PRURIGO, PRURIGINOUS ECZEMA, AND LICHENIFICATION.

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PRURIGO.

Historical.

Hebra was not the first to describe the prurigo which is specifically named after 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 pubes; and he ranked them with strophulus and the so-called lichens of the day in the Order of the Papules. To Erasmus Wilson prurigo was simply a prurigo associated with an organic change in the tissues of the skin, and its pathognomonic characteristic was the prurito—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 incurable and ultimately fatal affection, beginning in infancy as an urticaria, which is soon followed by characteristic papules that give rise to intense itching. Enlargement of the lymphatic glands follows, and later the skin may become thickened in a manner resembling lichenification. Kaposi said 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 there have long been virtually agreed, but there have been and still are very considerable differences among themselves. Thus Vitali 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 rarely 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 or of organs, provoqué 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 differs from both Vitali and Besnier.

In the 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 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 urticaria 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 Frechet, and (c) prurigo ferox. The third, therefore, includes Brocq’s second and third types. Darier’s third type is styled prurigo vulgaris, which may be either (a) diffused, or (b) circumscribed. This corresponds with Brocq’s nérodermies, or prurits avec lichenification, which that author does not admit into the category of the prurigos, but regards as forms of pruritus.

It was not until the year 1891 that prurigo was 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 Morrant Baker exhibited 3 cases which had 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, so well did it, perhaps, he was no doubt true; but in the discussion which followed Morrant 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 apologo- therm, it might be said, As many dermatologists, so many views of Prurigo. By apt citations from all the leading authorities, J. C. Skelton showed that the opinion of the greatest diver- sity in 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 enumerated the peculiarities and exceptions of the essential nature of the disease, as (1) a pruritus, sensibilitas-neurose, (2) a Motilitis-neurose, (3) a prurigino-diathesis, (4) a neurodermatitis, (5) a mixture of lymphatism, arthritism, and neurosis, (6) a vaso-motor transudation, (8) a trophonerosis, and (9) a dyscrasia. To which was added a tenth view, undoubtedly the most modest, possibly the most candid of all, which said: “The name prurigo has 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 entirely 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, I think 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 synonym of severe and discord. The mild affec- tion which he failed to recognize as a true prurigo as the one he actually described. They, are, in fact, but different types of the same affection. Why, then, not speak more simply of prurigo? The prurigo ferox might be held to include the worst cases of the affection, the rare type with which the name of Vitali is linked. But the differences between these two groups of cases, the severe and the less severe, are 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 more preferably qualified. Thus it is here is a prurigo gestationis, which can be differentiated from [2687]
herpes gestationis, and a prurigo lymphadenoma, in which, it is held, true prurigo papules are present. To me, however, there are no prurigo papules to be made out by any 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 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 lymphaticum, a prurigo of the axilla, 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, and is identical with the lichen urticatus of Bateman, the urticaria papulosa of Kaposi, 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 pruritis with lichenification, is excluded by the presence of 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 proposed 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 own obscurity, and the pathology is little more than a collection of rivel 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 dermatologists in general, I believe that the 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 limbs. 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 own obscurity, and the pathology is little more than a collection of rival theories, no other mode of classifying the affection is possible.

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 physiology between a case in a patient of 1 and 30 years. One 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, and may be limited to the extensor surfaces of 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 livid to intense; the eruption is much more frequent, and the itching is more intense, and may be limited to the extensor surfaces of the limbs.

Etiology.

The exciting cause of prurigo has been found in bad hygiene, in overcrowding, in defective alimentation, in
PRURIGO AND LICHIENIFICATION.

Pathology

The principal theories of the nature of the papule of prurigo are: (1) That of Riehl—that they are spastic oedematous papules of the cutis, closely allied to urticaria; (2) that of Auspitz—that they are pseudo-papules, depending on the contraction of the arrectors; (3) that of the cause being due to the action of 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 cysts containing a clear fluid, saline cells, and 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 is sui generis. Darié states that he has failed to observe the intra-Malpighian cavity described by Leloir and has even a synonyms 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 this oedema has an urticarial basis, but they say 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 pulp

mass, forming a vesicle, and later, in some instances, an impetigo pustule, which, however, contains no staphylococcus. The presence of 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 the rôle of prophet, holds that Auspitz and others who have described changes in the hair follicles are in some measure correct. He found the arrectors in some of the follicles thickened, and persisting arrectors of prurigo, more simply, he describes the prurigo of pathologists as a contraction of the arrectors, for the same hair follicles show proliferative and exudative inflammatory changes and necrosis, so that the contraction and enlargement of the arrectors 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 infections diseases of the epidermis.

