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Conclusions.

- (1) Jansen's results have been confirmed.
- (2) The method of isolating the anti-neuritic vitamin has been modified by using acid water in place of acid alcohol.
- (3) Thymol has been found to be satisfactory in preventing the growth of moulds.
- (4) The yield when acid water is used is comparable to that obtained by dilute alcohol.
- (5) A preliminary study has been made of the absorption spectrum of the vitamin solution.

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UNUSUAL DISPLACEMENTS OF THE EPIPHYSIS OF THE PATELLA.

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Quetta.

THE striking point about these two cases is not so much the fact that the actual ossifications were of extreme rarity, as the fact that these rare ossifications showed

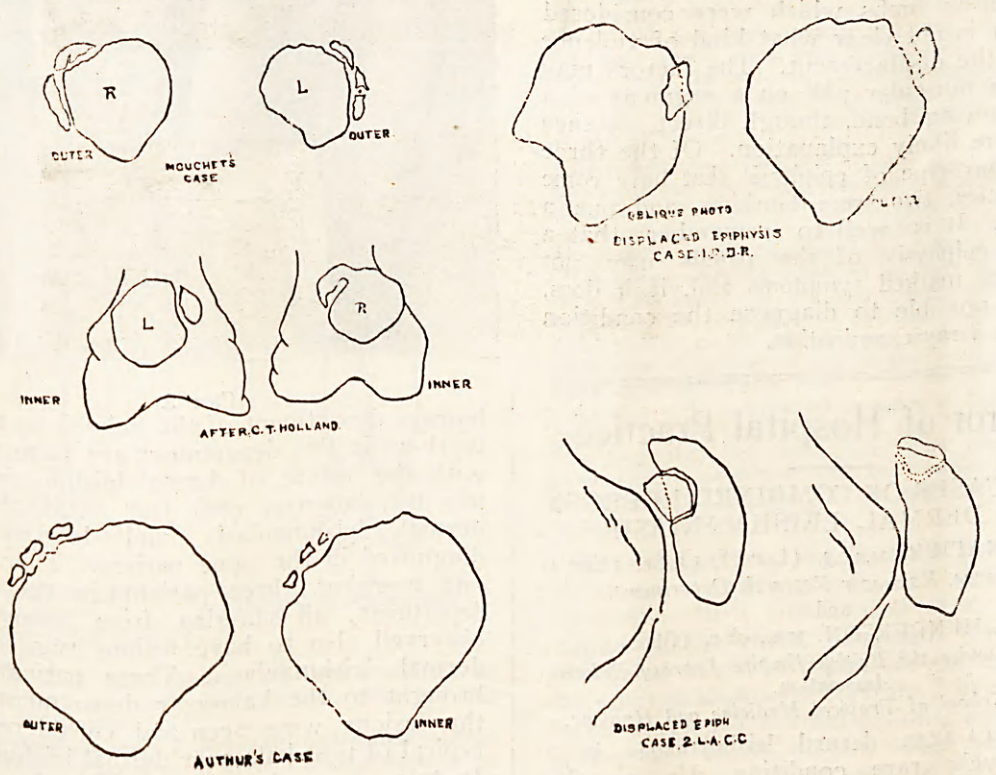
definite displacement. My object in placing these cases on record is on account of (a) the possibility of the true nature of the case being missed, (b) the evaluation of the patient's story as to when he sustained an injury may be verified radiographically, (c) the medico-legal aspect, as well as the service liability in the case of the patient being invalided.

Ossification of the normal Patella.

The patella normally ossifies by a single centre, which appears in the second or third year, or at the latest the sixth year. Occasionally the bone is developed from two centres, placed side by side. Ossification is complete at puberty.

Rare ossification.

A third type of ossification occurs, and has been described by various writers. Previous to the year 1919 there was practically no literature on the subject, and the case records are still very small. Dr. C. T. Holland was probably the first radiologist to point out the value of recognizing the condition from the diagnostic and medico-legal point of view. He described one case (1921) and quoted another from Mouchet (1919). In these cases there was no displacement of the epiphysis, neither was the possibility of such an unusual occurrence mentioned in their writings. In order to demonstrate what the displacement of these rare epiphysis looks like, I reproduce drawings from Holland and Mouchet, and also from one case of my own. In these three cases no displacement has occurred. It will be best to examine these



drawings before those of the two cases where there is displacement. One remarks (a) the fragmented appearance, (b) the lack of uniformity in all three cases, (c) the ossification is generally on the upper and outer side of the bone. One wonders whether Mouchet's case is not simply a modification of the type where the two centres occur side by side.

Displacement in cases of rare ossification.

