A CASE
OF
POPLITEAL ANEURISM,

SUCCESSFULLY TREATED BY
FLEXION OF THE KNEE-JOINT.

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COMMUNICATED BY
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I HAVE ventured to bring this case under the notice of the Fellows of the Royal Medical and Chirurgical Society, under the impression that they may be interested in the successful treatment of so formidable a disease as popliteal aneurism by the simple flexion of the knee-joint.

J. S—, æt. 41, consulted me in the month of September, 1858, having a popliteal aneurism in the right ham. It was globular, of the size of a small apple, and situated at the lower and outer part of the popliteal space. It had a full beat, but was not very near the surface.

Placing the patient on the sofa, and baring the leg in

order to make a careful examination of the tumour, I found that its pulsation was affected by the angle at which the leg was bent upon the thigh, and that when very complete flexion was effected, its thrill almost wholly ceased. Concluding that in this position the course of the blood through the tumour was greatly retarded, I conceived the hope of effecting the cure of the aneurism by the deposition of active¹ clots, if the leg could be retained for a sufficient length of time in the bent position.

My patient had been taking active exercise, and I thought it desirable to enjoin a week's rest in bed before the commencement of any plan of treatment. During this time he complained greatly of pain in the right ham, which prevented him from sleeping at night. In other respects his health was good.

At the commencement of the second week I bandaged the leg from the foot to the knee, not covering the tumour, and having thoroughly flexed the leg on the thigh, retained it in that position by the application of a stout roller. He was a thin, wiry man, and the flexion produced no inconvenience to him at the time. On the same evening, he complained that the position was not very comfortable; the bandage had become slightly loosened, and I tightened it.

Next morning I found that he had slept moderately well. He had passed a better night than any during the preceding week had been. The pain due to the aneurismal tumour was considerably lessened. He felt some pain referred to the knee-cap, and occasioned by the flexion; but he said that this was "very trifling, and barely deserving to be called pain." I pressed my index-finger into the angle of the ham, and could not detect any pulsation. On the evening of the second day his condition was unaltered.

On the morning of the third day he had passed a restless night, but free from the pain which he used to experience. He complained of pain at the knee-cap, and of the skin feeling tight, as though the knee were too much bent. I unloosed the bandage and slowly moved the leg to a right

¹ See Broca, 'Des Anévrysmes.'

angle with the thigh. This relieved him of that sensation. I could now examine the tumour, which felt hard and partially solidified. I could detect a faint thrill, but there was none of the strong throbbing which was present in the first instance. At night I again fastened the leg in its former position.

On the fourth day his condition was most satisfactory, and did not call for any change. I could not detect any pulsation by inserting my forefinger into the angle of the ham.

On the fifth day he was somewhat restless, had not slept much during the night, and there was some pain at the knee-cap. He was cheerful and of good appetite.

I removed the bandage, and again drew down the leg to about a right angle with the thigh. The tumour was now hard and solid, and I could not detect any pulsation.

I allowed the limb to remain in this position during the day, with a light bandage fastening the foot to the thigh.

Next day I found the leg at a somewhat obtuse angle, the patient having slightly lowered it, and in consequence of the relaxation of the bandage. There was not any pulsation in the tumour, which continued to be hard and solid to the touch.

On the seventh day I attached the leg to the thigh at a slight angle, and allowed the patient to move about, the foot being slung.

On the twelfth day the leg was completely straightened, and the patient walked on it with ease, limping as he walked from the stiffness consequent upon the previous confinement of the knee-joint.

Six weeks subsequently the tumour was greatly diminished in size, but still hard and firm. It was then seen by Mr. Coulson. Three months after treatment the tumour was not perceptible, and there was no pulsation in this part of the artery. He was then seen by Mr. Buxton Shillitoe, who happened to be present when my patient presented himself.

During the course of the treatment he was seen by my friends, Mr. White Cooper, of St. Mary's Hospital, Mr. Holmes, of St. George's Hospital, and Mr. Flower, of Middlesex Hospital, by whom the progress of the case was observed.

The treatment by flexion in this case was perfectly and immediately successful. It was unattended with any difficulties, it offered no inconveniences, and was not followed by any other than satisfactory results.

The case, however, was one particularly well suited to such a plan of treatment. The patient was not stout, which renders flexion difficult; nor was he aged, which makes it painful. The tumour was of average size and of average prominence; when the knee was bent it was below the line of flexure. I believe that these are all favorable circumstances.

Cure is evidently effected in this method by the retardation of the current of blood, and the consequent deposition of active clots in the sac—the only manner in which satisfactory cures could be anticipated.

This result is probably effected by the combined influence of pressure on the sac and acute flexion of the artery.

In so far as it is due to pressure, it appears to be a return to the old method of treatment by direct pressure, but it is free from the inconveniences of the screw and pad, which were open to the reproach of occasioning gangrene of the skin, rupture of the sac, and other accidents.

Its simplicity, and its success in this case, appear to strongly recommend it for further trial. If it be not always successful, there is not any other method free from the same objection; and there appears reason to hope that this principle may admit of efficient application to other cases in which aneurismal tumours are developed opposite to the joints of the limbs.