CASE
OF
ANEURISM OF THE EXTERNAL ILIAC,
IN WHICH A LIGATURE WAS APPLIED TO THE COMMON ILIAC
ARTERY.

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SINCE John Hunter expounded the true principles on which the cure of aneurism is to be attempted, an increasing confidence in the resources of their art has led surgeons to apply the principle of stopping the circulation through the diseased vessel to the most important arteries, not even with the exception of the aorta itself: so that the case which I am about to relate to the Society will not deserve attention on account of originality, although I presume to hope that it presents some features of interest, which may render it not altogether unworthy of notice.

Before I relate the particulars of the case in which I had the satisfaction of successfully tying the common iliac artery for the cure of a large aneurism

of the external iliac, I shall take the liberty to present a short account of the cases in which a ligature has been applied to this important artery.

1. Professor Gibson, of Pennsylvania, seems to be the first individual who has given us any account of this operation; he tied the common iliac for a gun-shot wound in 1812, but the patient died on the 13th day, from peritoneal inflammation.

2. The second case upon record was one in which Dr. Mott, of New York, tied this vessel for the cure of aneurism of the external iliac in 1827: the ligature came away on the eighteenth day, and the patient recovered.*

3. Sir P. Crampton tied this artery in 1828 for aneurism of the exterior iliac, but death ensued on the fourth day, from hæmorrhage. It is much to be regretted in this case that a common silk ligature was not used: had this been done, probably a different result would have ensued.†

4. Mr. Liston, in 1829, tied the common iliac for secondary hæmorrhage after amputation. The patient was a boy eight years old: he died very soon after.

5. Mr. Guthrie applied a ligature to this artery for supposed aneurism of the gluteal artery. The patient recovered; but having died eight months afterwards from another cause, it was ascertained that no aneurism had existed.

* Article "Aneurism," by Mr. Wardrop, in the *Cyclopædia of Practical Surgery*.

† *Medico-Chirurgical Transactions*, vol. xvi.

6. In 1837, M. Salomon, of St. Petersburg, tied the primitive iliac with success.

7. Mr. Syme, of Edinburgh, performed this operation in 1838: the patient died on the fourth day.

8. The common iliac was successfully tied by M. Deguise, at the Hospital of Charenton, in 1840.

9. Dr. E. Peace, of the Pennsylvania Hospital, applied a ligature with complete success to the common iliac in 1842, for the cure of aneurism of the external iliac artery: a detailed account of this case may be found in the first volume of the Medical Gazette for the session of 1842-3.

From this account it will appear that the operation has been performed nine times; and although it has not hitherto been very successful in this country, yet upon the whole, if we add the one which I now relate, we have a decided preponderance of successful over unsuccessful cases,—as six to four.

The following is a brief account of the case which fell under my care.

On the 22nd of November 1843, I was requested to visit Mr. Taylor, of Acomb, near York, in consultation with Mr. Nelson and Mr. Ellis, surgeons. I found a large pulsating tumour, situated above Poupart's ligament, which, according to Mr. Nelson's account, had increased in the course of ten or twelve days from a very small size; appearing at first like a cluster of enlarged glands, being very hard, and devoid of any remarkable character. In two or three days, however, its sudden and rapid

increase, accompanied with great pain along the course of the anterior crural nerve, and pulsation, left no doubt as to the real nature of the complaint, viz. that it was aneurism of the external iliac artery.

I visited Mr. Taylor, on several occasions, until the 2nd of December; when, as the tumour was rapidly increasing, and the skin threatened to give way under the progressing disease, I determined, with the sanction of my brother, Mr. W. Hey, of Leeds, who had been requested to see the case, to apply at once a ligature to the common iliac, as the only means of possibly saving the patient's life. There were present at the operation—Mr. Nelson, Mr. Ellis, Mr. W. Hey, and Mr. Teale, of Leeds; Mr. Dodsworth and Mr. Reed, of York.

The tumour now occupied the whole of the left iliac fossa, extending from below Poupart's ligament to within little more than an inch from the umbilicus; the vertical diameter was six inches, the transverse six inches and a half; the swelling also projected at least three inches from the plane of the abdomen. It presented all the usual characters of aneurism. The patient was placed on a mattrass, inclining somewhat to his left side, and his shoulders moderately raised.

