PROVINCIAL MEDICAL & SURGICAL JOURNAL.

THREE CASES OF INGUINAL ANEURISM FOR WHICH THE EXTERNAL ILIAC ARTERY WAS SUCCESSFULLY TIED.

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The operation here announced is one of the few improvements due to British surgeons, the originality of which has never been questioned by our Continental brethren. No great operation has been attended with more success, in proportion to the number of times it has been performed. It is due to the genius of John Abernethy, a true disciple of John Hunter. More than one hundred examples of ligature to the external iliac artery have been placed on record; and Velpeau states that he noted seventy-one, and found only eighteen deaths, or one in four. Vastly more numerous are the unpublished cases without doubt, and hence the risk of such an assertion as has recently been made by Malgaigne, who, on relating a successful and solitary example in his own practice, assures us that it is only the fourth case of the kind that has been operated upon in Paris with a favourable result.

If any excuse can be offered for making public the following cases, it must be sought in the use to be made of them for statistical purposes, and their offering encouragement to provincial surgeons, of sufficient anatomical knowledge and practical experience, to undertake the operation on any suitable occasion.

CASE I.

This man was in the marine service for twelve years, and subsequently occupied himself as a labourer for three years. His age was 31 when he presented himself at the Hospital on the 2nd of June, 1818, having a pulsating aneurismal swelling, as big as two fists, in the right groin; it had commenced before he quitted the marine service, but increased so slowly, and caused so little inconvenience, that he took no advice about it until very recently. The disease had, however, made rapid progress in the last few weeks, and the patient on presenting himself, was immediately admitted, as he could not brook any delay. When the fingers were placed upon two points of the tumour remote from each other, it seemed to swell out at both these points at the same time, and the pulsation and thrilling could be distinguished equally at all parts of the surface of the swelling. It pulsated most forcibly; there was no mistaking its nature. As to its size, the circumference on its inner aspect reached to the angle of the os pubis, and outwardly it was within an inch of

the commencement of the spine of the os ilii; a line drawn straight from the summit of the symphysis pubis to the anterior superior spinous process of the ilium, left nearly one third of the tumour above it. The man was very slender, in good general health, and every way favourable for the operation of tying the external iliac artery. In five days there was perceptible increase of the tumour; it was decided that the operation should be immediately performed.

This patient came under the care of Mr. Bond, who at that time officiated as one of the surgeons of the Hospital, although possessed of as little anatomical knowledge as any man, perhaps, who ever filled such a public and responsible office; but he was a very intrepid man, had a steady hand, was acquainted with no causes for self-apprehension, and certainly made no nice distinctions in an operation, however delicate or dangerous. He possessed in an eminent degree the requisite qualification of attending to the suggestions of his colleagues; both Martineau and Dalrymple were present to direct him, and the straight incision was adopted, made four inches in length, and obliquely upwards and outwards; the three abdominal muscles were all cut through at once, a director having been previously passed under them through a small aperture made for the purpose. The peritoneum being thus exposed, it was pushed aside by the fingers. I forego some remarks which my note-book contains upon this part of the operation. The convex prominence of the upper part of the aneurismal tumour could be felt by the finger in the wound, and above it the pulsation of the external iliac artery directed one to its situation. It fell to my lot to place the curved blunt needle under the artery, armed with a single ligature of small size, and I accomplished this by passing the end of the needle between the artery and vein, whilst the forefinger of my left hand was pushed under the artery from the outer or iliac side, till it met the needle, and conducted it in the rest of its course. The vein afforded so little resistance that I could but just feel it; only when lightly touched could it be felt as a tube distended with fluid; it ceased to be distinguishable by the finger when stronger pressure was applied. The rule I observed was to keep the end of the needle close to the firm cylinder of the artery. The effectual application of the ligature was proved by the tumour ceasing to pulsate. Both ends of the ligature were brought out at the wound, which was closed by strips of adhesive plaster, without any sutures. I estimated that the part of the artery to which the ligature was applied was more than two inches above Poupart's ligament. I distinguished readily the brim of the pelvis, in this

deep situation, as far as my short forefinger could reach; and I noticed that "it would be more easy to push aside the peritoneum, and reach the common iliac, than to get at the internal iliac;" and I even carried my imagination so far as to remark upon the possibility of reaching the aorta in this way, just above its bifurcation, should a ligature to that vessel be ever again applied with any prospect of success, and a ligature on the distal side of an aortic aneurism be advisable as a desperate resource. These are speculative ideas of earlier days, and in reviving them I do not desire to give encouragement to any rash proceeding, so I will return to the case of the operated patient, and conclude in a few sentences the remainder of his fortunate history:—

