and convince me that the child was dead, though when the head has been detained a considerable time, a few cases have terminated more favourably than I could have expected, and I have been agreeably surprised with the discovery of some faint signs of life, which, by the assiduous and careful use of the common means, have been improved, and the life of the child at length perfectly recovered."

"When we have," he continues, "in vain exerted all the force which we think reasonable and proper, and which in some cases, must be more than any circumstance would be thought to require, it will be expedient to rest, for the purpose of gaining all the advantage to be attained by the compression of the head. On this account, the mother will actually suffer no more inconvenience, than would have been produced if the head had originally presented, and been locked in the pelvis. After waiting some time, we must renew our attempts to extract, and thus proceed, alternately resting, and acting with efficacy and resolution, and if the hold we may have of the body or extremities of the child does not suit, a silk handkerchief or other band may be passed round its neck, and this will be found a very handy and convenient instrument."

"It must be a *very great* disproportion," adds Dr. Denman, "between the head of the child and the pelvis, which is able to withstand this method of proceeding, if we persevere in it with prudence and steadiness; because the integuments of the head will burst, or the bones be bent inwards in an extraordinary degree, or even broken." If it fail, "It then only remains that we should lessen the head of the child, and the operation may be as easily performed in this, as in the natural presentation of the head." "But it will," he continues, "be scarcely believed, how seldom this operation is necessary under these circumstances, if we have not been in a hurry, but have acted with prudence; nor have I ever known any ill consequences follow the compression which the soft parts undergo, between the head of the child and the sides of the pelvis, if proper attention were afterwards paid to the state of the bladder and rectum."*

* "Introduction to the Practice of Midwifery," p. 497, 498, 499.

(To be continued.)

CASE OF VARICOSE ANEURISM, CURED BY LIGATURE OF THE BRACHIAL ARTERY.

By SAMUEL S. DYER, Esq., Surgeon, Ringwood.

(Read before the Medical Society of King's College.)

In the middle of the night of the 9th Jan., 1848, I was called to a man, 56 years of age, who had been suffering three days with symptoms of the then prevailing epidemic—influenza. My being sent for was occasioned

by a sudden aggravation of his symptoms. On my arrival, within half an hour, at his house, I found him labouring for breath, in great pain at the posterior and lower part of his chest, where small crepitation was distinctly audible; sounds elsewhere perfectly healthy. Pulse full, and bounding; skin hot; thirst and restlessness. He had shivered much on the preceding day, but used no remedies for what he considered a severe cold. I at once opened a vein in the arm, and allowed sixteen or seventeen ounces of blood to flow from a large orifice. There was no peculiarity in the bleeding, except its *freedom*, which did not of course surprise me, as it was just what I intended should occur. There was no *per saltum*,—no scarlet colour,—no evidence in short, of arterial hæmorrhage. When satisfied with the quantity taken, and relief afforded, I tied up the arm as usual, the flow of blood ceasing upon the removal of the ribbon tied around the upper arm. A brisk cathartic was administered immediately, a mustard poultice applied over the seat of pain, and potassio-tartrate of antimony, in half-grain doses, ordered to be given every two hours. In the morning I found all active symptoms relieved, and a continuance in the use of the tartar emetic soon removed every trace of inflammation.

It was not until the 11th instant, two days and a night from the time of venesection, that my attention was called to the condition of the arm, which my patient described as being *numb*, with a sense of tingling in the fingers. To confess the truth, the idea of my having cut into an artery never entered my head, and I considered this symptom must depend upon a wound of a branch of the cutaneous nerve; I therefore took but slight notice of the complaint, merely advising fomentation to pacify the man; but on my visit the next day I looked at the part for the first time, and then found a slight and circumscribed swelling at the puncture, (which was healed,) throbbing on the application of the finger, and attended with the not-to-be-mistaken whiffing sound, which (with pulsation,) ceased on firm pressure being made on the artery above. There was of course no doubt as to the nature of the case, so that I at once commenced a plan of treatment for the poor fellow's relief.

