. The disease would vary a good deal in severity at different times; and in illustration of the possibility of complete cure he showed me his right thumb, which was now his best nail and had formerly been the worst. It had remained well now for four or five years. From what I have previously said you will gather that I should regard this case, although there was no proof of the existence of the dartrous diathesis, as a condition closely allied to psoriasis. I prescribed arsenic internally, and advised frequent soaking of the finger ends in a tar lotion. He shortly afterwards returned to the United States.

A year later Mr. C— again came over to England and called upon me. I found his nails but slightly better. Precisely

the same fingers were affected. Both thumbs were, as before, quite well. His health was excellent, and there was no tendency to skin disease, with the exception that the palmar surfaces of the fingers were somewhat dry and harsh. It did not affect the palms themselves, and it scarcely affected the thumbs, the nails of which were good. I think there can be little doubt that this sort of palmar pityriasis of the fingers was really in some way associated with the disease of the nails. It is of importance to note in this connexion that the disease of the latter was not a surface one as in eczema, but began in the nail-bed.

Mr. C— was naturally exceedingly anxious to be cured, and pressed me as to whether it might not be well to remove the diseased nails, in the hope that they would grow better. He told me that his right thumb nail, which had once been the worst, and was now quite sound, had got well after having been accidentally almost torn off. I advised that the loose part of the nails should be carefully and completely cut away, so as to allow the tar solution better access to the diseased bed, and that the lotion should be used as water dressing at night. A much larger dose of arsenic was also ordered.

To the description above given may be added, that some of the nails were scarcely thickened, but simply opaque and non-adherent to their bed. There was a space between the nail and its bed into which a slip of paper might be passed for a considerable distance. Under the loose nail the bed was dry and horny, but there was no tendency to epidermic accumulation as is often seen.

I have said that when syphilis affects the nails it is usually in the secondary stage, and that it is usually soon cured.

The following case is of special interest because, although there was reason to believe that the patient was syphilitic, yet the interval was long and no other specific symptoms

were present. It seems not improbable that the onychitis was in connection with dartrous tendencies rather than with syphilis. It exactly resembled that of psoriasis, and it was both symmetrical and general.

Mr. E—, aged 39, was under my care in 1862 for paralysis of the right fifth nerve. I gave a diagnosis of syphilis. He had had a sore four or five years before, but did not recollect any rash.

Eight years later, in March, 1870, Mr. E—, now aged 47, applied to me for dyspepsia and for disease of the nails. Almost all his nails, both of fingers and toes, were affected, and with tolerable symmetry.

The condition was marked by opacity of the distal parts of the nails, which became loose from the subjacent bed. In some there was deposit beneath the end, but in others the nail was scarcely thickened. In none was the root or the proximal part of the nail affected. At this time Mr. E— was in good health, and had no other symptoms of syphilis whatever.

We have seen, then, that the peculiarities presented by nail-disease when met with in psoriasis patients, are, that the nail is attacked at its sides or free edge, and but rarely at its root, that the nail is not much altered on its surface, but becomes opaque, loose, and brittle, and that the quantity of epidermis accumulated under the nail is not usually very great. It may lead to shedding of the nail; and if it does, a new one of perfect structure may be reproduced. It is very definitely influenced for good by arsenic. I have said that it is by no means common to find the nails affected in psoriasis cases; and I may add, that most of the examples of it which I can remember were in patients whose psoriasis was severe and inveterate. I must here leave this special class of cases; and our next subject of inquiry will be as to whether there is reason to believe that another and very peculiar form of chronic disease of the nails may be in

association with an allied constitutional cause. Our interest in this inquiry is increased by the practical consideration that upon our answer will much depend our decision, as to whether arsenic ought to be given to those who suffer from the very disfiguring and annoying malady, which I am about to describe to you.

On a peculiar form of chronic onychitis, with thickening of nail-substance, and without skin disease.

I do not know that any name is in use by which to distinguish the affection with which we have now to deal. It is a chronic, multiple and usually symmetrical onychitis, with *thickening of the nail itself.* Its local conditions differ remarkably from those which I have just described in connexion with true psoriasis of the nails. In the latter the middle and root regions of the nail often remain unaffected and neither thickened nor rough; but in this form the whole nail is always affected, and the thickening and roughness of surface are very great. In psoriasis it would seem probable that the nail-bed is first affected, and the nail itself only secondarily, whilst in this the disease chiefly shows itself in the nail substance. The disease in question is fortunately rare; but as it is long persistent, in some instances perhaps incurable, we not unfrequently see examples of it; oftener, I think, than of true psoriasis. It occurs mostly in young persons, and according to my experience in young ladies. I have never seen it in very young children, but several times at about the age of ten. The drawings which I will now show you will enable you to fully appreciate the description I have given.

We are now in position to repeat the question, whether we have any right to regard the common forms of *chronic onychitis with thickening* as of dartrous origin, or in other words as allies of psoriasis. Let me repeat, that all dartrous

manifestations ought to be symmetrical with a tendency to become general (*i. e.* to affect both hands and feet); they ought to prefer young adults, to be influenced for good by arsenic, to be unattended by ill health, to be chronic and apt to relapse; lastly they ought to be associated, at any rate sometimes, with other manifestations of the diathesis. Now, I cannot say that I remember a single case in which a sufferer from chronic onychitis became afterwards the subject of general psoriasis, but in all other respects this malady conforms to the requirements laid down. It occurs in the young and healthy; it usually shows its constitutional character by attacking the nails of both hands and of the feet as well, and it is generally benefited by arsenic. I have not, it is true, observed that definite effect from arsenical treatment which we often see in psoriasis disease of the skin; but still it has often been very positive, and my invariable habit is, in addition to the local use of tar, to prescribe arsenic in full doses.

I treated with these remedies about ten years ago a well-marked case, the subject of which was a young lady who was sent to me by Mr. Kennedy, of Stratford. The result was a perfect cure, to her great satisfaction. She was very persevering in steeping her fingers in the tar, and whether that or the arsenic had the largest share in the cure I am unable to say.

In this form of chronic onychitis the nail-substance becomes extremely thick in all its parts; it is also somewhat softened, and may even contaiu minute deposits of pus. It is not gryphosis, for there is no lifting up of the nail by deposit under it; it is inflammatory thickening and softening of the nail itself, and due in all probability to disease of its matrix and bed. I do not know that I have even in a single case been able to connect it with the taint of syphilis, either inherited or acquired.

I show you the portrait of one of the hands of a girl,

aged 16, who suffered from this form of disease, the nails of all her fingers and all her toes being affected. You will observe that the nail of the thumb is nearly a quarter of an inch in thickness, extremely rugged on its surface, and blackened by the accumulation of dirt in the cracks. I well remember that, on paring it, fluid points of pus were found in its structure and that it soon began to bleed. A few years later I had under care another case almost exactly similar in a girl, aged 14, who had a very feeble circulation. In this instance the disease was not so far advanced, and on the feet only the great toes were as yet affected, and on both hands the little and ring fingers had escaped. In her the disease evidently began at the root. The symmetry was very accurate, and the thumbs and great toes on all the extremities suffered first and most severely. Her hands and feet were very cold, and I could not help suspecting that this feebleness of circulation might possibly have something to do with the disease of the nails.