Prurigo

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 grounds, I think, for giving a rather more hopeful prognosis in cases of the mild type. Not seldom, under judicious treatment, such cases recover during childhood or in adolescence. At best, however, the affection is a serious one, entailing much irritation and nervous depression and suffering; at worst it is one of the most distressing affections of the whole range of dermatology.

Diagnosis

When it has reached the typical state, 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 chronic eruptions for the thinner surfaces of the limbs and the immunity enjoyed by the bends of the joints. The glandular enlargement, in association with the eruption, is one of the distinctive features. In the early stage the diagnosis from urticaria papulosa 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 urticaria, scabies, and pruritus may be supposed until the secondary lesions have healed. The diagnosis 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 adherent epithelial papule, 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, as the symptoms may be postponed until the secondary lesions have healed. The complicating lesions having been dealt with, the indications, as Cocker Fox says, are to improve the patient’s nutrition by good hygienic diet, and cool liver oil; to control the itching by baths medicated with chalk, sulphurated potash, creolin or isinglass, and to dissipate any coexistent eruption. All irritating preparations must be...
PRURIGO AND LICHENIFICATION.

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.

Itching is pathologically not a peculiarity of just any eczemas, but is very frequent 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 muslin, than to apply it to the extensor surfaces, though it is these surfaces that are most affected by the itching, the lesions on the flexor surfaces corresponding rather with those met with in the ulcerous type of the eczematous affection. It is usual to find scales, crusts, and vesicles in situations where the scratching has been most unrestrained. There is seldom profuse "weeping," but in rare cases the whole surface of the skin may be moist. As a rule there is some glanular swelling, less pronounced, however, than in prurigo.

There is, perhaps, no pruriginous affection, not even prurigo feo, in which the itching is more intense and intolerable than it frequently is in this group of eczemas. Such itching, as I have heard patients declare, is far harder to bear than pain; the pain of excoriation, indeed, is the only sensation that can be felt, except when the itching is psychical; often; too, it is periodical, undergoing nocturnal or seasonal accesses and remissions, in some cases for long periods together, with singular regularity.

Frequently, though by no means invariably, the affection begins in infancy or in early life. The patients often have a flabby skin with more pigment than normal. Sometimes the eczema is in close relation to the eczematous affection, and is also associated with asthma, with uterine disorders, with mental strain or shock, with insomnia, migraine, and other nervous phenomena, or with xeroderma. I have known a distinct alternating observation time after time between asthma and pruriginous eczema, as though the one or the other were a necessary manifestation of the underlying morbid state. The itching may be due to disorders of the secretions which so far defy detection, or to the influence on the nerve centres of morbid conditions of the blood, or to changes in the nerve-endings of the skin, or to hereditary cutaneous irritability, or to microbial agency, or—as is indeed more probable—to a combination of two or more of these pathological states. Whatever the cause, there is between the itching and the consequent lesions the reciprocal reaction already noted in connexion with prurigo. The itching provokes scratching, the scratching sets up lichenification, which irritates the nerve-endings and provokes further itching; and the main object of treatment is to break this vicious circle by lichenification and restoring the damaged tissues to the normal state. The most effective means of attaining this end will be considered in the next section.

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 is appropriately the one which has been developed; 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, prurigo-nodulosum, psoriasisform parakeratosis, pityriasis rubra, lichen planus, certain artificial eruptions, and, according to Saubouraud, chronic streptococci infections. Lichenification, then, may be, on this or the other hand secondary, 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,45 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 hyperaeracystasis, an active proliferation of the subepidermal connective tissue, with considerable lengthening of the papillary processes, and a cellular infiltration, moderate in degree, in the papillary layer.

Biopsy.

