PRURIGO, PRURIGINOUS ECZEMA, AND LICHENIFICATION.

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PRURIGO.

Historical.

Hebra was not the first to describe the prurigo which is specifically known by his name. It had already been described, though not clearly discriminated, by Willan, under the name of lichen agris, and by Cazeneve, Devergie, and other French writers under the designation of lichen agris. But Willan's prurigos included all affections in which itching is associated with a special eruption and other phenomena; thus he recognized general prurigos and a number of local prurigos—prurigo of the anus, of the prepuce, of the scrotum, of the urethra, of the vulva, of the pubis; and he ranked them with strophulus and the so-called lichen of the day in the Order of the Papules. To Erasmus Wilson prurigo was simply a pruritus associated with an organic change in the tissues of the skin, and its pathognomonic character was the pruritis—a pruritus without obvious or apparent cause.

In Wilson's day, therefore, the distinction between prurigo and pruritis had not emerged, and dermatology is perhaps indebted to Hebra at least as much for his insistence upon this distinction as for his classic description of the severe form of prurigo known by his name.

In limiting the term "prurigo," however, to a single type of the affection, Hebra fell short of the truth. To him prurigo was an invariable and ultimately fatal affection, beginning in infancy as an urticaria, which is so soon followed by characteristic papules that give rise to intense itching. Enlargement of the lymphatic glands follows, and later the skin may become markedly lichenified. Kaposi saw that his master had described only the grave form of a disease which sometimes manifests itself in a milder form, prurigo mitis, not necessarily incurable, and allowing no tendency to develop into the severer type. French dermatologists were quick to seize upon the same error, and also to question another of the Vienna master's statements—namely, that the papules precede the itching. On these points they have long been virtually agreed, but there have been and still are very considerable differences among themselves. Thus Vidal preferred to style the prurigo of Hebra a lichen, maintained that from the anatomico-pathological point of view prurigo is only a large papule of lichen, or lichen only a small papule of prurigo, and declared that it is not merely cured. Besnier included among the prurigos many other itching conditions which he had separated from the eczema group, qualifying them all as diathetic prurigos because he regarded them as associated with individual conditions of digestion and of organs, provoked or maintained by an abnormal mode of nutrition. To him prurigo was nothing more than an itching dermatosis accompanied by a visible eruption—a position not very dissimilar from Willan's.

Brocq differed from both Vidal and Besnier. In his view there are three forms of prurigo: (1) prurigo simplex, with no eczematization or lichenification—the urticaria papulosa or strophulus of many other writers; (2) prurigo of the anus may be itching or severe or mild, and in which the milder forms may begin much later in infancy and may die away, sometimes within a few months; and (3) prurigo ferox, in which the papules are larger and harder, the itching is frightful, and the gland enlargement considerable, but in which the lichenification is less extensive than in the prurigo of Hebra. Darier also recognizes three forms of prurigo, which, however, do not tally completely with Brocq's. The first, like Brocq's, is prurigo simplex, or strophulus urticarialis papulosa. The second he styles prurigo of Hebra, but he regards it as including not only (a) the type of Hebra-Kaposi, but also (b) a mild Frenc, (c) a prurigo in vaccine, which is therefore, includes Brocq's second and third types. Darier's third type is prurigo vulgaris, which may be either (a) diffused, or (b) circumscribed. This corresponds with Brocq's névromérites, or pruritis avec lichenisation, which that author does not admit into the category of the prurigos, but regards as forms of pruritus.

It was not until the year 1811 that Hebra published so precisely and luminously described by Hebra was recognized as such in England. In the Diseases of the Skin section of the International Medical Congress held in London in that year Morsant Baker exhibited 3 cases which were accepted as examples of true prurigo of Hebra by Kaposi and the younger Hebra, as well as by Unna. The event constitutes one of the landmarks of the history of prurigo in these islands. For, since then, as it may seem, in the country of the founder of the Order of Papules, who had described, though he had failed to give clear identity to the disease, the severe form of prurigo had up to this time been overlooked. That it was, and still is, of such frequent occurrence in this country than on the Continent, is no doubt true; but in the discussion which followed Morsant Baker's paper the younger Hebra affirmed that he had seen undoubted cases at St. Bartholomew's.