Ten hours after the operation his only complaint was of pain in the right knee; the operated limb was one degree lower in temperature than the other, respectively 99° and 100°. As the pulse had risen from 65 to 80, sixteen ounces of blood were taken from the arm; a similar bleeding was performed next day. The temperature of each limb was the same as before, one degree difference; subsequently the operated limb rose in temperature to one degree above the other; the variation was never more than this. The ligature separated on the fifteenth day, followed by some discharge of matter from the wound, which speedily closed. In less than three weeks the tumour had so greatly subsided, as to equal a pigeon's egg only in size; this diminished tumour was situated exactly at the bend of the groin, which we may suppose to have been the seat of the aneurism at its commencement. A small abscess formed over the most prominent part of the tumour, and burst, but it did not retard the cure. In five weeks the man was walking about by the aid of crutches, and soon afterwards was allowed his discharge.

CASE II.

A healthy-looking sailor, aged 40, was admitted into the Hospital on the 16th of September, 1825, on account of an aneurismal tumour, about the size of a goose's egg, situated at the upper part of the left thigh, and between two and three inches below Poupart's ligament. He discovered the pulsating tumour a year and a half before, and attributed it to an accidental strain about fifteen months previously, but could adduce no satisfactory proof of this accident having anything to do with the disease. The pulsation was so strong, that at each systole of the heart the tumour appeared to be elevated three quarters of an inch.

The disease showed perceptible increase in a few days, and therefore it was determined in consultation to put a ligature on the external iliac artery without waiting longer. The patient came under the care of the same surgeon as the preceding case. The straight incision was adopted, to the length of five inches, and it was not deemed necessary to make it so high above Poupart's ligament in this case, the aneurismal tumour being out of the way. The pubic end of the external incision was distant three quarters of an inch from Poupart's ligament, and its other end was an inch and a quarter from the same ligament. The dissection was continued till the tendon of the external oblique muscle was clearly exposed for four inches in length, answering to the external incision; a small opening was now made in this tendon, through which the grooved

director was passed and conducted under it, enabling the operator safely to divide the tendon to the full extent of four inches, not in the direction of its fibres, but in correspondence with the original incision of the skin. To gain further room, the tendon of the external oblique muscle was afterwards divided upwards a little, at a right angle to the previous incision, which very much facilitated the rest of the operation. The scalpel was not again used, its handle and the operators' fingers serving for the rest. The transversalis muscle was visible, but did not require to be divided, yielding sufficiently without division, the pulsating artery being got at an inch above Poupart's ligament. Some embarrassment arising, I became engaged in the next step of the operation, and put the armed ligature under the artery, and which I found it easier to accomplish in this case, (although contrary to the ordinary rule,) by passing the needle on the outer side of the artery, and bringing it upwards between the artery and vein. The ostensible operator tied the ligature insecurely, making it necessary to pass another, which was effectually tied one third of an inch above the first, allowing the patient, who had been long upon the table, to be conveyed to his ward.

In the evening, his pulse being 100 in a minute, he was bled freely; the operated limb, which had been perceptibly cooler, had already become warmer than the other. His pulse subsided to 80; the wound granulated healthily, but the tongue was brown and parched; and at the expiration of twelve days he was restless, and complained of some pain in the abdomen, on account of which he was purged and again bled, with good effect. The ligatures came away on the sixteenth day. The aneurismal tumour subsided slowly, the integuments covering its most prominent part inflamed, and an eschar was formed, but it proved only superficial. In seven weeks the patient was walking about and in good health. He was not dismissed till the expiration of ten weeks, when his only complaint was of numbness and pain upon the instep and upper part of the foot, which troubled him most during the night. He was permanently cured of his aneurismal disease.

CASE III.

Henry Neave followed the occupation of wherryman, and was accustomed to carry heavy cargoes to his vessel—sometimes bricks, at others corn. His height was nearly six feet, and he presented all the appearance of a fine healthy man, when I first saw him, in August, 1842. Three or four months before this date, he discovered a tumour below the right groin, a little bigger than a common marble; for a short time previously he had experienced pain down the inner side of the thigh, extending to the knee. In the course of a few weeks the tumour attained to the size of a walnut. In consequence of its further and more rapid increase, and of the severe pain experienced, he applied to Mr. Copeman, of Coltishall, who recognized arterial aneurism just below the groin. The patient now desisted from his usual employment, and after the lapse of about a week, was sent to the Hospital, and admitted under my care on the 27th of August above noted. I found the tumour to be nearly as big as my fist, and pulsating violently; its superior limit reached very near to Poupart's ligament. Without the aid of the stethoscope, I could