LECTURE XII.

ON ICHTHYOSIS.

Demonstration of a severe case with an important family history.—Transmutation in hereditary transmission.—Mr. Wilson's portrait.—Other portraits and cases.—Parts chiefly affected.—General statements.

Gentlemen,—We will begin with a demonstration and proceed afterwards to comments, suggestions, and theories.

You see before you a girl of about thirteen whose skin is in a most deplorable condition, being everywhere covered with large plates of a dirty crust. These plates are nowhere very thick; they do not heap themselves up like the crusts of psoriasis, but remain flat and, in many places, smooth and shining; nor are they clean, white, and silvery, like those of psoriasis, but of a dirty-brownish tint. The disease, as you observe, is literally universal; from the crown of the head to the soles of the feet there is no sound patch of skin. Her eyelids are drawn down by the contraction of the cheeks, and the conjunctiva is exposed. Perhaps the most characteristic conditions are seen on the chest and back. On these parts she is cased as if in mail by greyish-white, dry plates, which are flat and present a curious reticulated, or minutely honey-combed, surface. These plates are polygonal in shape, and many of them an inch across. We can peel them off without causing bleeding, although they adhere closely. After removal the skin is seen to be red and covered with little depressions like the rind of an orange.

There is scarcely any evidence of hypertrophy of papillæ. On the fingers and toes there is much less of scale-crust, and the skin is simply hardened and smooth as if it had been soaked in some drying oil, or like the dried hands of a corpse. The nails are not affected, excepting that they are small and ill developed. The scalp is covered with thick crusts, and the hair is rather thin. At the flexures, bends of elbow, and sides of axillæ, the plates of epidermis are broken up into much smaller ones, but there is no evidence of papillary growth. If the skin be pinched into folds it will remain rigid and elevated for some little time. The skin is thinner and much less supple than natural. The palms of the hands are rough and so are the soles of the feet, but they suffer less than other parts.

The case is, in fact, one of the most severe examples of ichthyosis which I could bring before you. The family history of the child is very interesting, for there is clear evidence that it began during intra-uterine life; also that there has been some agency at work which affected in a similar manner a brother and two sisters; and lastly there is reason to suspect it to be inherited, and that this influence has been at work in several generations. Her father, a very intelligent man from Cornwall, who brought her to my house a few weeks ago, gave me the following history of his family. Himself and his father and his grandfather have all suffered from chronic skin disease lasting through life, but in none amounting to any great degree of severity. The girl's grandfather got cured, or got well, at the age of fifty-six, but was, not long afterwards, "attacked in his chest" and died. Of six brothers and sisters her father is the only one, so far as he knows, who has suffered. His own children have, however, not been so fortunate, for out of five three have suffered. His first-born was a boy, whose skin was at birth very badly affected, and who pined and died at a month old. The next, a girl, also severely affected, died at

nine months. Then followed two who have not suffered, and lastly our patient, the youngest. At birth her skin was covered with plates, and she appeared so feeble that the "doctor said she could not live many hours." However, she survived, her skin remaining much as at first, or rather slowly getting worse until it presented the state you now see. Her father thinks there has not recently been material aggravation of the condition, and he says that the eyelids became displaced in early childhood. The skin disease, although so extensive, has never, beyond some itching, caused her inconvenience, and she has always enjoyed excellent health. Since she has been with us she has always seemed remarkably well and happy. One cannot help being struck by the resemblance in this point of good health to what we notice in psoriasis. I have not yet told you that the disease from which her father suffers, and which he believes to be the same as in his father and grandfather, is not ichthyosis, but common psoriasis. He showed me his patches on elbows and knees, and there is really no feature of resemblance to his daughter's malady. This apparent descent from a widely different disease is a fact which we must keep in mind.

We will next examine some drawings and portraits. Here is a plate from Professor Erasmus Wilson's 'Atlas' representing a similar but much milder state of things. It shows the feet and legs of a little girl, aged five, in whom the entire surface was affected. The legs offer a fair specimen of the whole, and as Mr. Wilson's power of description in these matters is unrivalled, I shall indulge myself by quoting his words at length.

"The lower limbs were highly characteristic of the disease. The skin of the knees was thrown into numerous prominent wrinkles, on which the epidermis was harsh, dry, thick, and discoloured, and in certain parts, where the wrinkles were crossed by transverse clefts, resembled *ichthyosis cornea*. On the sides of the knee, near the ham, a similar structure

existed. From the knee to the ankle the skin was smooth, greyish, silvery, and glossy, *ichthyosis nitida,* and in an oblique light might, from its refractive qualities, bear comparison with mother-of-pearl (ichthyose nacrée, Alibert). It was marked by a reticulated tracery of white lines, *ichthyosis reticulata,* the lines being occasioned by the loosening and rupture of the epidermis at the abnormal grooves of motion of the condensed skin. The spaces between the reticulations, from their regularity of shape and smooth polish, resembled more or less closely the silvery scales of certain fish; and occasionally, when the reticulations were of small size and irregular, and the centre of each scale thicker and more deeply coloured than its border, the idea of the scales of serpents was suggested, *ichthyosis serpentina.* Around the ankle the skin was thrown into prominent wrinkles, and across the instep were three greyish bands, where the epidermis was thicker than elsewhere, and marked by a number of longitudinal clefts into broken ridges running parallel with the foot. On the rest of the back of the foot the skin formed numerous wrinkles corresponding with the movements of the joints, and along its borders were several deep chaps. The soles of the feet exhibited the same peculiarity as the hands, namely, a disproportion in growth between the skin and the bones. This was apparent in the great length of the foot and the shortness of the toes. The epidermis of the under surface of the foot was very thick, yellowish in colour, very much broken, and presented a number of irregular edges; on the borders of this surface were several deep and long chaps."

The portrait described is of especial interest in connexion with our patient, because it is plain that it illustrates exactly the same state, with the difference that in our child on most parts the conditions are vastly exaggerated. Both are, however, examples of the universal form. We shall have to see presently that the degree of severity in parts is not always

in close proportion with the extent. In a large majority the soles and the palms escape, whilst both in Mr. Wilson's case just quoted and in the girl before us they suffer, but I have seen many cases in which the skin of the limbs and body suffered more severely than is shown in the portrait, and yet these parts remained free. Still speaking in a general way, extent and local severity are met with together.

I show you next a photograph for which I was some years ago indebted to the kindness of Mr. Lawson Tait, of Birmingham. In it the condition is nearly universal, but the hands escape. The patient is a lad of 14, Henry Sterndale, whose case has been published by Mr. Tait in the fourth volume of the 'Journal of Cutaneous Medicine.' The following is an epitome of it. The disease affected all parts except the head, neck, and hands, being most abundant on front of abdomen, fronts and outer parts of arms, fronts of legs, inner sides of knees, and over the back. The scales were grey and dry. It began on him at about 5 years of age. Was always worst in winter, while in summer only roughness of skin remained, the grey scales disappearing.

Family history.—His father had the same disease, and in him it also began at about five years of age. His father's brother and two of his own brothers, one older and the other younger than himself, also had the same affection; the context implies that it began in each of these patients also at about five years old, but this is not distinctly stated.