At the Third International Congress of Dermatology, held in London in 1896, there was a discussion on prurigo which brought into relief the wide differences of view that prevailed on this subject. Paraphrasing a famous apophthegm, it might be said, as many dermatologists, so many views of Prurigo. By apt citations from all the leading authorities, J. C. White, of Boston, shewed that there was the widest divergence on almost every phase of the disease—its age-incidence, its course, the character of the eruption, the causal relation between the neurosis and the papule, and the pathology. He commented upon the exceptions of the essential nature of the disease, as (1) a pruritus, (2) a Sensibilitatis-neurone, (3) a Motilitatis-neurone, (4) a pruriginous diathesis, (5) a neurodermatosis, (6) a mixture of lymphatism, arthritism, and nervosism, (7) a vasomotor translation, (8) a trophonérose, and (9) a dyscrasia. To which was added a tenth view, undoubtedly the most modest, possibly the most candid of all the series—pathology.

During the intervening sixteen years prurigo has continued to excite the lively interest of dermatologists of all nations, but there is still nothing approaching a consensus of opinion on any of its various aspects. I have already touched upon the different views that prevail in the French school. But I do not know that English-speaking dermatologists are much nearer unanimity. The chief difference between the two schools, indeed, is that we have been rather more sensible of the difficulties of the subject than have our French confrères, and have been less prone to the confident elaboration of theories. On a question so involved in obscurity dogmatism would be eminently out of place, but one may hope that as the result of free discussion some progress, however slight, may be made towards common agreement.

Nomenclature and Classification.

It was Besnier who proposed that the severe type of prurigo described by Hebra should be known by that master's name, although it would have been better, he considered, to find a new designation for what he considered to be in some sense a new malady. There is certainly need for simplification in the nomenclature of prurigo. That members of the same school of dermatology should regard "prurigo of Hebra" as including and as excluding the severest type of the affection is admirably calculated to produce misunderstanding. Sensible as I am of the obligations we are all under to Hebra and Kaposi, it appears to me that it would be better to cease to attach his name to the affection, since it has come to be, in a sense, a symptom of neurosis and disorder. The milder affection which he failed to recognize is as truly prurigo as the one he actually described. They are, in fact, but different types of the same affection. Why, then, not speak simply of prurigo? But if we are to term that gravis might be held to include the worst cases of the affection, the rare type with which the name of Vidal is linked. But the differences between these two groups of cases, the severe or the milder, are so essentially different that it is not sufficiently pronounced to make it convenient to preserve the worst type of prurigo the expressive name prurigo ferox. If other prurigos are to be recognized, they may be necessarily qualified. Thus it is believed here is a prurigo gestations, which can be differentiated from...
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HERPES GESTATIONIS, and a prurigo lymphadenoma, in which, it is held, true prurigo papules are present. To me, however, whereas both of these states in the pregnant patient differ so markedly from what I have called prurigo by no means conclusive, and I am not prepared at present to recognize more than the three forms of the affection mentioned above—prurigo gravis, prurigo mitis, and prurigo simplex.

With regard to classification, I cannot regard as a prurigo any itching affection which does not present an eruption of discrete, hard papules, of the kind and in the situations to be presently described, followed sooner or later by the peculiar roughening and thickening of the skin known as lichenification. Besnier claimed that there was a prurigo of the scrotum, of the anus, of the vulva, and so forth; but such affections are now regarded as belonging to the great pruritus group, and it is convenient, I think, to limit the term "prurigo" in the way suggested. From prurigo, thus understood, the prurigo simplex of Brocq and of Darier, which appears as the first of their three types, is identical with the lichen urticatus of Bateman, the urticaria papulosa of Kaposis, Dubring, and other writers, is excluded by the absence of lichenification, while the prurigo vulgaris which is the third of Darier's types, and is regarded by Brocq not as a prurigo but as a pruritus with lichenification, is excluded by the characteristic papules. I confess that I have sometimes been disposed to admit this last affection into the group of prurigos, but further consideration has led me to adhere to the definition of prurigo formulated above. A classification on a purely clinical basis can, of course, make no pretension to finality; but so long as the etiology of prurigo is veiled in its present obscurity, and the pathology is little more than a collection of rival theories, no other mode of classifying the affection is possible.

