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A CLINICAL STUDY OF SOME PYOGENIC LESIONS OBSERVED IN FRANCE.

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It is a well-recognised fact that during war-time new disease conditions arise with which we are unfamiliar, and that known conditions alter in type and character. This change is most probably due to the altered conditions of life; the physical and mental strain which must necessarily tax the resisting powers of the body to the utmost. This applies in the domain of dermatology as in the diseases of the other systems, and I think that other medical officers dealing with skin diseases will agree with me in this matter. For example, there is an intractable type of *Seborrhœa corporis et capitis* subject to frequent relapses with secondary pyogenic infection; there is the unusual complication of adenitis of the groin in scabies when there is no secondary infection to account for it; there are various types of impetigo which present features not commonly seen in civil life.

The type of infection I wish to confine myself to is the infective streptococcal condition so commonly met with on the buttocks and lower limbs, a type which causes a great deal of destruction of tissue and which is a great source of wastage to the Army.

It is a form of impetigo which requires to be clearly differentiated from the milder condition met with so frequently on the face and

head, although both are of streptococcal origin. This difference may be partly explained by the situation on the lower limbs and the consequent much greater exposure to irritation by dirt and perspiration. The initial microscopic lesions may be the same in both cases, but by the time they become macroscopical there is a distinct clinical difference which becomes more marked as the lesions enlarge. Impetigo as it commonly affects the head and face amongst the soldiers on active service is practically identical with that observed in children in civil life, though, as a rule, it is more intractable to treatment and more acute. The initial lesion is a clear or opalescent vesicle which only involves the superficial layers of the epidermis, and which very quickly spreads and passes from this stage into the superficial crusted lesions, in which the crusts have the characteristic "stuck-on" appearance with but little or no surrounding areola. On removing this crust a very superficial abrasion is found, freely exuding serous fluid, in appearance not unlike a slight burn. Even in a very acute widespread case of impetigo of the face it generally retains the same characters. In the impetigo under consideration the early macroscopical lesion is a pustule quite recognisable when the size of a large pin-head but still more so when a little larger. From the earliest stage this pustule is surrounded by a distinct inflammatory areola. On opening the pustule and cleaning away the pus a tiny shallow ulcer is exposed, differing clinically from the superficial abrasion in impetigo of the face, though possibly only one of degree. This small pustule is not associated with the hair-follicles like the staphylococcic folliculitis, although the hair-follicles may become ultimately involved. As the lesions enlarge they tend to become oval and begin to dry in the centre. When they reach the size of a split-pea without being ruptured the appearances are very characteristic. There is a central greenish-brown colour due to the drying process, surrounded by a yellow zone at the spreading border where the pus is still liquid, and beyond this there is a well-marked inflammatory areola which becomes very wide in the later stages and is so different from the impetigo of the face. The corneal layer of the healthy skin is continued without interruption over this inflammatory pustule except that it is beginning to dry in the centre. The ulcer, which is exposed on cleaning away the pus, has also very characteristic appearances. Its borders are sharply defined; its

edges precipitous; the whole ulcer cup-shaped and the base granular. The sores are painful.

As the condition progresses thick crusts form of a dark-brown colour and cover the whole of the lesion. It is at this stage that the lesions assume the appearance of the more common impetigo—with the “stuck-on” crusted condition—or they may become ruptured, the exuding pus and serum dries on, greatly adding to the thickness of the crust and sometimes producing a rupoid condition—hence the name *rupia* of Bateman.* When they reach the size of a sixpenny-

FIG. 1.—Shows the early streptococcal lesions on the forearm. Two of the lesions are intact, showing small oval pustules starting to dry in the centre with a wide inflammatory areola. The larger circular lesion is one from which the pus has been removed, exposing a sharply-defined shallow ulcer. At this stage pure cultures of streptococci may be grown.

piece to that of a shilling-piece, the acuteness usually subsides and the inflammatory areola assumes a livid hue. The contents of the sore under the crust become more liquid and often blood-stained. Finally, there is left a very unhealthy crusted ulcer varying in depth from $\frac{1}{8}$ to $\frac{3}{8}$ in., and which bleeds readily. The edges of these ulcers become infiltrated and rolled; assume a punched-out appearance very

* The lesions at this point clearly come under the category of “ecthyma.”

suggestive of a syphilitic gummatous ulcer. These callous ulcers are found almost entirely on the lower limbs and chiefly below the knees.

When seen at this stage these cases are often sent into hospital diagnosed "syphilis." When the healing process is complete, well-marked, sharply-defined scars and pigmentation are left which also are often mistaken for old syphilitic lesions. To a certain extent the appearances left after the lesions are healed depends upon the chronicity and depth of the ulceration. It was the teaching at one time that the characters of the syphilitic scar were that they were

FIG. 2.—Showing large unhealthy ulcers, staining and scarring on the site of old healed lesions, and two tiny inflammatory pustules. One of these tiny pustules spread rapidly and developed into a large ulcer similar to those shown in the figure while the patient was under treatment in hospital.

sharply-defined, complete, slightly depressed if anything, and the scar tissue was usually soft and silky and surrounded by a zone of pigmentation. These are just the characters that some of the healed callous ulcers present. There is never, however, any of the serpiginous character as is found in the old tertiary syphilides.

