THE TREATMENT OF RECENT TRANSVERSE FRACTURE OF THE PATELLA.

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I WAS very much interested in the report of the clinical lecture delivered by Mr. Barker at University College Hospital dealing with the past and present methods of treating by operation recent cases of transverse fracture of the patella, and recording in detail the new method adopted by him with certainly very gratifying results, judging from the cases which he has quoted.

The operation, as performed by Mr. Barker, has been described by him as subcutaneous, but it decidedly is not so in my opinion, as, in the first instance, he makes an incision two-thirds of an inch in length by means of a narrow-bladed knife into the joint at the lower border of the patella, passing through the middle line of the ligamentum patellæ. A similar incision is also made into the joint through the quadriceps tendon immediately above the upper fragment. Thus, in the first place, the joint is opened, and in one of Mr. Barker's cases he evacuated as much as 8 or 10 ounces of clot through his incisions, and, taking this into consideration, I fail to see how this operation can be rightly described as subcutaneous.

With regard to the ligature being passed into the joint, this would have seemed to me to be an insuperable objection to this method, as I should have expected, under these circumstances, to get arthritis, resulting in, at least, a stiff joint, but this does not appear to have been the result of Mr. Barker's operation.

Again, the knot in this method is placed in a very inconvenient position, namely, in front of the knee, and might possibly be the cause of a good deal of pain, especially if the ligature be of wire, and the patient's employment such as to necessitate much kneeling.

The operation which I intend performing when a suitable case presents itself, and which I have tried upon the cadaver, seems to me to be very much preferable, in that, in the first place, it is strictly subcutaneous, and, in the next place, it does not interfere with the joint and so does not give rise to any possibility of inflammatory complications or a stiff joint.

A, the needle in first position carrying the end, B, of the silk ligature.

My procedure is as follows, and is applicable to recent transverse fractures of the patella: The patella fragments are first adjusted by the hands of an assistant, and then a stout, well-curved pedicle needle on a handle is passed through the skin about the centre of the outer side of the knee and pushed slightly upwards subcutaneously until it reaches the upper border of the patella; the needle is now thrust through the quadriceps tendon as near to the upper border of the bone as possible; then the point of the needle is depressed and the skin on the inner side of the joint is drawn upwards, and

the point of the needle, armed with sterilised silk, is forced through the skin on the inner side of joint; the needle is then withdrawn, leaving the silk *in situ*. The needle is again passed as before from the outer side of joint through the same puncture in the skin as previously, and directed slightly downwards until it feels the lower edge of the lower fragment of the patella; it is then thrust through the liga-

A, the needle in second position being passed unarmoured, and receiving the end, B, of the ligature.

mentum patellæ, and, the skin on the inner side of the joint being drawn downwards, the point of the needle is then thrust through the same puncture as will be seen occupied by the silk. The needle having been passed unarmoured, is now threaded with the silk end which protrudes from the puncture and withdrawn, with the result that the silk disappears through the opening on the inner side of joint, and the two ends appear at the same puncture on the outer side of the knee.

C, B, the ligature passing round the patella and the ends protruding from the same puncture in readiness for tying.

The broken fragments are then rubbed well together so as to secure perfect apposition by the removal of any clots, etc., that may have intervened. The ends of the ligature are drawn tightly together and knotted, and the knot slips through the puncture in the skin on the outer side. Thus a permanent ligature is passed round the patella subcutaneously; there is no wound to dress and the joint is not interfered with. The patient is kept in bed on a back splint, and would not be permitted any movement of the joint for about ten days.