Symptoms.

Whether of the mild or of the severe type, prurigo usually begins in early infancy, between the eighth and the twelfth months of life. Hebra and Kaposi went further, and taught that it always begins in this period, but cases have been reported commencing between the ages of 10 and 15, and even later. According to Hebra and Kaposi, again, it appears first as an urticaria, which manifests itself in the form of wheals, of itching, of excoriations, and of insomnia, and as an urticaria it persists until about the beginning of the second year, when the characteristic papules begin to appear. In this interpretation of the first signs of prurigo I am unable to acquiesce. It is not unlikely that one form of urticaria, namely, urticaria papulosa, forms a connecting link between urticaria and prurigo, but, like Besnier, the late J. F. Payne, Colcott Fox, and other dermatologists, I inclined to regard urticaria develop into prurigo. The papules are hard, small, often perceptible only to the touch, pale or reddish in colour, and distributed principally on the extensor surfaces of the arms and legs, and on the abdomen, scrotum and buttocks, and the back and front of the chest, but sparing the joint flexures. They give rise to violent itching and, when subjected to the irritation of scratching, become reddened and increase in size. When a papule is excoriated serum and blood exude, which quickly dry into a brown crust. Other lesions appear, which may resemble those of eczema (except that the flexor surfaces are usually spared), and finally the skin becomes lichenified. One crop of papules succeeds another, and the disease becomes chronic, but usually there is some abatement in summer, with exacerbation in winter. In severe cases, which take on a brown colour, there is desquamation, the hairs are extruded, there are pustules and sores, and the mental and axillary glands enlarge and may go on to suppuration.

One peculiarity of the disease is that after the third year of life it undergoes no further evolution, so that there is no essential difference in pathological physiognomy between a papule in a patient of 3 years and one in a patient of 30. Another peculiarity is that prurigo mitis never develops into prurigo gravis. In the former type, as a rule, the papules are less numerous, the eruptions less frequent, the itching is much less intense; they may be limited to the limbs. In the severest and rarest form of the disease, which may be called prurigo ferox, the papules are much larger, varying in size from a small pea to a small cherry (Brocq), are noticeably raised above the level of the skin and give to the touch a sensation of hard nodosity; the colour varies from red to a vivid pink to a vivid red. They are crowned with a large thick-walled vesicle, sometimes filled with a purulent liquid. Disseminated in no traceable order over the body, and even upon the face and scalp, they are most numerous over the limbs. They are accompanied by itching of the intesntest kind, and the patient, in his frenzy, seeks relief by excoriation that may not stop short of tearing off pieces of flesh. The lymph glands are usually much enlarged. Lichenification is present in all cases, but is not so widespread in prurigo ferox as in the other forms of prurigo. As in the former types, the symptoms are worse in winter than in summer.

Hebra, and after him Kaposis, held that the papular eruption precedes and is the cause of the itching, and the former considered it probable that the itching is due to irritation of the papillary nerves set up by the eruption which quickly accumulates in each efflorescence. Cazanove was one of the first of the French school to maintain that the itching precedes the papule, and this view, which prevails generally among French dermatologists, was crystallized by Jacquet in the epigram: "Ce n'est pas l'éruption qui est prurigineuse; c'est le prurit qui est éruptif." A clinical experiment of Jacquet's has been adduced by Besnier in support of the theory that the itching and the papules are independent of each other. The right arm of a girl who had for two years suffered from prurigo mitis, and who rest on a purely pathological basis, can, of course, make no pretension to finality; but so long as the etiology of prurigo is veiled in its present obscurity, and the pathology is little more than a collection of rival theories, no other mode of classifying the affection is possible.

