LIGATURE OF THE BRACHIAL ARTERY FOR VENO-ARTERIAL ANEURISM.

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A. B. A COLORED man, aged twenty-six, called for my advice (November 25th), in relation to a tumor situated in the bend of the arm. At first touch it was evidently an aneurism. An eminent medical friend had previously examined the case, and learning its character, had referred the patient to me.

The disease had resulted from an accident in bleeding, which had occurred in the hands of a gentleman remarkable for the neatness with which he usually performs phlebotomy. The accident was owing to the local relations of the parts concerned being remarkably different from those which usually exist. It was the median-cephalic vein which had been opened, but this vessel lay much lower than is usual—that is, nearer to the inner condyle ; while the median basilic was very short. The brachial artery, on the other hand, lay nearer than usual to the radial border of the arm. We entertain but little apprehension of wounding the brachial artery when we strike the median-cephalic vein, and this undoubtedly was the cause of the occurrence in this instance. The artery was wounded through the vein and directly beneath it. The blood gushed rapidly at the time, but its flow was soon embarrassed in consequence of the formation of a thrombus. A compress was finally applied, and, although bleeding in small quantity occurred several times, yet the hemorrhage was never serious. The part was a good deal swelled at the time, and painful. At length the inflammation disappeared, and there remained a pulsating tumor. At the time it was first examined by me, it had the magnitude of the half of an egg, and had a distinctly circumscribed cyst. The vein was evidently concerned in the tumor, but to what extent the tunics of the vein entered into the walls of the aneurism, it was by no means easy to determine. It appeared to me, however, on making a most careful examination, that the principal part of the cyst was formed in the cellular tissue, intervening between the artery and the vein—that the inner orifice of the wound in the vein had become expanded, and its margin incorporated with the cellular walls of the aneurism.

The peculiar aneurismal thrill was very manifest in the pulsation of the tumor. At each throb the blood was forcibly injected into the vein, suddenly expanding, it both beneath and above the tumor. Beneath, however, this swelling of the vein extended no further than to the first valve, which was half an inch from the tumor. Above, the expansion of the vein was obvious half way up the arm, and the thrilling rush of the blood was distinctly felt at each pulsation of the heart. Pressure upon the brachial artery, above the tumor, arrested the pulsation. Pressure upon the tumor emptied it of its contents. The walls of the tumor toward the surface were thin.

The compress having been already ineffectually employed in this case, and the tumor obviously increasing, I immediately advised that the ligature of the brachial artery should be performed without delay. For this

operation he repaired to the Baltimore Infirmary, where I was then officiating as surgeon. Preparatory to the operation, I caused blood to be taken from the arm—prescribed a low diet and repose for two or three days.

The operation was performed in the presence of the medical class of the University of Maryland, and with the assistance of the pupils of the house. The patient was seated in a chair, and his arm was extended upon a table. The incision was made as usual along the border of the biceps, the fascia of the arm being laid bare at the first stroke of the knife, and opened by the second. On introducing the finger into the wound, I felt the pulsations of two arteries—the one in the usual position of the brachial, close beneath the border of the biceps—the other toward the ulnar border of the arm, but not remote from it. On compressing the latter, the pulsations of the tumor did not cease, but when this was practised upon the former, they were instantly commanded. The pulsations of these vessels were so equally strong that I immediately inferred that, in this instance, the division of the brachial had occurred at a higher point than usual, and that only the radial branch was concerned in the operation. With this impression I immediately applied the ligature to the artery beneath the biceps. The pulsations of the tumor at once ceased, its volume diminished, and it became flaccid. A silk ligature was employed, one extremity of which was left hanging from the wound. The incision was very accurately closed by means of adhesive strips—a compress was applied to the tumor, and a roller to the member, from the hand to the shoulder. The patient was kept in a tranquil state. At the same hour of the next day, the tumor was found, on examination, to pulsate feebly. There was also a pretty strong pulsation in the radial artery, at the wrist. The brachial artery was also found to pulsate slightly, where it merged itself in the tumor. I could not now feel the pulsation of any artery toward the ulnar border of the arm, which could be regarded as the ulnar artery, nor were the pulsations of the ulnar at the wrist stronger than those of the radial, and I now came to the conclusion that the collateral vessel, which I so distinctly felt during the operation, was the anastomotic, considerably enlarged in consequence of the circulation in the brachial. There had occurred no visible diminution of temperature in the limb. The bandage was re-applied and kept wet with cold water.

On the third day the bandage was again removed, and we were gratified to discover that there now no longer existed any pulsation in the tumor, although it was still manifest in the artery both above and below it.

On the fifth day there was still no pulsation in the tumor, and it had now become quite hard and incompressible. There was not much tenderness to the touch, nor had the patient experienced much pain, though it was occasionally such as to disturb his rest at night.

On the 13th day the ligature came away. In the mean time complete reunion of the wound by adhesion had taken place, and he had scarcely felt a sensation where the ligature had been applied, till the present time. By any prudent effort we could not now, by pressure, force any fluid out of the cyst into the artery, or in any measure diminish its size. It

was manifest, therefore, that the blood contained in the cyst had now formed a firm coagulum, and that we might confidently expect its ultimate obliteration.

On the 20th day, the patient complained of severe pain and tenderness in the tumor, and evidently a slight degree of inflammatory swelling had taken place in its base. I conjectured that suppuration of the cyst might be about to happen, in consequence of the coagulum being so thickly covered with integuments. I directed a poultice to be applied to the part, and this to be compressed with the bandage. In two or three days the inflammation was wholly dissipated, and I found on comparing the tumor with a cast which I had made of the part before the operation, that it had lost half its original size. It was perfectly free from pulsation.

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CASE OF DIABETES MELLITUS.

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ON the 22d of April, 1831, I was requested by Dr. E. Perkins, of this city, to visit with him Robert Kinnier, a lad about seventeen years of age, laboring under diabetes. On reference to my notes, I find the details of the same as here given. Our patient appeared to be somewhat emaciated; had a sallow complexion, with those appearance of general disorder which often follow our autumnal remittent fevers. On inquiry I learned that he had suffered by an attack of this disease during the preceding autumn, while engaged with his father on the line of the Baltimore and Ohio rail road; and after the more severe symptoms of attack had passed away, a remittent fever with irregular paroxysms had continued to manifest itself occasionally. At the time we saw him, these paroxysms were interrupted; but he still remained languid, incapable of active exercise, and much depressed in mind. He sometimes walked slowly in the open air, from which he experienced fatigue. His liver seemed to perform its functions slowly, but there was no tenderness or enlargement from which might be inferred a serious disturbance of this organ. He had occasionally a very slight cough. The tongue was whitish and his skin cool. The perspiration did not appear to be materially changed from the standard of health. We requested that the urine should be retained for our examination, and the quantity discharged between the hours of nine o'clock in the evening and six of the following morning (nine hours), was found by measurement to be more than one gallon—of a pale straw color, and sweet to the taste—pulse 84—appetite irregular—digestion also imperfect. He labored under no important pulmonary disturbance, and the alvine dejections evinced the presence of biliary matter.

Tonics were first directed. S. quinine, phosphas. ferri, &c. were freely used without apparent benefit for some time. No vegetable preparation, except bread, was allowed to be taken. His diet was directed to be purely *animal*, with the foregoing exception. Still finding that his diabetic symptoms were not materially altered, we prescribed the tinc. meloe.