You will notice if you look carefully at the photograph that certain parts are much more severely affected than others. The following statement on this point, which I dictated some years ago at the hospital with several cases before me, is borne out in almost literal accuracy by Mr. Tait's excellent photograph. The parts most severely affected in this disease are the upper and outer parts of arms, often in a broad belt round the lower half of deltoid, the outer sides of thighs, the navel and adjacent parts, the knees, and

a belt of skin extending round the leg just above the ankle. On these parts the dry ichthyotic crusts are usually developed, whilst on the trunk and on the other parts of the limbs there are only dry scales of exfoliating epidermis.

The flexures of the joints are almost always unaffected. The forearms rarely suffer much, and the hands usually escape, so also the face and neck. In the more extensive cases, however, the face and neck may suffer, and in the very worst the palms and the soles also.

Whilst we are dealing with special regions let me show you a coloured drawing made for me some years ago to illustrate the state assumed by the skin on the margins of axillæ. Very often in mild cases these parts are almost the only ones upon which the disease can be identified with certainty, and usually there are here certain peculiarities. My drawing shows the skin of these parts roughened over with a sort of coarse pile, which consists of hypertrophied papillæ surmounted by crusts of adherent scales. This is a common condition in these parts, and is the initial stage of what is known as *ichthyosis hystrix*. Certain degrees of papillary hypertrophy often occur in other parts, but the borders of the armpits are the regions where it is to be specially looked for. When it is excessive the papillæ become thickly coated with a dirty and very firmly adherent crust, which dries and breaks into plates. This state of things in an aggravated form is shown in Hebra's portrait of *ichthyosis hystrix* which I now exhibit. You see that in it the state extends over the whole surface of skin shown excepting the face, and that it involves the backs of the hands, even to the finger-nails. There is no doubt that this papillary form differs somewhat from those in which all the crusts are flat and plate-like, but we often find the two present more or less in the same patient—that is, at different parts of the surface. When, however, several members in the same family suffer, the malady in these, its minor peculiarities, generally keeps very closely to the same

type. In the case of the girl before us you have heard that she and a brother and sister were all born with the skin severely affected, and the father assures me that they were all exactly alike. Another instance of sameness in brothers occurred to me some years ago.

In February, 1874, two brothers, the subjects of the epidermic form of ichthyosis, came under care at the Hospital for Skin Diseases. The two were exactly alike. The sides of the axillæ were the parts most affected, but the skin of the trunk generally and of all the extremities showed in degree the same peculiarities. The epidermis peeled off in large flakes, and the areas of desquamation were mapped out in plates. The skin was almost black near the armpits by the accumulation of dirt on the adherent flakes. There were no papillæ or enlarged sebaceous glands visible anywhere. They were both of fair complexion and florid. The whole surface was affected in both with the exception of the following parts: the face and scalp, the apex of axilla, bend of elbow, fold of groin, popliteal space, palms, and soles. In both the front of the ankle was especially rough. These cases afforded the best example of the most purely epidermic (or pityriasis) form of the disease that I have ever seen. The skin was much less rough and harsh than is usual.

The boys were remarkably alike in appearance and build.

There was a sister older who had a soft skin.

It is believed to be getting worse and to be extending up the neck, but it causes little or no inconvenience.

No relatives are known to have suffered, and they have five brothers and sisters who are all free.

The same fact is again illustrated in the following narrative, which also shows that in some cases the face may be greatly disfigured and the soles and palms remain quite free.

Mrs. M—, of High Street, has three children aged respectively 20, 17, and 13. The two younger ones are girls, and both are the subjects of very severe and almost universal ichthyosis. The eldest, a boy, has a perfectly healthy skin. Both girls were born with dry skins. They have always enjoyed good health. All parts are involved excepting the soles and palms.

In both sisters the skin of the face is contracted so that the eyelids are drawn down. The ears are shrivelled. In all other parts the skin, although dry and scaly, is not contracted. The elder one is well grown, of dark complexion. She states that in summer the skin itches very much, but that she perspires freely.

The mother states that when born both children had the skin "as if covered with white fat." Bran baths were used for this state of things.

It is not known that any tendency to ichthyosis has shown itself in the family before.

I will not trouble you in the present lecture with any further narratives of cases. I have several more yet to bring forward, but they will come better when we have to speak of special points. I have, I think, told enough and demonstrated enough for you to be in a position to feel interest in a general statement of the subject, and with that I shall conclude.

You will have gathered, then, I think, respecting ichthyosis, that it is a morbid state of skin, met with in young persons and often congenital, varying much in severity in different cases, but always attended by roughness, harshness, and desquamation. We have said further that there is often a tendency to overgrowth of papillæ, and to the formation of flat, dirty plates of dried epidermis. You will also have learned that in some of the most severe cases the child dies soon after birth, and further, that it is prone to affect several members in the same family, and sometimes representatives of several generations. We have insisted, also, that it is neither a sign, nor a consequence, nor a cause of ill-health, but must be viewed mainly as a peculiarity of the skin itself. It is customary to speak of it as a developmental disease of the skin, or as a malformation. To some extent these terms are justifiable and appropriate, but I am not sure that you will not get a clearer conception of it if you think of it as a peculiarity of skin involving liability to disease at the very earliest periods. Thus, in many cases it does not wait for the child's birth, but attacks it, perhaps severely, during its intra-uterine existence. Any inflammation occurring at this period before the structures are fully formed must result in malformation, very possibly in comparative suppression of important parts or viscera.

There can be no doubt that the ichthyosis condition does

really involve the practical suppression, in varying degree in different cases, of the glandular organs of the skin. The skin is dry or coated with a solid fat crust, because the sebaceous glands do not act normally, and very often the patients complain also that they seldom or never sweat. But ichthyosis is not merely a disease of the sebaceous and sudoriparous gland systems. It is much more. In it all the structures of the skin—the epidermis, the papillæ, the hair-follicles, the corium, and the subcutaneous fat, are all involved. The corium is often thin, and in some cases liable to shrivel and contract, the papillæ are, in some cases and in some parts, prone to hypertrophy, whilst of the subcutaneous fat I think we may safely say that it is always deficient in quantity. I never saw an ichthyosis patient who was plump, and usually they are very thin. The tendency to contract is especially observed in the face, where the nose becomes small and pinched, the cheeks bright, and the lower eyelids drawn down. Many features might tempt one to believe that the sebaceous system is chiefly at fault, and that it is because the skin is not sufficiently or properly lubricated that the rest of the symptoms follow. But apart from the fact that the dryness, shrivelling, and epidermic incrustations are too great to be easily so explained, we have the conclusive observation that the soles of the feet and palms of the hands—parts where no sebaceous glands exist—are often affected. There is no escape from the belief that ichthyosis is the expression, or the result, of a tendency to morbid change in the skin which implicates, not one part, but all. It does not, however, implicate all parts with the same severity in all cases. In some cases the changes chiefly involve the superficial or epidermic layers, and we have as a result the formation of large, flat, polygonal plates, to which the name *fish-skin* is more especially applicable. These plates are not exclusively epidermic, they consist in part of dried, sebaceous material, and in virtue of its presence they

are susceptible of polish. Now and then they are so smooth and bright as even to resemble remotely mother-of-pearl, and then the term *nacrée*, given by Devergie, becomes applicable. In other cases the sebaceous material preponderates and a thick hard crust results, which consists mostly of it, and then the term *ichthyosis sebacea* or *spuria* is suitable.