Etiology.

The exciting cause of prurigo has been found in bad hygiene, in overcrowding, in defective alimentation, in...
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**Pathology.**

The principal theories of the nature of the papule of prurigo are: (1) That of Riehl—that they are spastic edematosus papules of the cutis, closely allied to urtica; (2) that of Auspitz—that they are pseudo-papules, depending on the co-operation of the arrectores; (3) that of Caspary—that they are epithelial papules due to acanthosis. More recently Leloir and Tavernier claim to have observed a degeneration of the prickle cells with the consequent formation of cytoplasm containing clear fluid, some leucocytes, and their finding has been confirmed by Kromayer and other pathologists. Hebra was the first to teach that the papule of prurigo has analogies of structure with the vesicle; but the view of Leloir and Tavernier is that it is sui generis. Dacier states that he has failed to observe the intra-Malpighian cavity described by Leloir and has found no oedema reported by Riehl; but he agrees with Caspary that the papules are the expression of an acanthosis. Unna reports, with Riehl, that there is a spastic oedema of the cutis, and that the papule has an urticating base, but there it ceases also, he says, a proliferative inflammation of the vessel sheaths as well as still more characteristic changes in the epidermis—a degeneration of the prickle cells into a papulous mass, forming a vesicle, and later, in some instances, an impetigo pustule, which, however, contains no staphylococci. These vesicles he identifies with those found by Leloir, but, unlike Tavernier, he could determine no connexion between them and the sweat pores. Unna, continuing to play a very free game, holds that Auspitz and others who have described changes in the hair follicles are in some measure correct. He found the arrectores in some of the follicles thickened, and persistently at least one or two of the arrectores being erected and the point of insertion of the muscle in the papillary body appeared funnel-shaped. He is unable, however, to agree with Auspitz that the characteristic phenomenon of prurigo is a contraction of the arrectores, for the same hair follicles show proliferative and exudative inflammatory changes and necrosis, so that the contraction and enlargement of the arrectores is nothing more than an accompanying or secondary symptom. The epithelial proliferation described by Caspary he compares with the acanthoses present in the neck of the follicle and its neighbourhood in certain infectious diseases of the epidermis.

**Prognosis.**

Hebra declared that prurigo, as he understood the term, was incurable. Kaposi concurred, although he held that if treatment is begun in early infancy the disease may be so favourably influenced that at times the patient may believe himself to be cured. Even in cases of moderate severity, he believed, there is no hope of cure, while cases of the mild type are only curable if treatment begins in early infancy and is perseveringly applied. There are, however, in my opinion, safely include heredity among the etiological factors of this disease. It is difficult to believe that a nervous system is not in operation, and usually (though not invariably) manifesting itself in early infancy, hereditary influence is absent. But it requires more mental enterprise than I am conscious of possessing to adopt the elaborate theory of Broc, which looks as though it were less an induction from ascertained facts than a speculative endeavour to assemble all the hereditary influences which could possibly count in this connexion. That this ingenious and distinguished author has not only the merits of a comprehensive theory, but has also, as I feel it, so far as I can see, been able to convince the competent authority of its correctness, is quite possible; but I am disposed to believe that the prurigo of infancy may be due to a micro-organism. Finding the changes in the epidermis and the lack of any tendency to bear some resemblance to those produced by micro-organisms in certain infectious diseases of the skin, Unna suggests that the disease may belong to the microbic group. I know of no facts, however, beyond that which is mentioned, to support this hypothesis, and prurigo has always been regarded as non-infectious.