I commenced the operation by an incision which reached from about two inches and three quarters above the umbilicus to the base of the tumour, being about six inches in length, and moderately curved; this was afterwards extended by an angular continuation an inch and a half in length; it was also

exactly three inches to the left of the median line. The fibres of the external and internal oblique and transversalis muscles were successively divided ; and the transversalis fascia having been readily raised with a director, was carefully opened, to an extent equal with that of the external incision. The peritoneum now protruded, but being greatly depressed and drawn towards the opposite side, I was enabled slowly to insinuate my fingers behind it, so as to separate it from its cellular attachment to the adjacent parts. The common iliac artery was easily reached, and its compression with the finger instantly stopped the pulsation in the tumour. A little time was occupied in scratching through the sheath of the artery ; a common silver aneurism needle was now passed under the artery, armed with a double ligature of staymakers' silk, waxed. By holding aside the peritoneum and viscera, a momentary view of the artery was now obtained, and its complete isolation ascertained. The ligature was then tightened with the fingers close down upon the artery, when the pulsation entirely and finally ceased. The situation of the ligature was I believe an inch below the bifurcation of the aorta, or very little more.

The wound was closed with sutures and strips of adhesive plaister, and over the whole was placed a coating of lint dipped in strong mucilage. The time occupied by the operation was 25 minutes.

After the operation, the patient was much exhausted, notwithstanding the little blood lost, no

vessel having required to be tied. He vomited some brandy-and-water, which had been given to him during the operation, but a cup of boiled milk was retained.

I shall not occupy the time of the Society with a lengthened account of the progress of this case. The wound healed, upon the whole favourably, and the ligature came away on the twenty-eighth day after the operation.

It is important to remark, that the temperature of the limb was much less affected than might have been expected. The limb was simply wrapped in fine flannel. It was found at first to have fallen three degrees below the temperature of the sound limb; on the third day it was two degrees warmer than the other, and on the fourth day both limbs were equal in that respect, and continued so. One source there was of anxiety in the after treatment, which I must not omit to notice. The patient complained of a constant sense of distension of the bowels, accompanied with violent spasm, especially when the bowels were moved; and which was but partially relieved by the use of aperients and anodyne injections. On the 4th of January (thirty-three days after the operation) these symptoms assumed a very serious aspect. No action of the bowels could be obtained, the attacks of spasm were most distressing, the abdomen was tympanitic, and the patient became quite exhausted, slight coma denoting his dangerous condition. Mr. Nelson thinking it advisable to empty the bladder with the catheter,

found so much obstruction, as to induce him again to explore carefully the rectum. (This had already been done, in order, if possible, to find a clue to these repeated and painful attacks.) He now, however, found that bowel distended with an enormous mass of fæces, which he described to me as very much resembling the presentation of a child's head in labour.

This mass, which was perfectly dry and hard, was with difficulty broken down, and thus were these alarming symptoms at once explained and relieved, and the patient became rapidly convalescent.

There can be no doubt, that the pressure of the aneurismal sac on the colon prevented the contents of that viscus from descending into the rectum, thereby causing a gradual and formidable accumulation, and which was at length suffered to descend by the progressive absorption of the fluid in the sac.

On the 20th of January I found Mr. Taylor restored to his usual health, and able to take daily walking exercise.

It only remains for me to make a few brief observations.

1. This is the first case which has occurred in this country in which aneurism of its branches has been cured by tying the common iliac artery.

2. The extreme rapidity with which the tumour increased is, I think, worthy of note. When first observed, it was mistaken for a mere enlarged gland ; and in the short space of three weeks, in spite of

every effort to retard its progress, it had attained the large dimensions which have been described. The patient very nearly lost his life in consequence of his indecision after the operation was proposed. It may be a question for serious consideration whether, in a similar case, a surgeon would be justified in delaying the operation at all, after the real nature of the disease has been clearly ascertained.

I intended to have made some observations on the situation of the incision in this case, not only with regard to any future operation for the same disease, but also as affecting the operation for tying the aorta itself; but I observe that Sir P. Crampton has said all that need be advanced on the subject, in the account of his case already referred to. I see no reason to doubt the practicability of successfully tying the aorta itself, when we recollect the various instances in which that vessel has been found obliterated after death.

Finally, the alarming symptoms which threatened at last to destroy all our hopes should teach us to reflect, in every doubtful case, on the mode in which the deviation from a healthy condition of any structure may give rise to the most anomalous symptoms in another; for, in the case under notice, reflection might, possibly, have indicated to us that state of things which time showed really to exist, and so have led us daily to examine the state of the rectum, so long as the necessity existed.