not discover any *thrill* in the tumour, but the external iliac artery within the abdomen conveyed a distinct *thrilling sensation* to the fingers pressing upon the integuments, and immediately over it. The patient suffered severe pain on the inner side of the thigh and knee; the pain was increased on recumbency. Passing my fingers lightly over the inner side of the knee caused pain; proving a degree of morbid sensibility of the cutaneous nerves at their terminations, the result of pressure upon these nerves in their course over the tumour. The patient's pulse varied from 50 to 70, and was more frequently 60 in a minute. It was a clear case for applying a ligature to the external iliac artery; and having prepared *the patient* by rest and low diet, and *myself*, by a strict observation of him, as well as by reading, deliberating, and experimenting upon the dead subject, I operated at the Hospital on the 7th of September, assisted by my colleagues—Messrs. Norgate, Godwin Johnson, and Archibald Dalrymple.

I made the external incision just four inches and a half long, and curved, beginning it at an inch and a half from the anterior superior spinous process of the ilium, approaching within half an inch of Poupart's ligament at midway, and terminating above and on a line with the external abdominal ring. The adipose subcutaneous substance was above half an inch thick, and this having been divided to the full extent of the incision through the skin, I dissected the superficial fascia, and exposed the beautifully glistening tendon of the external oblique muscle, under which I passed a grooved director (having first made a small opening to admit the director) and cut through it to the extent of four inches. I now found that the cut edges of this tendon did not recede, but continued to lie close together, presenting a sharp resisting edge to the finger, which induced me to make the incision crucial by effecting a second an inch long over the middle of the first incision. By this procedure I exposed the internal oblique muscle, as well as gained great freedom for prosecuting the rest of the operation. I was able clearly to distinguish the cremaster muscle at its origin, and the lower edge of the internal oblique muscle; I separated these, leaving the cremaster to its course, but passing a director under the internal oblique for facilitating my dividing it to the extent of three quarters of an inch, nearly at a right angle with the course of its fibres. Thus I exposed the transversalis muscle, which there was no need to divide, as I carried my finger beneath its lower edge, thus pressing it aside, and effecting the next steps of the operation with the finger or the ivory-handle of a scalpel, viz., separating the fascia transversalis (which was fortunately not very dense, much less so than I found it in one of the *cadavera* I had operated upon experimentally,) and pushing aside the peritoneum, until I placed my finger upon the artery. I accomplished this last object without any very great difficulty or delay, and used the end of a director to open the sheath and bare the artery at a depth of two inches from the skin, and where the vessel answers to the brim of the pelvis. The patient strained violently just at this time, compelling me to delay, and a mass protruded which might have been mistaken for omentum, but it was simply adipose substance, coming from a concealed space

between the peritoneum and the transversalis muscle, and I quickly pushed it back again. It was well that I proceeded thus, dissecting layer by layer, and endeavouring to quiet and command the patient as I advanced, as he was most restless, screaming violently as often as he felt the slightest degree of pain inflicted. A sudden removal of the support to the abdominal viscera might, I conceive, in so unmanageable a patient, have endangered a protrusion of the peritoneum. I passed the armed needle on the inner side, between the vein and artery, curving it round the latter; some cellular tissue covering and impeding the needle when nearly freed, I cut upon its extremity and thus let the needle through. I tied a single twine ligature upon the artery, with all the usual effects upon the aneurismal tumour, and estimated that its situation was an inch and a half above the giving off of the epigastric. The wound was closed by three sutures, being left a little open where the ligature was brought out; and both ends of the ligature remained, which is to be preferred when the tied vessel is distant from the surface, much inconvenience and delay arising when the knot is too large to pass away readily through the narrow channel left by a single thread.

The course of this case afterwards was most favourable, the pulse never beating above 64 in a minute, and there being not the slightest tenderness of the abdomen complained of; the tongue became slightly brown, but all the other symptoms were so satisfactory, that, regarding hæmorrhage to be less liable to ensue after this operation, when tolerably well performed, than after almost any other operation of the same class, I, at the expiration of five days fully calculated on a successful issue, no longer apprehending peritoneal inflammation, abscess in the cellular tissue, or such an interruption to the arterial circulation as might lead to mortification of the limb. After ten days I took steps for stretching the ligature, to aid its rising, fearing lest the granulations rapidly and healthily forming should interfere with its early removal. I also made a knot in one of the threads, exactly level with the skin, and finding that this knot had risen the third of an inch, proving that the ligature was no longer so deep as the artery on which it had been placed, I did not hesitate to use a little force, and succeeded in removing the ligature at the end of thirteen days from the operation. The wound healed in a month, and the patient was then able to sit up and walk about, the limb being supported with a bandage from the toes to the groin. He was dismissed from the Hospital on the 22nd of October, no further treatment being required. The remaining tumour at the groin was the size of a walnut.

