A CASE
OF
ANEURISM OF THE POPLITEAL ARTERY,

CURED BY COMPRESSION OF THE FEMORAL ARTERY.

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AND

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COMMUNICATED BY EDWARD STANLEY, F.R.S.,

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ON 2nd May 1844, Private John Hedley, ætat. 27, 1st Battalion, Coldstream Guards, walked to the Hospital and complained of pain and swelling behind the right knee, which had obliged him to fall out of the ranks on returning from a quick drill in Hyde Park.

On examination, a large irregularly-shaped aneurism was found filling up the popliteal space, strongly pulsating, and admitting of being partially emptied by pressure. It was tender and painful, the leg and foot somewhat swollen, and veins turgid. The swelling prevented his straightening the knee-joint, the circumference of which, taken over the middle of the patella, was $17\frac{3}{4}$ inches, but of the sound knee only $15\frac{1}{2}$ inches. He had perceived the

tumour only a few days before his admission into the Hospital.

His health has been always good since he enlisted four years ago, as well as before that time, when he was a farm servant: his height 6ft. 1½in., weight 14st. 4lb. Pulse 84, natural, and, excepting the aneurism, he has every appearance of strong health, and is reported to be a man of regular habits.

Rest in bed, and some opening medicine, relieved in a few days the pain in the tumour, and the slight cedema of the foot.

When he had been a week in the Hospital he was attacked by acute laryngitis, which required active treatment, blood-letting, &c., and in a few days after recovery from this alarming seizure, a repetition of similar measures was necessary, together with blisters and mercury, until ptyalism occurred, to subdue a sharp pleuritic inflammation of the right side.

On his convalescence in the beginning of June, it was intended to treat the aneurism, which had meanwhile slowly enlarged, in the ordinary manner by ligature of the superficial femoral artery; but by Mr. Guthrie's recommendation, the treatment lately so successful in Dublin was adopted, and simple pressure applied on the vessel.

The prevalence of erysipelas in the Hospital was an additional inducement to prefer this advice, to the operation.

An instrument was made for the purpose by Mr. Weiss. It consisted of an Italian tourniquet, a broad short splint to fit the outer and back part of

the thigh being substituted for one of the usual pads, as less likely to cause pain and sloughing.

It was first applied on the 18th of June, on the artery at about six inches below the fold of the groin, and the pulsation of the aneurism stopped; but on visiting him shortly afterwards it was found to beat again with unabated force, and this was the case over and over again, although the shape of the pad was changed, and various other little alterations tried.

He had now the ill luck to be attacked by modified small pox, which, although slight, occasioned necessarily some relaxation in the treatment of the aneurism.

The same constant escape of the vessel from beneath the pad occurred until the 8th of July, notwithstanding pressure was made as strongly as he could bear it, or as was advisable for fear of sloughing. The knee then measured $18\frac{3}{4}$ inches, and the tumour had become softer on the outer side, the pulsation and bellows-sound being very strong and loud. On the 8th of July the plan was adopted of screwing the pad down firmly, and leaving him the key, so that he might, when the pain became intolerable, and "burning like a hot iron," to use his own words, relax the pressure by turning the screw for an instant or two, taking care always to apply his thumb or fingers with all his force on the artery just above, in order that during these short but frequent intervals the passage of the blood should still be retarded, if not stopped.

On the 9th of July this method was found to have been successful, the tumour was now perfectly solid, and no pulsation or bellows-sound has since been detected in it.

The instrument was kept applied as described, for nine days after the pulsation had ceased, to avoid any risk of the stream of blood again making its way into the aneurism : on the afternoon of the 18th of July it was entirely removed, Mr. Stanley agreeing in the opinion that all danger had passed. The skin under the pad was slightly inflamed, and three or four small blisters had risen there ; beyond this, there was no damage done by the instrument. The superficial femoral artery was clearly felt to pulsate down to its entrance into the tendinous canal, though perhaps not quite so forcibly as in the opposite thigh. Two arteries as large as crow-quills employed in the collateral circulation, were felt passing downwards on the surface of the now hard and solid tumour.

On the 9th of August, the tumour having diminished, he was allowed to walk about on crutches. On the 24th he walked well with a stick, and could put his heel to the ground. From this time the progress of the case may be told in a few words. He has been kept in the Hospital, but allowed to be up and about all day. Absorption of the contents of the aneurism has proceeded very slowly ; with a view of hastening it, friction with stimulating liniments, and gentle pressure by the application of a flannel bandage, have been used.

On the 8th November the measurements were, of the right knee $16\frac{3}{4}$ inches, of the other $15\frac{1}{2}$ inches : although he can perfectly straighten the joint, he finds it easier to walk with it slightly bent. The tumour in the ham is hard, flattened, and yet nearly as large as a hen's egg : on its surface the vessels above mentioned are still perceptible. His general health has been very good, and he has grown fat and stout. On the 14th November he was dismissed the Hospital, and returned to his battalion in the Tower, to undertake light duty.

January 18th, 1845.—He performed the light duty until the 12th December, when he was placed on full duty, which he has efficiently discharged ever since. The tumour does not now feel as it did after pulsation had ceased, namely, dull and solid, but rather elastic, and has undergone a further diminution, the circumference of the knee being about a quarter of an inch less than it was when he was discharged the Hospital. He has continued in good health, and is an active man.

P.S.—The following was the state of the patient on the 6th of June, as reported by Mr. Robinson in a letter to Mr. Greatrex :—" I measured Hedley's knee this morning—it is $15\frac{3}{4}$ inches around—the other 15 inches,—precisely the same dimensions as when you last saw the man. The tumour to the touch is much the same as when you left town : it gives him no inconvenience. He is stout and well, and does all his duty."