Lastly, we have a form in which, in addition to the accumulation of sebaceous and epidermic scales, we have overgrowth of the papillæ on large areas. Upon these papillæ the crusts accumulate and thus little horns or spines result, and the term *hystrix* or porcupine-like is earned. I am anxious that you should clearly understand that all these names are applicable to mere varieties of one and the same disease. The sameness consists in, and is proved by, the general conditions under which it is met with. Invariably beginning in early childhood, and usually present at birth, independent of all known causes of ill-health, prone to be general, liable to affect more than one in the family, affecting with tolerable uniformity certain definite regions —such are the clinical features which unite all the varieties of ichthyosis under one name. They far outweigh the little differences observed in different cases as to the anatomico-pathological products. We can afford to let the papillæ take a larger share in some cases than in others, or the sebaceous system to preponderate in some, without disturbing the conclusion that the basis malady is the same. A further very strong argument for identity is found in the fact that very often these different conditions are, as I have already said, met with on the same skin at different parts.

When we next assemble I shall purpose to discuss the following questions:

Within what limits of variation may we suitably recognise ichthyosis?

What is its degree of frequency?

Is it usually present at birth?

Is it often hereditary, and does it often occur to several members of the same family?

Under what conditions does it become aggravated, and under what ameliorated?

What are the chief inconveniences which it entails?

What are its relations to other forms of skin disease?

LECTURE XIII.

ON ICHTHYOSIS (SECOND LECTURE).

Discussion as to names.—Narratives of cases.—Its occurrence at birth occasionally a cause of death.—Prevalence in families.—Transmutation in transmission.

GENTLEMEN,—I have felt much difficulty in deciding whether it is better to retain the old name *Ichthyosis* or to use that of *Xeroderma*, as proposed by Mr. Wilson. For many years I have, indeed, been in the habit of employing the latter because it seemed more easily to comprise the very numerous cases in which the changes are so slight that nothing in the least approaching to "fish-skin" results. But on reflecting that *Ichthyosis* is in possession, that it is the older term, that it alone is in use on the Continent, I think, on the whole, that it would be better to go back to it. If we do so, however, it must be clearly understood that we claim the right to use it far more widely than formerly. The condition known as *Xeroderma*—or dry, harsh skin—is, undoubtedly, a minor form of the same malady which produces the *ichthyosis nacrée* and the *ichthyosis hystrix*, and whatever name we use must be applied to all. Yet most persons feel modestly unwilling to apply a high-sounding classical name, which they have been taught to associate with an Atlas-portrait of a most peculiar and severe malady, to one which is almost of everyday occurrence and which at first sight has scarcely any similarity to it. We must take courage, however, and dare to be true to our insight into real clinical character. In my younger days I was taught to call the milder cases *congenital pityriasis*, and to wait for the rare examples of severe

disease before venturing upon that of *Ichthyosis*. Such custom is, however, as little reasonable as if we were to insist on calling nothing "Ale" but the best Edinburgh, and should invent a new name for the home-brewed article. In each instance we have all conceivable gradations. Possibly for the minor cases to which I have just alluded the term *Ichthyosis minima* might be very suitable.

If you ask me within what limits the ichthyosis skin may vary as to severity, I reply between one which involves such extreme disorganization that the infant cannot live, or entails, if life be prolonged, a state like that which you saw last week in the girl M—, and a condition of mere harshness and dryness of which its possessor scarcely becomes conscious excepting when it is aggravated by exposure to cold and wind.

This brings me to answer the second question which we proposed at the conclusion of the last lecture, as to the frequency of the disease. The severe forms are rare, fortunately very rare, the slight forms are tolerably common. You will meet with the latter not unfrequently in those who never ask for treatment, and in whom, excepting under peculiar circumstances, no inconvenience is caused. As it usually affects in mild cases only those parts of the surface which we habitually cover, this state exists in many without revealing itself to their friends. If the skin is abnormally harsh and dry, and if this state has been observed from infancy, you have an example of the "minima" form of ichthyosis, and such are, I repeat, by no means rare.

Our third question concerns the presence of ichthyotic conditions at birth or their development subsequently. If we could trust the accuracy of observation of parents and nurses, we should believe that only in a minority of cases is this peculiarity of skin present at birth. There can, I think, be no doubt that it becomes in almost all much aggravated after birth and during the first few years of life. In many

instances we are assured that it did not begin till the child was three or four. I suspect, however, that in almost all there was present at birth, if it were carefully looked for, some peculiarity, and that in most cases the malady really begins during intra-uterine life.

The following case illustrates this point, as, indeed, do many others :

Elizabeth Tilley, æt. 6, was at the Hospital for Skin Diseases in 1865. She had the milder form of ichthyosis. She was the only one out of three that had it, and her mother knew of no family history. Her skin was observed to be simply harsh when she was born, but the dryness, &c., increased when she was two or three years old, and she now presents a very definite example of the disease.

In Hebra's Atlas there is a portrait of an infant whose skin is everywhere covered with large peeling flakes of discoloured epidermis. I show you the portrait (which is named "ichthyosis congenita"), and we may easily believe that it does indeed represent the state in which our patient M—, and her infant brother and sister, who died, were at birth. I had never myself had an opportunity of seeing a case at this stage until a few weeks ago, and it is, I suspect, very rare for any degree of severity approaching it to be attained. More usually all that is noticed at birth is that the skin is dry and rough. In one instance, which I have already mentioned, the mother told me that three of her children, who had subsequently become ichthyotic, were at birth encased in a greasy material which it was difficult to remove. Whether by this statement we are to understand more than that the *vernix caseosa* was unusually abundant I cannot say. Probably it was altered in quality as well as excessive in quantity.

I have said that I have seen but one instance of ichthyosis in a new-born infant. For this opportunity I was indebted to the courtesy of my colleague Dr. Stephen Mackenzie. The infant was a first-born child of a woman residing in a

street at the back of the hospital. It was not known that any form of skin disease had ever shown itself in the family of either parent. The infant when born "was covered thickly with a white layer of greasy substance." The nurse who washed it, an experienced woman, said "she had never seen a baby in such a state." We may suppose, therefore, that it was much more than the ordinary accumulation of vernix. This was with some trouble removed and then the skin was too red. The next day it was dry and harsh, and in a few days more dried plates of epidermis had accumulated everywhere. The child wasted and seemed likely to die. I saw it when it was seven weeks old. It was then puny, withered, and with an old-man face, but there were no indications of congenital syphilis. The skin was dry, leathery, rather tight, excoriated in parts, and in others showing large peeling flakes of epidermis. The disease was universal with the exception that the face was less severely affected. The scalp was covered with a thick dirty crust of greasy matter, which was beginning to loosen and fall off in some parts. The state of the skin on the body and limbs had already been somewhat altered and ameliorated by the constant application of oils. Should the child survive I have no doubt it will afford a good example of severe ichthyosis.