Five cases of cure by pressure, in analogous instances, reported by Mr. Tyrrell,* and others by Mr. Cooper; one case of false aneurism of the brachial artery, communicated some years since, by Mr. Salter, of Poole, to the Medico-Chirurgical Society, and which has been more recently reported in the *Provincial Medical and Surgical Journal*,† wherein (if I recollect the first communication correctly,) pressure was to have been simply used as a temporary relief, until the term of pregnancy had expired, and by that time it had effected a perfect cure; and another case wherein pressure was adopted in popliteal aneurism, which I once saw, induced me to try this palliative, or at any rate, *more mild*, plan of treatment. A compress was therefore applied over the tumour, one extending two inches up the brachial artery, and a bandage from the

* "Guy's Hospital Reports," 1835, Vol. i., page 20.

† *Provincial Medical and Surgical Journal*, Dec. 3rd, 1845.

ends of the thumb and fingers, to near the shoulder. I could not, however, give this plan a chance or possibility of success; for, after having continued it but a week, the pain in the hand and fingers remaining unabated, the weariness of inactivity, and the confinement recommended, was more than my patient would bear, and he urged upon me the necessity of some active treatment, in the hopes of more speedily resuming his accustomed occupation as a labourer in a tan-yard. I was the more ready to listen to this entreaty, from the fact of his being a member of a benefit society, and therefore drawing heavily from their funds during the time of his loss of work. I now removed the bandage and compress, and finding the skin somewhat inflamed and irritated by the pressure, ordered a soft cold poultice to be applied, and a change of this to be persevered in for two or three days. The slight inflammation had by that time entirely subsided, but the size of the tumour increased in the mean time, and extended to either side, apparently between the artery and the vein, which latter was enlarged and varicose, over and above the bend of the elbow; arterial pulsation small and weak below that point down to the wrist, and, on comparison with the opposite limb, much stronger above.

An operation was decided upon, which I performed on the 27th, in the presence, and with the assistance, of my father and Mr. Westcott, by making an incision two inches in length on the inner side of the basilic vein, keeping this vessel outwards, and dissecting cautiously down to the sheath; having the median nerve held to the inner side, I passed the aneurism needle from within outwards, about an inch and a half above the situation of my former puncture. On tightening the ligature all pulsation in the tumour and at the wrist ceased. The edges of the wound were brought together with strapping, a flannel bandage was applied, and the man sent to bed.

On visiting him in the evening we found that he had felt faint once, but not to actual syncope; he complained of pain in the wound, extending some distance up and down the arm; pulse S5 in the left arm, none to be felt in the right; temperature of the two limbs much the same,—both warm and moist. Ordered low diet. No opiate.

28th. Had no sleep; suffered much through the night with pain in the arm, which has now somewhat subsided; no headache nor other constitutional suffering; slight pulsation in the lower third of the right radial artery. I removed the bandage, and merely enveloped the limb in loose flannel, to keep up the warmth.

29th. Has passed a much better night, having slept soundly at intervals; nearly free from pain, but the hand feels numb; pulsation of the right radial artery still faint and weak at the wrist. On removing the dressings I found that the wound had healed by the first intention at each end to the extent of half an inch, the other part discharging healthy pus. The situation of the varicose aneurism was occupied by a firm resisting tumour, about the size of a broad bean; no pulsation whatever, nor impulse given it by arterial action. Re-apply strapping and flannel.

February 1st. There is greater pain, of a throbbing character, about the upper arm, which is inflamed, swollen, and feels hard and tense, somewhat of the *boggy* feel given by phlegmonous erysipelas; there is very little discharge from the wound. To take a cathartic powder directly, and foment the arm continually.

2nd. Better in every respect; pain in the head gone; arm less swollen; wound discharging laudable pus.

5th. Progressively and rapidly improving; general health good; eats, drinks, and sleeps well; sits up all day, with the arm at rest, and slightly flexed. He considers the condition of the limb to be considerably better than it was prior to the operation.