**Diagnosis.**

When it has reached the typical stage, prurigo, in the sense in which it is employed in this paper, is, as a rule, easy of recognition. The positive characters are the usual origin of the affection in infancy, its persistence, the poor general health, the preference displayed by the patient for sweetish, impure preparations for the extremities, and the immunity enjoyed by the ends of the joints. The glandular enlargement, in association with the eruption, is one of the distinctive features. In the early stage the diagnosis from urtica papules is, however, exceedingly difficult, and it may be necessary to defer judgment. In later stages, also, the characteristic lesions of prurigo may be masked by eczematous crusts or by pustules, etc., and the eczematous phenomena may even extend to the parts spared by the prurigo. In cases thus complicated the diagnosis is between prurigo and such conditions as chronic eczema, chronic urtica, scabies and pruritus may be supposed until the secondary lesions have healed. The distribution of ichthyosis is similar to that of prurigo, and the former disease, like the latter, may be complicated with eczema, but in ichthyosis the prurigo papule is altered epithelial acanthosis, and it is seldom difficult to distinguish between the two conditions.

**Treatment.**

This must be mild or vigorous according to the intensity of the affection, but whether this be of the one type or of the other, the measures must be applied again and again, perseveringly and patiently, until the required results are obtained. At the same time the patient must be carefully watched, and, if the eruption be there, the necessary measures taken. As an instance under treatment, in the early stages of a case of ichthyosis, the complicating lesions having been dealt with, the indications, as Colcott Fox says, to improve the patient’s nutrition by a good diet, a generous diet, and cool liver oil; to control the itching by baths medicated with per cent potassium sulphate, creolin or zinc, and to dissipate any coexistent eruption. All irrigating preparations must be
The external remedies employed by the Vienna school are sulphur, tar, soap, and naphthol. The sulphur is used in the form of soap, solution of sulphur of potash or of turpentine, and in all stages of the affection, even the most acute. If the surface is smeared with the oil the applications must follow each other quickly; and he considers it better to envelop the parts in an impregnated naphthol or naphthol tar, than to apply the oil directly. He speaks highly of a preparation of cod-liver oil and white wax in the proportion of three to one, used as a poultice, with or without covering. Cod-liver oil may also be used in the form of an lotion, with which, when there is intense itching, 8-naphthol or carbolic acid may be incorporated. Colcott Fox has had excellent results from the use of a carbolic acid ointment. Wolff from alternate injections of carbolic acid and pilocarpine. In severe and rebellious cases the patient may be soaped in a warm bath, and a tar preparation or Vlemingct's solution applied, the patient continuing in the bath or lying in bed with the application still on. If such vigorous measures as these be employed they must, of course, be carefully watched. Friction with Wilkinson's ointment, ten or twelve times repeated, is also said to give relief in bad cases. Occasional dressings, such as Unna's glyco-potassium, or caoutchouc, have been found useful in preventing the eruption, though occlusion, as Jacquet's experiment shows, fails to influence the itching. In many cases the meanest wash, whether in bed, the application of naphthol ointment, and the administration of cannabis indica. Thyroid is well spoken of as favorably influencing the eruption, at least temporarily.

Thibierge has employed lumbar puncture in a long series of cases of pruriginous dermatoses, and while he reports temporary benefit in some "diathetic prurigos" and other eczemas, he has been unable to draw any conclusion from the few cases of prurigo of Hebra which he has submitted to this treatment. The itching affection in which he has found it to yield the best results is lichen planus. Bayet has used radium extensively in a number of pruritic affections, including Darier's third prurigo, with almost constantly good results, even in refractory cases. The itching disappeared almost suddenly, and the relapses were few and easily amenable. But his report does not include cases of prurigo proper. Brocq believes that he has seen cases of even rebellious prurigo mend under radium-therapy, and I am inclined to think that ray treatment may prove to be the least unpromising methods of treating this affection. It will be seen that there is little concurrence of opinion in treatment as in other phases of this baffling affection. I have thought it desirable to enumerate the chief remedies that have been well spoken of, for in prurigo, as in other pruritic affections, the same agents yield different results in different hands, or in the same hands in different cases, and the practitioner, when he fails with one, must try others.

**PRURIGINOUS ECZEMA.**

Just as urticaria papulosa, as mentioned above, is a link between prurigo and urticaria, so do the pruriginous eczemas form a chain which connects prurigo with eczema. The eczema affection that is most frequently met with, is briefly discussed before passing on to consider the lichenification which is common to them and to so many other pruritic conditions.