Some caution is needed in answering the question, is ichthyosis often hereditary? In the case of the patient whom you have seen we might easily have been misled into a statement that three generations had suffered, but when I came to inspect her father's skin-disease I found that it was common psoriasis and not ichthyosis. It is very seldom that we have the opportunity of correcting our patients' statements in this way, and a certain degree of fallacy, perhaps not inconsiderable, must rest over histories which extend back through several generations. There can be no doubt that ichthyosis cases usually occur in families in which there is a history of liability to some kind of skin

disease, the only question is whether that skin disease is usually true ichthyosis. In several instances, as in the case before us, I have found good reason to believe that it was not ichthyosis, but rather psoriasis. Thus, the mother of two ichthyotic daughters under treatment in 1867 told me that she herself before her marriage was liable to large scaly patches on her legs, for which she was several years under treatment, and of which at length she got well. This was probably psoriasis. In some cases, however, the expression "dry skin" and the statement that it had really existed from infancy make it almost certain that the predecessor's malady was true ichthyosis.

The question as to its occurrence in several members of the same family may be answered affirmatively with assurance. There are few specialised forms of disease, of any kind, concerning which you may more confidently predict that, if the family be numerous, more than a single example of it will be found. In our first case three out of five had suffered. In Mr. Lawson Tait's case there were three in one family affected. In Mrs. M—'s family (see p. 165) two out of three suffered severely, and in the case of the two brothers (p. 165) two out of seven. A girl named Wilton, who was under care in 1872 for a slight form which had been present from early infancy, said that one sister had it, whilst four other sisters and one brother all had "beautiful skins." In the case of a boy named John Cordell whom I saw in 1872 the family history was very interesting. He came from Sittingbourne, in Kent, and the statement was that his father and his father's mother and grandmother had all suffered from "dry skin." This boy had three sisters and two brothers all affected like himself, whilst one only, a girl and the eldest, had wholly escaped. A child named Judd, aged six, was brought in May, 1872, on account of ichthyosis with lichen-eczema which had been present since six months of age. Her father and paternal grandfather

were both stated to have had dry skin; some of her brothers, now dead, had also suffered. I may just note in passing that in this child the axillæ were specially affected, and "rows of close-set papillæ" are described, "from many of which minute, almost filamentous horns projected." In another case, a lad named Sturgeon had lost a brother who, like himself, was the subject of "dry skin."

The chief conditions which make ichthyosis worse are cold and wind. Its subjects are always worse in winter weather, and not unfrequently in exposed parts the disease is aggravated to such an extent that eczema or fissures may occur. The complication with eczema is by no means an uncommon one. There is often great difficulty as to perspiration, and in some cases this function is almost in abeyance. In others sweating occurs only in hot weather, and when it does the skin is always much relieved. The following illustrates this statement. A girl, aged 5, Fanny Burslem, was brought to the hospital on account of general harshness of skin, which was aggravated in certain positions, especially on the borders of the armpits. The face was affected, but the hands were free. It had been observed in early infancy. Her mother stated that she had six children, three of whom had clear skins, one a boy suffered from ichthyosis, and another was attending the hospital for eczema. Both the subjects of ichthyosis were reported to have great difficulty as to perspiration, or rather that they never did perspire. The mother said that when running about on a hot day their skins would crack, but never became moist.

It is to be noted here that ichthyotic patients are by no means exempt from the occurrence of eczema, and that their skins may also become pruriginous. It is, I think, only in the slighter forms that anything like well-developed eczema occurs, but in this condition it is not unfrequent. During many years I had under occasional observation a gentleman, aged about 40, who was the subject of congenital xeroderma,

and who was liable to slight attacks of diffuse eczema upon it. His skin also itched very much, his prurigo attacks seeming to be connected with derangements of the liver.

In 1877 a little boy was brought to the Skin Hospital who suffered very severely from eczema on the scalp, face, and extremities. His skin was universally dry, and on the trunk, where it was not eczematous, it was in a characteristic condition of mild ichthyosis. He was a florid, well-grown boy, æt. 4. His mother would not allow that his condition was congenital, but said that it had began at three months old, "after vaccination."

In 1869 I had under care a healthy adult man, who was the subject of general ichthyosis, avoiding as usual the feet, hands, and face. He was not aware that his parents had any skin disease, but two brothers and sister have it; two others were free. He stated that it was much better in hot than cold weather. He had never been treated, and did not consider it to have been of any material inconvenience to him. He was accustomed to perspire freely.

I will now briefly mention a few facts which may help in the *prognosis* of ichthyosis, inasmuch as they concern those who had suffered from infancy and had attained adult life. As a rule, I think that after puberty there is generally some slight tendency to ameliorate observed. But we will look at the facts.

A man named Moore came for advice for a different complaint, but the backs of his hands attracted my attention, and I asked him to let me examine his skin. The trunk and limbs were extensively affected. He did not complain of any inconvenience from it. In the summer it was always much better. Contrary to what is usual, he reported that he was accustomed to perspire very freely.

A woman named Susannah Howard, æt. 33, came to the hospital in 1871 on account of "dry skin." She was the subject of ichthyosis in a moderate degree, and had got neither better nor worse as she advanced in life. This statement, at any rate, applied to her extremities, but she asserted that on her abdomen the disease had got much better. Perspiration had always been very difficult. In the palms of her hands the skin was very thick and marked with transverse white lines. A brother also had "dry skin."

A man, æt. 71, named Honniball, who had been the subject of dry

skin ever since his birth, came under my observation in October, 1872. He stated that a sister had also suffered from the same state —"like fish scales"—from birth till her death, at the age of forty-eight, in childbirth. He did not know of any other family history of tendency to any form of skin disease. In himself the condition had been present from birth and the skin was now as dry as ever it had been. The state of his skin was characteristic, and the usual positions escaped. He was a very healthy old man, the father of eight children and grandfather to thirty-two, some of whom suffered. He stated that he could perspire easily, and that in summer he sweated a great deal, and his skin got quite well, soft, and smooth. He came under treatment, not on account of his ichthyosis, for he was quite reconciled to that, but for eczema of his legs.

You will see that this case affords us an important illustration of the persistence of the malady, without aggravation and without cure, through a long life. It also shows in a definite manner the tendency of the disease to affect several members of a family, although, as far as known, not inherited, and with but slight proof of transmission.

I have been detailed and possibly tedious in the production of facts respecting this curious malady, but I trust, gentlemen, that you feel that your patience is rewarded by a tolerably clear insight into its nature. Can we doubt that the various forms of ichthyosis are really due to intra-uterine disease, which produces defects in the organization of the integument? We have seen that in all the more severe cases the conditions attract attention at the time of birth, sometimes, indeed, being very conspicuous, whilst in the slighter cases the disease always dates from a very early period. We have seen, further, that excepting to a slight extent the disease does not become worse with age, but remains through life much as at first. I put aside for a time the well-proved influence of season, and speak of the disease from year to year. Clearly it is connected with some congenital peculiarity in the organization of the skin. It is not associated with ill-health, and if its subject survive infancy does not seem to shorten life.