16th. Wound healed except where the ligature hangs from it; this is still firm; general health continues good; walks out every day; there is no trace of the aneurismal tumour.

21st. The ligature did not come away until this morning, the twenty-fifth day from the operation, a drop or two of blood followed its removal from the wound; strength of limb rapidly increasing.

29th. Has considered himself a convalescent for the past week; no difference in the size or muscular condition of the two arms; pulse in the right weaker than in the left; in the former the posterior radial and ulnar recurrences can be distinctly felt pulsating strongly around either side of the elbow-joint. Purposes returning to his work next week.

It may appear somewhat strange that I should have acted in this case in a manner different to that recommended by my esteemed teacher on such subjects, Professor Fergusson, who, for very good and sufficient reasons, recommends in his "Practical Surgery," and also teaches in his lectures, that ligatures, in such cases, should be applied directly above and below the communication between artery and vein; but it was so difficult in the present instance to detect any pulsation *below*, that I thought it probable the division into the radial and ulnar was just at this point, and would in no small degree complicate the operation; or else that the main trunk had so diminished in size from want of passage of blood through it, as to lessen the chances of a return of the disease, from a retrocession of the blood into and through that part. Seeing, too, that the Coopers* and Allan† thought, and proclaimed to the world, that a ligature above would suffice, I was led to adopt this easier method, trusting that the case recorded by Mr. Fergusson might have been but one out of many thus failing, and that the one under consideration might be successfully treated after the manner recommended by Allan, whose words I now borrow, as I did his ideas before the operation:—

"In performing the operation for false brachial aneurism, it has been customary to open the tumour, to clear away the blood, to search for the wound in the artery, then to separate the nerve, and otherwise insulate the vessel at its wounded point; and, lastly, to apply

* S. Cooper's Surgical Dictionary; Article *Aneurism*.—Sir Astley Cooper's Lectures, *Lancet*, Vol. i, page 385.

† System of Surgery.

two ligatures, one above and one below the wound. Although the operation has been usually performed in this manner, the improved method of operating by taking up the artery at some distance above the tumour, and leaving the sac untouched, is equally applicable here, and for the following reasons is undoubtedly the preferable operation:—It sometimes happens, that by the impaction of the blood, the artery, the vein, and the nerve are so knotted together by inflammation, that they form a very confused mass, which, if it is possible to unravel, can only be done after a very tedious and painful dissection. In such a case there is great risk of including the nerve in the ligature. When the parts cannot be separated, it has been the usual practice to take a sharp surgical needle, armed with a ligature, to pass it under this thickened mass, and to tie it, including the artery, vein, and nerve. This occasions excruciating pain at the time, and the consequences are—1st, that the ligature obliterates, and makes its way through, the artery and vein, but cannot destroy the nerve, which resists the ligature; and therefore, if this be well waxed, it will keep its hold for weeks and months, and will not be removed till it either rots, or is cut from the nerve: 2nd, great tension and pain will ensue, accompanied by high inflammation and profuse fetid suppuration; the inflammation, which is generally of the erysipelatous kind, undermines the cellular substance of the arm, lasting for months; and, 3rd, there is great risk of the thumb, fore and middle fingers,—to which the radial nerve is finally distributed,—remaining contracted and powerless. Again, even in the most favourable circumstances, the surgeon requires to make a large incision, involving the whole of the tumour; there is difficulty in getting out the clots of blood to reach the artery; it is long before the operation is finished, and afterwards there is some risk of the sac suppurating. Considering all these circumstances, I am decidedly of opinion, that the common operation should be abandoned, that the sac should not be opened, but that the artery should be tied two or three inches above its wounded point. This method was practised by success by Anel, and has been repeated with the same success by succeeding surgeons.”—*Allan's Surgery*, Vol. 2, p. 359.