Prurigo eczema corresponds with certain of Besnier's diathetic prurigos. With Brocq I do not admit their right to be regarded as forms of prurigo, though Unna holds, on both clinical and histological grounds, that the changes which the skin shows and which he interprets as an increased vascular tone, suggest that both processes have a common basis. The itching which characterizes these eczemas is so intense that the patient is absolutely incapacitated, both by day and night, while the distinctly eczematous lesions which effloresce at times of exacerbation and are mingled with the equally unmistakable marks of lichenification fully justify their being ranked among the eczemas. The lesions are of the most varied kind—erythematous, urticarial, papular, vesicular, impetiginous, with a preponderance of the urticarial element, and thus extending by the time of the first recurrence of the eruption, even the most acute. If the surface is smeared with the oil the applications must follow each other quickly; and he considers it better to envelop the parts in an impregnated naphthol or naphthol tar, than to apply the oil directly. He speaks highly of a preparation of cod-liver oil and white wax in the proportion of three to one, used as a poultice, with or without covering. Cod-liver oil may also be used in the form of an lotion, with which, when there is intense itching, 8-naphthol or carbolic acid may be incorporated. Colcott Fox has had excellent results from the use of a carbolic acid ointment. Wolff from alternate injections of carbolic acid and pilocarpine. In severe and rebellious cases the patient may be soaped in a warm bath, and a tar preparation or Vlemingct's solution applied, the patient continuing in the bath or lying in bed with the application still on. If such vigorous measures as these be employed they must, of course, be carefully watched. Friction with Wilkinson's ointment, ten or twelve times repeated, is also said to give relief in bad cases. Occasional dressings, such as Unna's glyco-potassium, or caoutchouc, have been found useful in preventing the eruption, though occlusion, as Jacquet's experiment shows, fails to influence the itching. In many cases the meanest wash, whether in bed, the application of naphthol ointment, and the administration of cannabis indica. Thyroid is well spoken of as favorably influencing the eruption, at least temporarily.

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**PRURIGO AND LICHENIFICATION.**

The word "lichenification" was applied by Brocq in the year 1891 to the peculiar roughening and thickening of the skin which so frequently follow scratching; but the changes themselves had been clearly described long before. Brocq expounded his theory of lichenification and proposed the term in a lecture delivered on May 29th and June 3rd, 1891, and published in that year, and it was not until May 12th, 1892, that Besnier proposed the term "lichenisation" for the condition. Brocq was therefore first in the field, and his theory was appropriately defended, since there is implied in it the idea that the changes in question, instead of being the direct consequence of the itching, or of the primary lesions, are made, caused by the scratching. Lichenification, as Brocq says, is not pathognomonic of a definite morbid state, but rather a general process which may develop without a preceding dermatosis, or may occur in the course of such dermatoses as prurigo, chronic eczema, and pruriginous eczemas, pityriasis parakeratosis, pityriasis rubra, lichen planus, certain artificial eruptions, and, according to Sabouraud, chronic streptococcic infections. Lichenification, then, may be, on the one hand, primary, as when it supervenes upon an anterior dermatosis. Primary lichenification may be due to so simple a cause as slight habitual friction, as in a case mentioned by MacLeod, that of a timekeeper in a...
Pathology.

The histological structure of the skin in lichenification is less altered than one would suppose from the marked changes on the surface. Darier interprets the process as essentially a hyperaemia, an active proliferation of the reticulum, with considerable lengthening of the papillary processes, and a cellular infiltration, moderate in degree, in the papillary layer.

Biology.

In lichenification, as in the itching which precedes it, heredity is not improbable a factor. Women are more liable than men, possibly because of their inferior nervous stability, and it is most often met with in adults. Why it is not a sequel of long-continued scratching is a puzzling question, and the superficial depressions produced by the scratching are not unlike those produced by lichenification. It is sometimes said that, in cases of this kind, the affected portion is more vascular than the normal, and that, in the case of the lichenous plaques, the vessels on the surface are dilated, and there is an increase in cellular infiltration, but no actual hypertrophy of the真皮 tissue.