On the 18th of February following, the patient was in perfect health and able to resume his occupation, with a caution to avoid extreme exertion, lest hernia should occur at the seat of the incision through the abdominal muscles. Only a thin ligamentous cord was to be felt in the situation of the aneurism.

At the present time, nearly four years since the operation was performed, I am informed that the patient continues his old occupation of a waterman on

the river, enjoying good health, and free from every indication of relapse of his disorder.

The marginal figure represents the ligature as preserved by me since its removal; it will serve to shew the exact dimension of the circle that compressed the artery, as well as the size of the ligature employed. The advantage of using a small ligature, and applying it singly without any additional precaution, may perhaps be considered as properly estimated in Great Britain, but is not so in some other countries, where want of success has led to the less frequent performance of this most important and most valuable operation.

It will be remarked that all the patients concerned in the above three cases of inguinal aneurism, had been occupied on board of vessels; and it is singular how great a proportion of such cases have been found to occur in seafaring persons. It would seem that there is some cause operating to produce inguinal aneurism in those who spend their time as sailors or watermen. I am in possession of the histories of two unpublished cases of ligature to the external iliac artery for inguinal aneurism, and both patients had been sailors.

Norwich, July 30, 1846.

CASE OF FRACTURE OF THE CORONOID PROCESS OF THE ULNA.

By WILLIAM GILLARD, Esq., Surgeon, Totness.
(Read at the Annual Meeting of the South-Western Branch of the Provincial Association, held at Exeter.)

April 11th. A boy, eight years of age, fell from a height of four feet; when I saw him two hours after, the arm was much swollen, and I considered from its appearance it was a dislocation of the ulna backwards. On making extension, I found it more easily replaced than if such had been the case, and a fulness in the front of the joint, with a very slight crepitus on flexing the arm slightly, and making pressure on the fullest part, made me decide on its being a fracture of the coronoid process of the ulna. I ordered such remedies as are usual to reduce the inflammation.

12th. The swelling and inflammation was immense, but after four or five days it was so reduced, that I applied splints and kept the arm extended. Inflammation again making its appearance, which made me fear a stiff joint, I then put the arm in a flexed position, and ordered cold lotions; from that time the inflammation subsided, and everything went on well.

He now has a perfectly useful arm, with as much strength as before the accident, and can bend and extend it as freely as ever. The coronoid process is still moveable, and causes a slight fulness in front of the joint.

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The letters which have recently been received and published on the subject of the improvement of the Journal of the Association, will call for attentive consideration on the part of the Council and the General Meeting. There can be no question that the expressed wishes of members of the Association are always to be treated with respect, and when these relate to a question of such general importance to the Association, every attention, as far as practicable, should be paid to them.

It will be well, however, in the first place, briefly to recall to mind for what purposes the Journal has hitherto been circulated amongst the members. These are—first, to keep up the interest of the members in the Association, and to afford a medium through which the proceedings of the Association, and of its Branches, may readily and at once be made known to every member, and by which those who are resident in the most remote parts may be periodically reminded of their connection with their brethren throughout the provinces; which, were it not for this medium of communication, would probably be only once a year, on the occasion of the payment of the annual subscription. Secondly, to admit of the Council from time to time communicating with the members on subjects of importance to the interests of the Association or of the profession, so as to lead, where there is sufficient unity of purpose, to a unity of action, in any channel, or upon any point, whether public or connected more particularly with the Association, in which it may be thought desirable to act. Thirdly, to afford a ready means of communication, by which the sentiments of any member on subjects of general interest may be at once made known to his fellow associates, and their opinions in turn elicited. Very many instances of the beneficial operation of this privilege might be referred to; but to quote from recent numbers, we may at once mention the cases of Mr. Cautrell, of Wirksworth, and Mr. Martin, of Evesham, connected with the mal-administration of the Poor-law authorities. There can be no question that the facility thus afforded by the columns of the Journal to the circulation among the members of such instances of wrong as these, will operate powerfully in rousing the attention of the Association, and in again directing its energies into a channel where its influence has already been beneficially exerted and felt. And, lastly, as a medium for recording the experience of the members on various points of practice, or their observations on