THE BRITISH JOURNAL OF DERMATOLOGY.

AUGUST, 1901.

REPORT OF A CASE OF THE CORYMBOSE SYPHILIDE.

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THE great rarity of this form of syphilitic rash and the fact that its position in the course of the disease seems to be a matter of some doubt have led me to think the case worthy of a short recording note.

Patrick N., aged 30 years, attended the Skin Clinic at King's College Hospital for the first time on March 4th, 1901.

The patient complained of a rash, sore throat and a sore on the penis.

The history was that the sore had first showed itself about Christmas, 1900, the patient saying at one time a week before and at another a week after. He complained of feeling very weak and miserable, and stated that since the beginning of his illness he had lost two stone and a half.

There was a strong history of alcohol, but there was no tubercular history elicited either then or later, in the patient himself or his family.

Nor could I find any evidence of tuberculosis about him, although, in the face of the later developments of his disease, the possibility of a double infection was present in my mind.

His condition when first seen was as follows:—The patient is very emaciated and looks very feeble. His face has a somewhat livid redness

strongly suggestive of alcohol, and is covered with enormous papules scattered without arrangement and extending over the whole of the scalp, where a patchy alopecia has resulted. The form of the papule is such as one seldom sees in so early a stage of syphilis (a little over two months). Each papule is a veritable small tumour of about a quarter of an inch in diameter, rising also about a quarter of an inch above the surrounding surface. At the right ala nasi an extra large papule is undergoing some necrosis, being covered with a dark blood scab and showing evident loss of substance. The trunk and limbs are covered with similar papules, but they are not quite so prominent as those upon the face and scalp. The back and extensor surfaces of the limbs are much more severely affected than the other parts, the palms and soles being quite unaffected. On the penis there is a typical, but slightly ulcerated, sore lying on the dorsum in the coronal sulcus, the whole organ being in a very septic condition, but showing no tendency to phagedæna. At the commissures of the lips there are large macerated papules which have given rise to deep fissures. The tongue shows one or two small superficial erosions, while on the throat an immense inflammatory redness spreads right forward on to the hard palate, both tonsils being covered with a fibrinous membrane, but without true ulceration. There is well-marked generalized adenopathy affecting all the palpable lymphatic glands.

The patient was warned to abstain entirely from alcohol, a warning which he frequently disregarded, and was treated constitutionally with small doses of grey powder and locally with mercurial applications to all the moist lesions. Considerable benefit had begun to be manifest until April 29th, when on stripping the patient to observe progress I noticed for the first time a new development on the skin. Around each of his large papules on the extensor surfaces of the arms and back there had sprung up a small constellation of miliary papules, most being situated at the orifices of the hair-follicles. The large papules had begun by this time to show signs of undergoing involution, and were covered with rather heavy scales, as shown in the photograph (Fig. 1). The patient was shown at the Dermatological Society of London on May 8th and appeared to be only the second example of this form of eruption which has been shown at the Society in the whole course of its existence.

In searching the literature for similar cases I noticed that nearly all the authorities consider that the miliary syphilide even of the ordinary type is associated with a bad constitutional condition, generally with a tubercular taint. Joseph draws particular attention to the extreme similarity, microscopically, between this lesion and that of tubercular disease, and states that at present no one has attempted the inoculation of part of such an eruption into the guinea-pig. This applies to the commoner miliary syphilide, as Joseph does not describe the form now under consideration. Kaposi and Finger both describe the corymbose eruption, but agree that it is a relapse, which it certainly was not in my case. The members of the Dermatological Society of London who were acquainted with the rash were positive about this point, considering it to be a somewhat later form than the common large papular syphilide, but certainly not a relapse.

Roná described a case at the Dermatological Society in Buda-Pest* in which the eruption began as a psoriasiform, lenticular papule. The eruption yielded to ninety inunctions of 2 grams each, and the corymbose syphilide apparently developed under treatment. The mother of this patient died of Phthisis.

In order to settle the point of the co-existence of tuberculosis, on May 20th, without using any antiseptics, but with sterilised instruments only, I excised a strip of skin containing four papules, half being used for histological purposes, and the other half inoculated into the subcutaneous tissue of a guinea-pig by my friend and colleague Mr. Lenthal Cheate.

The animal remained perfectly healthy, and the small lump caused by the inoculated tissue slowly but completely disappeared.

The other half of the tissue was embedded in celloidin, cut and stained histologically in the following manner:—(1) Toluidin blue and neutral orcein. (2) Hæmalum and rubin and orange. (3) Acid orcein with polychrome blue and tannin-orange.