Diagnosis.

Lichenification, as a rule, is easy of recognition. It is most closely simulated by the lesions sometimes met with in the genito-urinary region in women affected with gleet, but, according to Brocq and L. Bernard, the surface of the skin in these cases is more velvety. In some cases it is difficult to distinguish between lichenification and patches of lichen planus, and it must be remembered that in lichenification the initial lesion is essentially unlike that of lichen planus, in which the typical lesion, in its most universal form, is of an ill-defined flat or round papule, is a flat polygonal papule, not seldom umbilicated and lilac-tinted, with puncta and milky lines on the surface which have no analogies in lichenification.

Prognosis.

Untreated, the patches may persist for many months, or for years, or the itching and scratching ceasing, they may gradually disappear.

Treatment.

The large question of the treatment of the pruritus which precedes lichenification is foreign to my present purpose. The lichenification itself may be treated either with X rays or with radium. Some dermatologists prefer the former; I have had my best results with the latter. I need only cite one case, that of a woman of 36, who had suffered for seven years from intolerable irritation, originating in a severe nervous attack; she was unable to sleep, and was emaciated and neurotic. In shape the lichenified area was roughly triangular, with the apex at the nape of the neck and the base line connecting the spines of the scapulae. At the Radium Institute an apparatus 4 sq. cm. in extent, containing 50 mg. of pure radium bromide, and shielded with 15 mm. of aluminium, was applied for ten minutes on each side over the whole area that had been treated; the exposures were repeated at intervals of four weeks, with the result that, save for a very small patch at the nape of the neck,
Fevers of Obscure Origin in Infancy.

C. Paget Lapage, M.D., M.R.C.P.
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Fevers of obscure origin are not uncommon in infants and are more often the result of some acute disease, especially those due to the causative agent of whooping cough. It is not always easy to distinguish the fevers of childhood from those originating in the newborn period. The lichenification disappeared. There was great improvement, and the patient's general condition, and she gained 7 lb. in weight.

References.

Certain Forms of Fever of Obscure Origin in Infancy and Childhood.

By C. Paget Lapage, M.D., M.R.C.P.
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Fever of obscure origin is not uncommon in most forms of medical practice, but it is in dealing with children that this problem is most often met with. Those who are called upon to solve the riddle and point out the cause of the fever do not find the solution any the less difficult because of the inability of the child to give reliable information about symptoms, or any the less urgent if there is an over-anxious mother armed with a thermometer of almost uncanny efficiency.

In children the heat-governing mechanism is under un-steady nervous control, and rises of temperature follow comparatively trivial causes, while the normal temperature taken in the rectum is, according to Finlayson, subject to considerable variations, and shows a very rapid fall between the hours of 6 and 8 p.m. I have noticed in a case of this description in which the fever did not result from any obvious cause that the temperature, taken four hours after the patient had woken from a nap, was 104° F. Associated with this was an absence of other symptoms.

When confronted with a case of fever in a child—fever which has no obvious cause on clinical examination, and which is not merely temporary, passing off with a purgative—it is best to proceed with a process of elimination. We must examine carefully first for chest conditions, such as deep-seated or apical pneumonia, localized empyemata, collections of pus; then for tonsillar, pharyngeal, or nasal pharynx conditions, including any present sinus, and for other symptoms which may be of no uncommon cause of fever, and one needing some skill to diagnose; and, finally, for abdominal conditions, such as appendicitis. Usually these causes of fever can be diagnosed by careful examination and due attention to the history.

Post-influenzal conditions may give rise to much anxiety, because there may be so little to show for the temperature, and visions of many far more serious conditions pass across the mind of the medical attendant, who can only have recourse to the process of elimination.

Another common but obscure cause of fever is the presence of caseous glands, either bronchial, mediastinal, or mesenteric. In some cases they are so marked as to be obvious on palpation or percussion, but in most cases they are by no means easily diagnosed, the only symptoms being of a general nature. The cutaneous tuberculin reaction and the history are both valuable, while careful palpation of the abdomen is needed, and examination by the X rays is a very important asset to our means of making a diagnosis. By the last method we can see bronchial or mediastinal conditions which were formerly inaccessible. The temperature does not necessarily rise more than a few degrees, but may be quite high enough to cause anxiety.

