CLINICAL LECTURE

ON

VARICELLA-PRURIGO.

By JONATHAN HUTCHINSON, F.R.C.S.,

Senior Surgeon to the London Hospital, and to the Blackfriars Hospital for Skin-Diseases.*

I MUST not weary you by the citation of individual cases; but I have yet one or two others to which I wish 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, and 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, 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 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 the hair-follicles and their adjuncts, cannot, of course, occur in parts where no such structures exist.

TABLE I.—Cases of Prurigo following Varicella.

Name.	Age at admission.	Duration at admission.	Remarks.
1. Alfred Vernon (Case viii.)	2 years	15 mos.	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 mos.	Began as modified small-pox. Under care 8 or 9 months.
3. Anne Cridland..... (Case xi.)	3½ yrs.	15 mos.	Liable to the eruption since varicella at the age of 2 years.
4. Frederick Manger .. (Case ix.)	1¼ yrs.	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 i.)	18 mos.	4 months	Began all over the body at once, and the doctor considered it to be small-pox. Attended 5 months.
6. Sarah Tosland (Case iv.)	19 mos.	14 mos.	Began gradually in summer. The mother thought it chicken-pox. Attended 2 months.
7. Walter F. Seymour.. (Case vi.)	12 mos.	No note	Was taken in the first instance for chicken-pox. Attended 2 months.
8. David Forster	3 years	2¼ yrs.	The medical attendant called it "glass-pox" when it began at the age of 8 mos. Attended 11 mos.
9. Georgiana Langton..	2¼ years	3 to 4 ms.	Began as large blisters, "like vaccination marks" or "chicken-pox". Attended 1 month.
10. Frederick Tothem ..	3 years	4 months	Some considered it "small-pox", others "chick n-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 mos.	2 weeks	Began 2 weeks ago as "chicken-pox".
13. Richard Bathurst ..	2 years	6 months	Began like small-pox. Attended 8 months.
14. George Thornton.... (Case detailed above.)	3 months	6 weeks	Supposed at first to be small-pox, 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.

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 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

* Concluded from page 632 of last number.

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 with confidence infer a connection.

TABLE II.—Cases of Prurigo following Vaccination.

Name.	Age at admission.	Duration at admission.	Remarks.
1. Samuel Bristowe.... (Case x.)	15 mos.	8 months	Came directly after vaccination; but the medical man said it was chicken-pox. Attended 18 months.
2. Sarah Ellis.....	2 years	18 mos.	Vaccinated at the age of 6 months. Eruption began immediately afterwards. Attended 3½ months.
3. George Humphrey ..	14 mos.	11 mos.	Began after vaccination at 3 mos. Attended 3 months.
4. Edward Barfoot (Case ii.)	16 mos.	13 mos.	Began after vaccination at 3 mos.; was called "glass-pock" by the medical man. Attended 2 months.
5. Sarah Richardson .. (Case iii.)	11 mos.	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 v.)	12 mos.	5 months	Came out soon after vaccination. Attended 2 months.
8. Walter Thompson .. (Case vi.)	19 mos.	3 months	Vaccinated at 15 months. Eruption began 3 weeks afterwards.
9. William Welch.....	6 months	2½ mos.	Began 2 weeks after vaccination. Attended 7 weeks.
10. Sydney Woolford ..	15 mos.	9 months	Vaccinated at 5 months. Eruption began a month later. Attended 4 months.
11. Caroline Duffell	10 mos.	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.

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 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 vari-

cella 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 unpalatable, 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 principle only for which I contend; the details of its extent of application we must determine hereafter. That principle is, if you will excuse the repetition, simply this, that varicella, varioloid, the rash which sometimes 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. It is probably not very common; for I have been assured by experienced vaccinators that they never witnessed it.