As regards the epidermis, the changes are so obviously secondary as to be of only very slight interest. Over the whole of the papules there is complete absence of the granular layer, and wherever there is any scaling the horny cells have retained their nuclei. The deeper layers of the epidermis are naturally somewhat œdematous, and are to a certain degree infiltrated with polynuclear leucocytes. At the

* *Monatshefte für praktische Dermatologie*, Bd. XXIII., p. 74.

mouth of the hair-follicle there is a horny plug, in the cells of which the nuclei are well stained. Naturally the changes in the corium are of much greater interest, and are as follows :—

With a low power it is seen that the chief infiltration has occurred around the hair-follicles, but the sweat-glands are also affected. The depth to which this infiltration has extended is considerable, as is shown in Fig. 2. Besides the circumscribed collection of cells in the immediate neighbourhood of the hair-follicles and sweat-glands, there are scattered smaller collections in various other parts. Thus for some distance on either side of the orifices of the hair-follicles there is a diffuse infiltration of moderate intensity into the papillary body. Every small vessel in the tissue excised shows a perivascular cell mantle of varying thickness, the veins being much more severely affected than the arteries. In places, also, usually round a central small vessel, there are regular small nodules to be seen.

The fibrous tissue and the elastic tissue are both well preserved, and show no degenerative reactions in the main part of the section, but where the very definite collections of cells are found the elastic tissue has entirely disappeared, and the fibrous tissue has been rarefied to such an extent that only a faint reticulum remains.

The more detailed study of the cells composing these various types of infiltration reveals points of great interest. The large infiltration round the hair-follicles and sweat-glands and the smaller nodular accumulations show the same main characteristics. The outermost zone of cells consists mostly of long, branching and irregular cells containing a nucleus very rich in chromatin, and only a very small amount of protoplasm. These belong to a variety of cell which is common to all organizing granulation tissue, and may be taken as certainly connective tissue cells. These cells do not form a complete covering to the nodule, but rather occur in streaks and patches, fading off gradually into the surrounding, apparently healthy tissue. Inside this there is a large amount of infiltration of small round cells, the daughter plasma-cells of Unna or the lymphocytes of other authors. Plasma-cells are fairly frequently met with in this part of the disease, but no very definite relation to the other cells could be made out, with the exception that the plasma-cells do not extend so far into the centre of the nodule as the small round cells. In the central part of the nodule the cells are almost exclusively the most

typical epithelioid cells that one can wish to see, in some cases grouped round a central giant-cell, in others without giant-cells, forming the whole of the centre of the nodule, and in both cases showing a tendency to caseation. The likeness to the detailed structure of a typical tubercular nodule is, as has been noted by other observers, most striking; in fact, it would be quite impossible to distinguish the two diseases from the appearances of the nodule alone. (Fig. 3.)

As regards the diffuse infiltration in the papillary layer the cells show no special arrangement, and consist mainly of proliferated connective tissue corpuscles, polynuclear leucocytes, and small round cells.

The mantle of cells around the vessels consists of an unmixed aggregation of plasma-cells, in many places several rows deep. In fact, I am unacquainted with any other lesion which shows such a pure plasmomatous infiltration as this does round the vessels, and in making this statement I use the words plasmomatous infiltration in the sense that it would be accepted both by Unna himself and by his opponents, Marschalkó, Krompecher, and others, no small round cells or daughter plasma-cells being included in the definition. (Fig. 4.)

The endothelial lining of these small vessels is quite distinct, and shows no signs of proliferation. In the lumen of one of these vessels which has been cut in transverse section, among the leucocytes present a single well-marked example of the plasma-cell is seen; but considering the great number of vessels cut so as to display the lumen and contents, this cannot be taken as conclusive as to the origin of the plasma-cell from the leucocytes of the blood-stream. Another interesting point is well shown in one of the sections—namely, that in a mass of unmixed plasma-cells a single cell is observed in the di-aster stage of mitosis. This fact seems to me to be important, for the reason that so many observers have denied the occurrence of mitotic division in these cells. Now, it is the rule that when a cell undergoes mitosis, the protoplasm clears up in a most remarkable way and refuses to attract any of the ordinary dyes, while, of course, the nucleus is completely altered. Under these circumstances it must be admitted that it is impossible to identify the plasma-cell by its form or staining reactions. If, however, in a

mass of cells one is found in mitosis and all the others are typical plasma-cells, I think the assumption is warranted that the cell undergoing mitosis is of the same nature.

Besides the sections stained for histological appearances, many were stained for organisms by the Ziehl-Neelsen and other methods, but in no case was any organism found except in the horny layer.

The inoculated guinea-pig having remained quite healthy, the question of any tubercular complication in the production of this type of eruption may be considered as definitely settled.

As regards the method of production of this concentric arrangement, we have to admit that we are extremely ignorant. Two forms of explanation suggest themselves—first, that this after-development is due to a later shower of the syphilitic organism taking place into the skin, and secondly, that there has been sufficiently strong development in the original papules to enable local metastasis to take place around them, such as is not infrequently seen around malignant tumours. The latter explanation seems to me to be the more probable, as it accounts so much better for the peculiar grouping which occurs, but whichever is accepted the fact of the later appearance of these miliary lesions is strong evidence that the treatment is failing to control the disease.

REMARKS ON REINFECTION IN SYPHILIS.

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IN this article I assume that the possibility of an individual acquiring two attacks of syphilis, *i.e.*, two separate infections, has been proved. Many observations by skilled observers have been recorded, which seem to put the matter beyond any doubt. In order to prove reinfection, it is of course necessary that the patient should pass through two distinct attacks of *secondary* syphilis. The occurrence of a second chancre, even if indurated, is not sufficient proof unless it is followed by secondaries. A list of cases was