It is not to be inferred that all the lesions go on to the formation of large callous ulcers. There are all stages and degrees of the infective process, but the primary pustule is the same, and a culture

from these early lesions gives a pure growth of streptococci: also the superficial type of impetigo may be present at one and the same time on the limbs.

Relapses are frequent. It is not uncommon for patients to be returned to hospital within one or two weeks with fresh sores; or a patient will be discharged to duty from one hospital after six to eight weeks' treatment only to be readmitted to another within a very few days. The wastage to the Army may amount to four months or more in some cases. Frequently these men stated that it was the wearing of puttees which precipitated each attack.

FIG. 3.—Two large, punched-out, sharply-defined ulcers with rolled thickened edges. This is the type of lesion which has been mistaken for gummatous ulcers of syphilitic origin.

Bacteriology.—From the frequency with which pure streptococcic growths were obtained from these pustules on different media there appears little doubt that the lesion is primarily due to the streptococcus. In the larger lesions very often the streptococcal growth was contaminated by *Staphylococci albus* and *aureus*. The latter sometimes quite overgrew and obliterated any possible trace of the streptococcus. The bacillus pyocyaneus was found in a few of the large sores. To what extent the secondary staphylococcic infection takes part in the destructive process it is a little difficult to say, but doubtless it plays an important part. Pure staphylococcic conditions—boils and folliculitis—frequently complicate the condition and add

greatly to the difficulty of treatment and the duration in hospital. Wassermann reactions were done in all cases with negative results, also the edges of the sore were scraped and serum examined under dark ground illumination with negative results. There was no question of the ulcers being of varicose origin.

Treatment.—There is little to add to already known methods. One can emphatically lay stress on the great importance of rest in bed in all acute cases or in those with any degree of ulceration. Treatment was often ineffectual until patients were put to bed and not allowed to do hospital fatigues. Even comparatively trivial cases would sometimes require rest in bed before healing took place. The

FIG. 4.—This plate was taken some months after the healing process was complete, and shows the central white scar with its surrounding deep pigmentation.

essentials in local treatment were the perfect cleaning of the sores, and dressing twice daily, if possible. Almost every application was tried, including scarlet red, brilliant green lotion and ointment. The most satisfactory applications were a 20 to 30 per cent. ichthyol ointment containing $\frac{1}{6}$ per cent. perchloride of mercury, bismuth iodoform paraffin paste, red lotion, eusol, and boric fomentations. Each had its own place and use. Scarlet red and brilliant green were only useful when the sores were fairly clean, and even then gave no better results than the other things properly applied. Strapping the callous ulcer with boric acid powder sometimes gave excellent results.

N.B.—Since this paper was written a few cases showing very

similar pustular lesions have been met with in which the bacteriological examination revealed a Gram-negative diplococcus in direct smear and giving a pure growth in blood-agar, and morphologically similar to the gonococcus but rather smaller. The organism was put through the sugars and found to give an acid reaction without any gas formation in glucose, lactose and saccharose.

UNILATERAL STRIÆ ATROPHICÆ (STRIÆ CUTIS
DISTENSÆ) OF THE THORAX.*

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THE patient, A. G—, a young man, aged 18 years, a tailor, was admitted to hospital on June 29th, 1917, with severe pulmonary tuberculosis, more advanced in the right lung, in which lung there are extensive cavernous signs. He has moderate pyrexia, of the hectic type, and his sputum contains abundant tubercle bacilli. He himself says that his illness commenced with "influenza" in October, 1916, up to which time he had not been severely ill. Since the commencement of the illness, he says he has been accustomed to lie on the left side (or rather, half-turned to the left side), because whenever he tries to lie on the right side he starts coughing, and lying on his back also brings on coughing. Over the left lower postero-lateral portion of the thorax he has a cluster of "cleavage" stripes, so-called *striæ atrophicæ* or *lineæ atrophicæ* (also called *striæ cutis distensæ*), which he states developed about one and a half weeks before admission to hospital, that is to say, about the middle of June, 1917. They are still purplish in colour, and have not yet acquired the glistening white appearance of so-called *lineæ albicantes*, into which they may be expected to develop later on. Their shiny transparent surface allows numerous small blood-vessels to be seen in them on close inspection, but this gives them, when viewed from a little distance, their diffuse purple tinge. They are arranged transversely to the long axis of the body, as such *striæ* always are, when they occur on the thoracic or lumbar region of the back. In the present case they occupy, as already stated, the postero-lateral infrascapular

* Case shown at the Dermatological Section of the Royal Society of Medicine on July 19th, 1917.

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