Rheumatism.

Rheumatism is perhaps one of the most important of the causes of fever in children, and, what is more, its ravages may be of an obscure nature. A noticeable feature of this disease in children, as distinguished from adults, is that it rarely takes the patient's general condition, and she gained 7 lb. in weight. More often there are only sore throat, some vague shooting pains, and some heart lesion. This may be definite endocarditis or myocarditis or pericarditis. Both myocarditis and endocarditis may give a systolic murmur (often soft, blowing, and easily missed) and an increase in the size of the heart. Myocarditis is much more common than endocarditis, and, with proper treatment, recovery should be complete, but while the latter the treatment may be high enough to cause anxiety. Endocarditis may be difficult to diagnose and give few signs at the heart, and yet the rises of temperature may be of considerable period. In the case of rheumatic fever of rheumatic origin I have under my care one case of septic origin and have seen several following scarlet fever.

I will now quote a case illustrating difficulty of diagnosis.

Girl, aged 9. Symptoms: pallor, bronchitis, persistent unexplained fever of an irregular nature, sometimes reaching 103° F, often 102° F or 101° F. History characterised by that of an indefinite nature. The only sign discoverable was an indefinite systolic apical bruit, indefinite because the child was anemic and the heart was neither irregular nor enlarged. The cutaneous tuberculin test was negative and the urine normal. Her brother, who was in another ward, had a similar illness. She finally recovered, and the most likely cause of the illness was rheumatism.

Perhaps, whilst dealing with rheumatism, I might mention that, though in cases of osteomyelitis the most convincing signs are usually those of the diagnosis at once, I still have seen cases in which the pains near the joints and the fever led to a diagnosis of rheumatism.

Again, the eruption of erythema nodosum is often preceded by an irregular temperature and pains in the limbs, while poliomyelitis may give rise to fever and pain, and, if no symptoms of paralysis supervene, the diagnosis is obscure.

Leukæmia and Hodgkin's Disease.

These diseases may run a chronic course with exacerbations, during which there is high fever. In both conditions there is usually sufficient evidence in the way of glandular or spinal enlargement, but this is not always the case, and the lesson to be learnt is that, when in doubt, the blood should be examined. There are not always marked changes in the blood, but sometimes a diagnosis can be cleared up in this way. For example:

B. T., aged 5; illness began one week ago—weakness, irritability, vomiting, and headache, with a temperature of 100° F reaching 105°. On examination Kernig's sign was present; there was no tache cérébrale; the heart and chest were negative, but the liver and spleen were large. A diagnosis of acute leukaemia was made, and the result of the last lymphatic leukaemia was diagnosed.

In this case the illness with high temperature had been a definite indication of the importance of recognizing the disease, though the large spleen pointed strongly to acute leukaemia.

I have also a case, F. L., aged 3, of Hodgkin's disease, in which the temperature was irregular, often reaching 101° and 102°, and the glands, though obvious enough, were not readily distinguished from other forms of adenitis until the case had been watched and the temperature had been irregular for nearly one month.

Bacilluria.

I now come to an obscure cause of fever to which I wish to draw special attention—infestation of the genito-urinary tract with the Bacillus coli communis, either in the form of acute pyelitis or in a less severe form of bacilluria. I shall deal almost entirely with those cases occurring in infants or very young children. Perhaps I can best illustrate the condition of pyelitis by describing the two cases which first drew my attention to the importance of recognizing this infection.

Girl, aged 11 months. Illness began four days ago with a temperature of 104° F and vomiting. Temperature sustained and stools foul, but soon became normal. Blotchy, dull-red rhyt- thems on face, and few petechiae on buttocks and groin. Child seems quite comfortable, but has had a left kidney region. Pulse 144. Urine foul but plentiful. No specimen available. Child curiously quiet and happy, but...