To save the necessity of a reference to the lectures of Sir Astley Cooper, I may also quote here the opinion he gives at the place I have alluded to above:—

“When an aneurismal tumour at the bend of the arm has been thus formed, (by venesection,) let me recommend you not to cut down upon it in order to secure the vessel; rather tie the brachial artery at the middle of the arm, and do not make an incision upon the swelling at the bend of the elbow; to put a ligature upon the vessel here is difficult, tedious, and dangerous, on account of the extravasated blood.” He then gives a case which occurred at the hospital, and says,—“At the end of a week one of the surgeons deemed it prudent to secure the vessel, and he did so at the part where the wound in bleeding had been made; the operation took an hour in performing, and it was excessively difficult to find the vessel. On the following day there was much irritation and inflammation, and on the tenth day he died.”

I would also refer you to a case reported in the

*Provincial Medical and Surgical Journal** by Mr. Nesbitt, of Yeovil, who states that he was once present when a young gentleman punctured the brachial artery in bleeding: he stopped the hæmorrhage by the application of a tourniquet in the middle of the arm, and pressure on the veins two or three inches below the wound, whilst he proceeded to cut down on the artery at the wounded point, intending to apply a ligature above and below the opening. He now very candidly and graphically describes the difficulties he encountered:—“All the tissues were, however, so injected with blood, that I found it scarcely possible to discriminate one from the other.” * * * “In this way from thirty to forty minutes had elapsed before I came to what I believed to be the artery; I loosened the screw of the upper tourniquet, and finally removed all pressure, but there was no pulsation, neither was there any hæmorrhage; the tourniquet was re-applied, and I again searched for the artery, and tied something, which I feel persuaded was not the artery.” Mr. Nesbitt attributes the cure of this case (which was perfect,) to pressure above and below.

There are many circumstances which combine to make the foregoing a case of interest and importance to the practical surgeon, more especially to the younger members of the profession, and it was this idea which mainly prompted me to send a report of it for the consideration of the members of the Kings's College Medical Society.

Some degree of interest is given by its rarity, for it is seldom we see or hear a case reported; indeed this form of aneurism was not noticed at all until the time of Hunter, who, about eighty years ago, first wrote on such an inquiry. This certainly is no proof of its not having previously occurred, but it eluded the observations of those writers who have handed down to our days the practice and principles of their own. This accident may be produced in any part of the body where a vein is situated directly over an artery; but for reasons which must be clear enough to every one, it is more common at the bend of the elbow than elsewhere. In the greater number of instances we are told that the coats of the artery and vein become so intimately connected that the blood passes directly from one to the other; in such a case but little or no interference is required on the surgeon's part, as the limb is generally, simply a little weaker, and this the only inconvenience, since the blood which *does* pass unnaturally out of the artery, is still held in the circulating system. This is the state of things called *aneurismal varix*, but for three reasons I am persuaded that in the case I have just reported to you, it was not simply this,—1st, the tumour was too large and resisting, to be occasioned by a dilatation of the vein, and increased laterally to so great an extent, without a

corresponding increase in the vein above and below ; 2ndly, pressure on the artery above, though it lessened, did not wholly obliterate this swelling ; 3rdly, from the resisting nature of part of this enlargement, I was inclined to think there was a coagulum in the areolar tissue between the two vessels, which coagulum could not exist if the blood was in constant motion. This is the condition called *varicose aneurism*: it is in this collection between the two vessels, that the distinction consists.

Another point of interest in such a case is afforded by the fact, (and an unfortunate one it is,) that in nine-tenths of such cases a member of the profession has been the unintentional cause of the complaint; and I would now take the liberty of urging upon those who hear this case, the absolute necessity of caution in performing so slight an operation as that of venesection. Remember that the accident can be avoided much easier than the aneurism can be cured; do not open the median basilic vein as I did, but choose rather the median cephalic. If the former must be opened, from any peculiarity in the case, pause one moment before using the lancet, and place your finger over the spot fixed upon for its point, to feel whether the artery (as in the present instance,) be unnaturally superficial, or out of harm's way.