Such being the facts, the hypothesis that it is really a result of an intra-uterine expression of the dartrous or psoriasis diathesis seems highly probable. We have seen that it sometimes occurs in the children of those who have suffered from psoriasis under circumstances suggesting that it is an intensified form of the latter, beginning at a very early period of existence and deriving peculiarities accordingly. We may add to this that the parts which suffer more severely than others are almost always precisely those which suffer most in psoriasis, and that those which escape are also those which psoriasis avoids. It undoubtedly differs from the latter in that it rarely shows much tendency to arrange itself in patches, but is diffuse and universal. The circumstance that it cannot be cured by arsenic, may be easily explained by remembering the fact that it is due, in the end, to structural and permanent alterations in the skin. It really seems to me that in this suggestion of relationship to the dartrous maladies, we get a most interesting and important clue to the real nature of ichthyosis. In the future we must investigate family histories more closely, and I shall be disappointed if we do not find that in many instances there is proof of transmutation in hereditary transmission.

You will not accuse me of wishing to imply that ichthyosis is nothing but *congenital psoriasis diffusa;* undoubtedly the two are very considerably different. In psoriasis, for instance, we have no such fact as that of the affection of several members in the same family which meets us constantly in ichthyosis. It is rare to find more than one child in a family the subject of psoriasis. If we accept ichthyosis as a transmuted form of psoriasis, we must not forget to allow for the introduction of some definite contributing cause which may explain this exaggeration of the tendency, and make several children in a family suffer, and suffer also during intra-uterine life. This new causal element may possibly have to do with the health and tendencies of the other parent. I am not

sure that facts might not be produced favouring the belief that, whenever a tendency to transmission rises to such a height that it shows a proneness to attack the fœtus, then we see it showing itself occasionally in more than one member of the family.

I will take you no further in the field of speculation. Let us note that the subjects of ichthyosis are best in hot weather and in hot climates, and that their comfort is greatly consulted by removing all crusts and freely oiling the surface. Neat's foot oil, olive oil, and glycerine, may in turn be tried, and the use of some lubricating material is especially necessary in cold weather. Arsenic may be tried, but we have no proof of its efficacy.

The girl whom I brought before you in a former lecture, and whose portrait I now again exhibit, remained in the hospital for three months. Glycerine and glycerine lotions were liberally used, and the large scales were carefully peeled off. By these measures we were able to discharge her with her cheeks clean, soft, and ruddy. They still, however, looked a little too bright and polished, and I much fear that if less attention were given to them the skin would soon relapse. The improvement on all parts was, however, very great indeed.

LECTURE XIV.

WHAT ARE SUDAMINA?

GENTLEMEN,—I believe that most observers recognise as "*sudamina*" little pearly or clear vesicles, which are seen chiefly on the skin of the chest during states of profuse sweating in bed. These are of tolerably uniform size, and are seldom attended by congestion. I do not know that any close observations have been made as to their mode of disappearance; whether their contents are absorbed without rupture of the epidermis, or whether they are usually broken.* That their contained fluid is not sticky like that of eczema is, I believe, generally admitted. The commonly received theory of their cause is, that in some way they result from the soaking of the skin in hot perspiration. Mr. Wilson says of miliaria, "They are the consequences of a weak and exhausted state of the skin induced by heat and perspiration." It is, perhaps, probable that many have suspected that the orifices of the ducts of some of the sweat-glands are obstructed, and that the vesicles in question result from the accumulation of sweat in the distended ducts. The circumstances under which, for the most part, they occur would favour this latter view, for their subjects are usually those who have been long kept in bed, and their skins free from that friction of clothes, washing, &c., which are likely to keep the gland orifices free. Perhaps also it will be found true that sudamina are more common in those who have not

* Mr. Wilson writes, "the vesicles sometimes break, but more usually collapse, from absorption of their contained serum."

for long been exposed to the exciting causes of profuse perspiration, and in whom it occurs as a novelty during disease and when confined to bed. Or another theory may, perhaps, take a share in the explanation,—that some of the sudoriparous glands do not usually act in physiological excitement of that function which, under the abnormal conditions of disease, assume for the first time secretory activity, and then find their apparatus imperfect.

Prof. Niemeyer distinctly adapts the theory that sudamina arises in connection with the sudoriparous glands, although he does not appear to consider that the duct itself is distended and constitutes the vesicle. He writes, "When the secretion of the sudoriparous glands cannot escape, owing to obstruction of the gland-ducts, or because the latter are incapable of transmitting all the secretion formed, it emerges around the sweat-duct under the epidermis, and lifting the latter, forms small clear vesicles containing an acid liquid, which are called sudamina." He thus distinctly recognises that the fluid is sweat, and at another place he distinguishes it from that of eczema by remarking that the latter is alkaline. It is difficult to see why we should be required to suppose that the sweat is in any other place than in the occluded duct itself. Were it effused "around" it then there would be an umbilicus at the orifice, and besides, we should not observe the limitation of size which is so constant. Nor can we accept, I think, the statement of this author, that what is known as *miliaria rubra* is distinct from the commoner form, and "has nothing to do with retention of perspiration, but consists in an inflammation and exudation induced by excessive diaphoresis; and for this reason is to be placed with eczematous affections. I think we may safely believe that miliaria (or sudamina, for the terms are equivalent) are small drops of sweat collected in the obstructed ducts, and that the only difference between the white and the red forms is that in the one the adjacent tissues are not congested, and in the other

they are so. I will relate to you directly a case bearing definitely upon this point That sudamina with congestion come very close to eczema I can readily admit, for eczematous inflammation is constantly evoked by local irritation, and profuse perspiration is one of its not infrequent causes. But we must not on this account compare the miliary vesicle with that of eczema. Though probably they are often mixed and though the one often precedes the other, they are probably totally distinct. The eczema vesicle is formed beneath the epidermis, without, so far as we know, any reference to special anatomical structure ; it contains alkaline sticky fluid, and after it is ruptured the abraded surface continues to secrete the same. The sudamina vesicle, on the contrary, contains sweat, which is acid ; it is developed in the gland-duct, its fluid is not in the least sticky, and it is never secreted except in connection with the act of sweating. If, then, we will admit, as just said, that sudamina and sweating often precede and excite eczema, we need trouble ourselves no further in this matter. A good lens will, I think, always enable an observer to say with confidence whether certain vesicles are sudamina or eczema. The former is perfectly globular, tense, full, and pearly looking ; each one in shape exactly corresponds with its fellows. A large majority are all of the same size, although, usually, a few may be found larger than the rest, and they are rarely or never confluent, but are scattered irregularly over the surface affected. Many of them will be seen to be quite unattended by redness, the skin being perfectly white at their bases. In eczema, on the contrary, there are no vesicles which are not attended by congestion at their bases ; they are unequal in size and irregular in form, and but few of them present the smooth, rounded, beehive top of sudamina. In all probability *miliaria rubra* has been many a time diagnosed as eczema, for a well-characterised vesicular eczema is not a very common thing. Eczema is, in nineteen cases out of twenty, a weeping state of skin that is unattended

vesicles. Unless, however, the two conditions are actually mixed a decision by aid of the test paper ought always to be easy. The one is acid, the other alkaline.