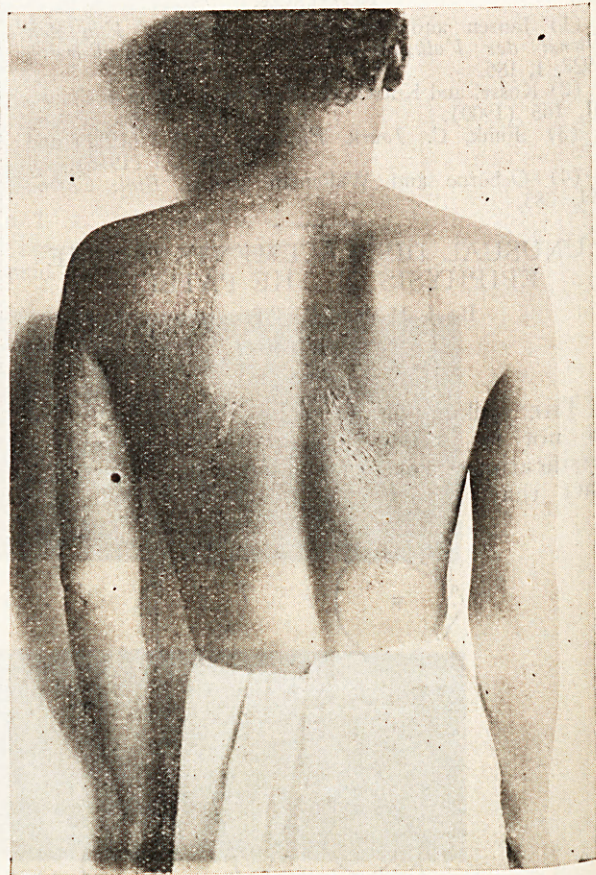
Case 1.—D. B. R., a Gurkha, aged 35 years. He gave a history of having sustained an injury to his left knee at the age of four or five years. Since that time he has always complained of weakness of both knees. A year ago he had synovitis of the left knee, which was brought on by hitting his knee against a door. The condition got quite well. When x-rayed now he had synovitis of the right knee, which he stated was caused by a fall. Radiographically the right knee showed the rare type of epiphysis just described and the left knee showed the same type but in that case the epiphysis was displaced (*vide* drawing D. D. R.). There was no question of arthritis in this case.

Case 2.—L. A. C. C., a European, aged twenty-two. Was unable to remember any severe injury in childhood. As long as he remembers, both knees have been rather weak, but not markedly so. He fell on his left knee-cap five days ago. At the time of his x-ray examination he was practically well again, and was merely sent in order to exclude fracture. Radiographically his left patella showed the rare type of ossification without displacement, and the right patella showed the same type displaced backwards. There were no arthritic changes in the knee joints. The patient went back to his work after about a week.

Remarks.

Both of these cases raise the interesting question as to when exactly did the displacements occur. Obviously it was some time before puberty. There was no question of compensation or liability as the displacements were seen in limbs which were considered sound. It is not clear what kind of violence produces the displacement. The factors may be sudden muscular pull on a segment of a young growing bone, though direct violence is the more likely explanation. Of the three cases of this type of epiphysis that have come to my notice, two were Gurkhas, and one a European. It is well to remember that a displaced epiphysis of the patella may not give rise to marked symptoms and, if it does, it is not possible to diagnose the condition without an x-ray examination.

beginning of 1927 only 3 definite cases had been described in the literature; then Acton and Napier (1927) reported on 44 cases collected at the Calcutta School of Tropical Medicine and Hygiene during a period of about a year. Notes have been made on all cases attending since October 1927; since this date 80 more patients with this disease have been seen. A history commonly given by a patient suffering from this condition is that he has been advised by a doctor to take, and has taken, a full course of some anti-syphilitic preparation, naturally without improvement; he has then been told by another doctor that he is suffering from leprosy, and has been treated accordingly. Thus a very large proportion of our cases come *via* the



Case 3.

leprosy department of the School, so that the workers in this department are quite familiar with the lesions of dermal leishmaniasis. It was not, however, until July 1928, that both dermal leishmaniasis and leprosy were diagnosed in the same patient. Then during one morning, three patients in the leprosy department, all suffering from leprosy, were observed also to have lesions suggestive of dermal leishmaniasis. These patients were brought to the kala-azar department where the lesions were seen and considered to be typical of post-kala-azar dermal leishmaniasis. In two cases the parasite was found in a

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THREE CASES OF COMBINED LEPROSY AND DERMAL LEISHMANIASIS.

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POST-KALA-AZAR dermal leishmaniasis is a comparatively rare condition. Up to the