The other circumstance which gives some degree of interest in this case, now that anæsthetic agents are so greatly in vogue, and which perhaps, from all I read, would render it almost unique in the surgical annals of the existing age, was the total failure of chloroform—not only failure, but (from its producing excitement,) injury and impediment in the proceeding. We might theorize and speculate as to the cause of this,—whether extreme cold prevented ready evaporation from the handkerchief,—whether the inhalation of it not being agreeable to the patient, he obstinately closed his mouth against it,—or whether idiosyncrasy of constitution rendered him insensible to its excellent agency. Certainly the quantity was more than should have sufficed, the drug was good, and the means adopted for its effect, were similar to those tried by others.

STRANGULATED HERNIA: REDUCTION BY THE TAXIS.

TO THE EDITOR OF THE PROVINCIAL MEDICAL AND SURGICAL JOURNAL.

SIR,

I feel it incumbent upon me to offer my unfeigned thanks to Dr. Paxton, of Rugby, for his prompt and candid confirmation of my views of the general success of the patient employment of the taxis in strangulated hernia. In truth, I felt more diffidence than I thought proper to express, in publishing my experience. It is by no means a pleasant task to impugn the prevailing practice of our brethren, and nothing but an urgent sense of duty would have impelled me to do so. Allow me, however, to say, that hospital practice in hernia is too generally

attended with peculiar difficulties. Before the admission of the patient the taxis has often been repeatedly tried, and the case has become complicated with symptoms of inflammation or approaching gangrene, and in these circumstances I should be the last to condemn a reluctant operation. The forlorn hope may justify it. But as regards recent cases, (often rendered eventually hopeless by injudicious manipulation,) I do believe that the efficiency of the taxis, rightly performed, cannot be too frequently urged upon the profession.

Perhaps an illustrative case or two may produce more impression than reiterated precepts.

CASE I.—My attention was first awakened to the right use of the taxis many years ago. I was called to a case of inguinal hernia in a robust, vigorous boy, about two years of age, a farmer's son. The hernial tumour had been discovered about thirty hours, but how much longer it had existed could not be ascertained. Having tried the taxis about twenty minutes without success, I began to think seriously of the operation; but the child was strong, and unusually obstreperous. I reflected that at a lone farm-house I should find much difficulty in getting the child effectually controlled, and having then no assistant, and there being no surgical assistance at hand, I confess the difficulties attending so delicate an operation began to assume a formidable character. I therefore reflected, that as no signs of inflammation were present, and the case was favourable for reduction, it *ought* to be reduced, and accordingly I resolved that it should be done,—and allow me to add, that in such a case *resolution* is half the battle. I placed the patient on a table, with a mattress and pillow, of convenient height, on his back, with his legs bent, and the limb of the affected side directed over the other, and taking my seat on a high chair, so as to command the best use of my arms and hands, I commenced, steady, gentle, and gradually increasing pressure on all sides of the tumour, and *in an hour and three quarters*, just as my strength was beginning to fail, I had the satisfaction of perceiving an evident decrease in its size, and in a few minutes heard the gurgling noise which preceded its return into the abdomen.

CASE II.—About two years ago, I was called late at night to a case of strangulated inguinal hernia, in a carpenter, aged 60, who had formerly worn a truss, but having broken the spring, believed the rupture cured. The tumour had existed fourteen hours; it filled and distended the scrotum; it was twenty-five inches in circumference, and of course could only be partially covered by both my hands; it was tender, as well as the abdomen; and nausea, quick pulse, and sunken features, proclaimed the urgency of the case. The patient was laid on his back in bed, the muscles relaxed, and placing myself on my knees, supported by a pillow, I compressed the tumour with both hands, as one might squeeze a mop. In half an hour my hands were both paralysed, and no apparent result obtained. I then sent for my assistant, who took my place; meanwhile I supplied myself with O'Beirn's defæcation tube, as the next best resource, if the taxis should fail, and also some tartar-emetic. My assistant was tired in his turn; I resumed my laborious post, and in two hours from the commencement of the pressure, the tumour was evidently softer and smaller.