In lichenification, as in the itching which precedes it, heredity is not improbably 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 still open to question. It may be due to pruriginous affections, and why some subjects of the affections in which it usually appears escape, are obvious questions. To the first, Brocq's reply is, that some cutaneous affections may so modify the vitality or nutrition of the tissues that lichenification is easily produced, while in others the resistance of the integument to trauma appears to be normal, or even augmented. To the second question he finds the answer in personal idiosyncrasy. Some subjects, he says, seem to be more predisposed than others to lichenification; he believes it possible, indeed, that in lichenification individual predispositions may play the capital part, and that lichenification, then, not only itching and scratching are necessary, but the affection which is the cause of the itching should predominate in the lichenification, and the patient should also have a similar predisposition. It need hardly be remarked that the very tentative terms in which this explanation is couched show that it is nothing more than a speculation, however plausible. In the present state of our knowledge it is certainly difficult to understand the incidence of lichenification, except by assuming a predisposition either set up by the affection, or pre-existing in the patient, or both the one and the other. With that, for the time being, we must content.

Diagnosis.

Lichenification, as a rule, is easy of recognition. It is most closely simulated by the lesions sometimes met with in the genito-urinal 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 there is much debate as to whether the two processes are intimately related. Brocq, however, contends that in lichenification the initial lesion is essentially unlike that of lichen planus, in which the typical lesion, i.e. the papule, 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 analogues in lichenification.

Prognosis.

Untreated, the patches may persist for many months, or even 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 nervous. In shape the lichenified area was roughly triangular, with the apex at the nape of the neck and the base line connecting the spine of the scapula. At the Radium Institute an apparatus 4 sq. cm. in extent, containing 80 mg. of pure radium bromide, and shielded with 7.5 mm. of aluminium, was applied for ten or more periods, the whole area having been treated; the exposures were twice repeated at intervals of four weeks, with the result that, save for a very small patch at the nape of the neck, the whole. Some further remarks will be made on the subject in due time.
the lichenification disappeared. There was great improvement in the child's general condition, and she gained 7 lb in weight.

REFERENCES.

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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 particular condition 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 unwillful nervous control, and rises of temperature follow comparatively trivial causes, while the normal temperature taken in the rectum, according to Finlayson, subject to considerable variations, and shows a variety of fall between the hours of 6 and 8 p.m. I have, therefore, been in the habit of passing attention to the well-known fact that a temperature taken four-hourly often shows rises which are not shown on the morning and evening chart.

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 at once with a process of exclusion. We must examine carefully first for chest conditions, such as deep-seated or apical pneumonia, localized emphysema, collections of pus; then for tachyphagia, pharyngeal, or nasal, or for a foul-smelling breath, and for other disturbances which are not unknown as a 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 after careful examination and due attention to the history.

Post-influenza 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 mesentric. 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.

CERTAIN FORMS OF FEVER OF OBS CURE ORIGIN IN INFANCY AND CHIL DC Hood. This is often a most often overlooked fact.

Girl, aged 9. Symptoms: pallor, bronchitis, persistent unexplained fever of an irregular nature, sometimes reaching 103.5 and often 101 or 102. History can never be rendered complete or employed as the cause 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 may mention that, though in cases of osteomyelitis the most striking signs are anemia and a marked rise in the temperature, the diagnosis at once will 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 obscured.

Leukaemia 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 splenic 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 101.5. The temperature gradually rose irregularly until it reached 105. On examination of Kernig's sign was present, there was no tache cerebrale; the heart and chest were not abnormal, but the liver (this latter fact shows the importance of the blood, and on the result of that lymphatic leukaemia was diagnosed.

In this case the illness with high temperature had been a source of considerable worry to the medical man in attendance, and only the examination of the blood definitely established the diagnosis, though the large spleen pointed strongly to acute leukaemia.

I have also a case, F. B., aged 3, of Hodgkin's disease, in which the temperature was irregular, often reaching 101.5 and 102.5, 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.

Bacillosis.

I now come to an obscure cause of fever to which I wish to draw special attention—infection of the genito-urinary tract with the Bacillus coli communis, either in the form of acute pyelitis or in a less severe form of bacillary dysentery. 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 rise of temperature to 104 and vomiting, with no other symptoms and stools foul, but soon became normal. Blotchy, dull-red, erythema on face, and few pusules on buttocks and groin. Child seemed quite comfortable, but was not over-easy. Left kidney region. Pulse 144. Urine foul but plentiful. No specimen available. Child curiously quiet and happy, but