Our forefathers in physic were accustomed to speak of a *miliaria clinica*, using the latter word in its literal sense, and signifying their belief that one form of the eruption was especially due to sweating in bed. Some modern authorities would appear to believe that all miliaria is clinical, and that whatever is like sudamina on the skins of those who are able to be about is eczema. This, however, is certainly a mistake, and unusually profuse sweating may produce sudamina as well out of bed as in it. All that is needful is that the sweating should have been unusually profuse, so that, according to my theory, glands are excited to take a share in it which have long been in practical abeyance, or possibly have never before been called upon. I do not think there is any improbability in the supposition that in many skins the glandular structures are incompletely developed. Although such conditions have not, as far as I am aware, been demonstrated as yet by the microscope, yet the facts of pathology render their existence almost certain. In man the hair system of the skin, and with it the sebaceous system, has evidently undergone changes which tend to its suppression over large areas. It is quite possible that in many persons the sudoriparous system is also comparatively suppressed. Undoubtedly many go through life without having ever experienced anything beyond a very mild degree of what is possible in the way of physiological diaphoresis. Such persons would be very likely if forced, during illness, to sweat inordinately to find that many of their pores, to use a popular phrase, will not open, and would at once become the subjects of sudamina.

Of *sudamina clinica* we see, perhaps, much less than the physicians of a former day, when it was the custom to keep patients in hot rooms heavily clothed, and to use most vigorous measures for the excitement of diaphoresis. Then

it was so common to see the skin covered with sudamina, that the latter were even allowed rank as important symptoms of fever, and the cases in which they occurred were called "miliary fevers." We know now that when not due simply to the treatment they were indications of profuse sweating as a part of the febrile paroxysm, and that they possessed no further claim to definite signification.

I must now cite a case in proof that sudamina are not always "clinical" (due to bed-sweating), and in illustration also of the resemblance to eczema which *miliaria rubra* presents.

A pale-faced, flabby man, who was accustomed to work in a hot room and who, being liable to lumbago, always clothed himself in flannel, applied at the Skin Hospital during the very hot weather of September, 1875. He came on account of some blisters and peeling patches on the soles of his feet and about his toes. I noticed that the epidermis of his feet was soddened, and he at once admitted that he had been greatly annoyed by too profuse sweating. He was wearing a flannel vest which was soaked with moisture. Just above his ankles were some red patches on which were little groups of vesicles arranged irregularly in short lines, all of them perfectly discrete. These were so minute that it needed the use of a needle to prove that they did contain fluid, and this done they were triumphantly pronounced to be "eczema." I made him strip, and carefully examined his shoulders and chest. On the latter part were many little, clear, round, scattered vesicles, which every one admitted to be typical sudamina. But amongst these were many patches of skin of a bright red tint from congestion, and as to these again "eczema" was freely suggested. We employed magnifying power, and then found that the vesicles on a red base were exactly like others which were on skin as white as paper. All the difference was in the presence of erythema around some and fts entire absence around others. Nowhere was the epidermis abraded, and nowhere was there any weeping discharge. The vesicles, which were very numerous, were all rounded—"beehive topped," and were all just alike, excepting some little difference as to size and as to opacity of contents. The new ones and smaller ones were clear as water, but many of the largest and older ones were slightly opalescent; they were not in the least yellow as if purulent, being slightly white as if containing a very little admixture of milk. Some of them were transparent in their upper halves and opaque in their lowest

parts, as if, as happens in hypopyon, the corpuscular matters had gravitated. None of these vesicles had any depression in the centre, none were in connection with hairs, and none presented the slightest irregularity of outline. Many of those which were recent were so absolutely pale, both as regards themselves and the surrounding skin, that their presence was only discovered by the aid of the lens.

I ask your attention to this last fact because a distinguished author has suggested as a distinction between *alba* and *rubra* that in the latter the red base of the vesicle is seen though its pellucid contents, whilst in the former the opacity of the contents conceals the congested derma beneath. This statement is, I think, founded on imaginary facts, and is, I am sure, not in accord with the original use of the words in question.

It will be convenient if, in concluding this lecture, I say a few words respecting the other maladies in which the sweat-glands take part. As compared with those of the sebaceous glands they are curiously few. The term hyperidrosis is applied to states in which sweating is profuse and too easily excited. It is usually general, but in certain forms of diseases of the nervous system it may be local only. When general it may be usually held to imply want of tone, and those who suffer from it generally complain also of lassitude and want of vigour, and stand in need of rest, cold bathing, and tonics. The influence of the nervous system in causing activity of the sudoriparous glands is often witnessed. The cold sweat of fainting and of fear is familiar to most. A few days ago a gentleman of middle age, much out of tone, and under the influence of the iodide of potassium, sat down in my room to have a bit of diseased bone removed from his nose. In a minute or two he exclaimed "I am wet all over;" "How wet I am;" and I found that he really was, a most profuse cool sweat having occurred as a consequence of "funk" acting upon a feeble state of nervous system. Five minutes later he became faint, but when the sweating occurred he was not in the least so.

A man who was in the hospital in 1877 on account of severe injury to the head, attended by prolonged insensibility and followed by pyæmia, offered us a good opportunity for studying sudamina. It was in January and cool weather, but probably in consequence of abortive rigors in connection with pyæmia his trunk perspired a good deal. One day in February, whilst inspecting his chest, I found that he was covered over with sudamina. The little vesicles were beautifully pellucid and occurred in great numbers. They were larger and far more numerous on the right side than on the left. It was his right side that was paralysed. The vesicles were very abundant on the sides of the axillæ, but did not occur so freely in their apices, at which parts the skin was wet with perspiration. It was not wet at other parts. There were no sudamina on the extremities. We tested the fluid and found it strongly acid.

On carefully examining the vesicles with a lens we could not detect any depression or mark in their centres. They were quite round. It seems highly probable that the nervous system took a share in the production of this eruption.

In this case the eruption was remarkably transitory. Two days later it was wholly gone, and only a little desquamation of the epidermis remained. A day or two later still it appeared again, but in far less quantity than at first Although our patient had no shivering that was ever noticed, yet I have no doubt that he went through something of the nature of a rigor. His temperature was occasionally high, and as the post-mortem showed extensive pyæmia changes it is in a high degree probable that he had rigors. On this supposition the sudamina were part of the sweating stage. It might be that his state of partial insensibility had something to do with the absence of the cold or shivering stage. I think, however, that I have often before seen cases of pyæmia in which rigors without shivering occurred. There are

cases in which patients are said to have "gone through pyæmia without rigors," whereas in most such I suspect if the symptoms were carefully watched there would be, in change of temperature, &c., good evidence that paroxysms —like rigors in everything excepting in the absence of shivering—did really occur. You will see that the skin brings here an important symptom to our aid, for the sudamina draw attention to the profuse perspiration and its recurrent character, both of which might easily otherwise be overlooked. In the case I am referring to large abscesses were found in the liver, such as must almost necessarily have been productive of some condition analogous to rigor.

Let me briefly resume the points which I have endeavoured to establish :

1st. That sudamina or miliaria consist anatomically of imperforate sweat-ducts distended by their secretion.

2nd. That sudamina occur to those in whom, during illness or otherwise, sweating far more profuse than usual is excited.

3rd. That it is not improbable that in many persons large numbers of the sudoriparous ducts are congenitally imperforate.

4th. That the parts which are the most prone to sweat on slight occasions—apices of axillæ, &c.—are those the least prone to sudamina.

5th. That between the red and the pale forms of sudamina there is no difference, excepting as to surrounding congestion.

6th. That when sudamina occurs in repeated crops they are indicative of rigors, although shivering may not have been noticed.

LECTURE XV.

ON THE USE OF THE TERM DARTROUS.

GENTLEMEN,—Our lecturer on botany, Mr. Baker, has no doubt explained to you in his course how definite are the distinctions by which plants are classified, and how easy it is by precise characters, which never vary, or vary but very little, to assign each to its proper genus, species, and name. No matter whether you have to deal with a dwarfed specimen from a dry hill side or a meadow-growth twenty times its size, the botanist will be able to convince you by unvarying characters that the plant is really the same. Mr. Baker will also have told you that although hybridisation is possible, and varieties may thus be produced, yet that it takes place only under certain limits so narrow that the field collector can almost afford to ignore its influence. All this is very different in the case of the various species of skin disease. Here we find mixed forms the rule and pure specimens the exception, and of the latter scarcely any two are exactly alike.

If the comparison were not too homely we might say that skin diseases differ as puddings differ; no two have exactly the same ingredients, and hence although a rough classification is practicable and easy we cannot make it precise. We all know what a real plum pudding is, but there are productions more or less cognate which it would baffle one's ingenuity to name excepting by a long descriptive sentence. Or perhaps the comparison to varieties of wine is yet more appropriate, and I take it with the more pleasure, because it

opens at least as wide a subject as that with which we are now concerned. Whoever has mastered the diagnosis and classification of wines may certainly hope with much less expenditure of attention and brain-force to accomplish the same for skin-diseases.

You will find that wines are classified and named according to the country which produces them, the kind of vine from which they come, the special vineyard, and the mode of manufacture. When, however, these conditions appear to be the same, a multitude of minor differences may still occur. The country may have been the same, but the soil, the aspect, the season may have varied, and resulting differences will be apparent in the product. It is just so in skin diseases: whilst true hybrids are rare, all sorts of variety from admixture and variation of cause are common. You will find in wines that great apparent distinctions are often not real ones, and that beverages which look very different, as in colour, for instance, are often closely allied. It is the same in skin diseases. Lastly, as in wines which count as the same there are yet delicate shades of difference in dryness, sweetness, bouquet and the like, which only the connoisseur can detect, so likewise in skin diseases it is practicable to go on separating for ever, and the more deeply we study them the more able do we become to subdivide them into smaller and smaller groups. There can be no doubt that future and more scrupulous observation, whilst it will throw into disuse many of the terms which have been hastily assigned to characters which are transitory or uncertain, will introduce many others founded upon real differences and resemblances which have as yet escaped our notice.

For the present we must be content to use as far as possible the old names and in their old meaning (may I add also in their old spelling), making changes only when absolutely necessitated by the advance of science. "The name of a thing is that which it is known by" should be our rule,

and whilst we labour to simplify names and to give definitions to them, we should change as little as possible.

When a Miss Smith and a Mr. Brown marry, it is clear that their offspring will represent the two families, and it would be a matter of convenience that the new generation should bear a name indicating correctly this fact. Any person cognisant with the peculiarities of the Smiths and the Browns would then have a clue to those of a Smith-Brown or a Brown-Smith. There are many obvious reasons against attempting any such method of nomenclature in social life, and we are usually content that our family names should denote parentage only on the male side. There is, however, no objection whatever to our availing ourselves of this method of designating the mixed forms of skin disease. Such a plan will simplify the subject very much. If we get in the first instance clear and definite meanings attached to the few root words which we employ, the compound words will almost explain themselves.

You will understand, however, that although I explain my object by comparison of the mixed skin diseases with the offspring of a marriage, yet there is considerable difference in the two cases. In skin diseases it is the coexistence of two processes of disease—the simultaneous presence in activity of the causes to which different types of eruption are usually due—which gives us the mixed results. But there is no reason why the causes of each should be mixed in equal degree: one may preponderate almost to the exclusion of the other; or one may have had possession long before the other was introduced. Or it is possible that more than two agencies may be in activity together, and the disease before us may be a mixed result of several. Thus the hybridisation, so to speak, is not simple but often very complicated. I have, however, on former occasions, I hope, said enough to convince you of the real existence of mixed forms of skin disease, and of the absurdity of insisting that

all ought to be made to arrange themselves under the names intended only for well-characterised types of each.

A very well marked natural group of skin dieases is that which includes eruptions which have a marked tendency to relapse or to recur. A person in good health, without warning and without known cause, has an eruption show itself on various parts. The spots are usually arranged symmetrically on the limbs of the two sides, or on corresponding parts of the trunk. By this symmetry, often very accurate, you see at once that the disease is of constitutional origin. The eruption usually comes out rather quickly and in a few weeks has reached a considerable extent. Still the patient often suffers no detriment to his general health, excepting such as may be attributed to the direct irritation, &c., of the rash, or to the amount of discharge produced by it.

These eruptions show but little tendency to observe stages or to undergo spontaneous cure. They persist for long and indefinite periods, liable, however, to occasional aggravation. Now and then they go away entirely, but if they do so the patient is certain sooner or later to suffer again. If cured by internal treatment (and most of them are easily influenced) the tendency to relapse or recur after longer or shorter periods is invariably shown. There is no such thing as a complete and permanent cure. The terms constitutional or relapsing diseases are therefore very applicable. We have as yet not attained to a knowledge of their precise cause. They are well-marked disorders, and have been the subject of more or less accurate description by every one who has written on skin diseases. They appear to be nearly equally common in the two sexes, in all classes of society, and in all countries in which as yet accurate statistics have been collected. Season does not always appear to exercise much influence on the tendency to relapse, but certain other influences, as for instance lactation in women,

do so most positively. They do not attack enfeebled persons, nor those who are the subjects of inherited syphilis or scrofula, or any other recognised diathesis. On the contrary, their subjects are usually persons who have previously enjoyed good health, are of vigorous make, and come of healthy families. The tendency to them sometimes runs in families, but rarely to any great extent. The first attack of a relapsing skin disease often occurs in childhood (but scarcely ever in infancy), and very frequently during the adolescent period or that of early adult life, rarely in the latter half, and scarcely ever in old age.

Although I have asserted that there is as a rule nothing tangible to be made out as to ill health either before or during the outbreak of a relapsing skin disease, yet we must of course admit that there exists some constitutional change. In certain cases the patients tell us that they did not feel quite well for some time before the eruption showed itself; in others they began to fail somewhat in health as the eruption came out, and in others the patient considers that his health is always at its best when the skin disease is out. These statements are, however, often open to much doubt if carefully sifted; but in some cases they are beyond all question.

Recognising, however, that there must be some constitutional peculiarity, although so faintly declared, it becomes a matter of convenience that we should have a name for it. Now, the French have for long used the term *dartre* (dartrous diathesis), in a sense which makes it very nearly coincident with the group of diseases I am describing, and as we have no better, and as it has the advantage of being in itself meaningless, I do not think we can do better than adopt it. Whenever, therefore, I speak of the dartrous diathesis you will understand that I intend to designate that peculiar and as yet unknown condition of health which is in the background in all cases of relapsing constitutional skin diseases.