

**Case of successful deligation of the subclavian artery for the cure of a large axillary aneurism / by William Pirrie.**

**Contributors**

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Wellcome Collection  
183 Euston Road  
London NW1 2BE UK  
T +44 (0)20 7611 8722  
E [library@wellcomecollection.org](mailto:library@wellcomecollection.org)  
<https://wellcomecollection.org>

# CASE

OF SUCCESSFUL

## RELIEF OF THE SUBCLAVIAN ARTERY,

FOR THE

## CURE OF A LARGE AXILLARY ANEURISM.

BY WILLIAM PIRRIE, F.R.S.E.

REGIUS PROFESSOR OF SURGERY IN MARISCHAL COLLEGE AND UNIVERSITY, ABERDEEN.

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ON the 26th of December, I was requested by my colleague, Professor Ogston, to visit a patient, who, three days previously, had applied to him for advice, in consequence of having a swelling, which Professor Ogston believed to be caused by a large axillary aneurism.

The patient's history of his case was, that he had felt uneasiness in front of his left shoulder for several months; that on the 12th of November the parts in that region were suddenly and violently strained; that on the 26th of November, while in the discharge of his duty as a criminal officer, and endeavouring to secure a prisoner, he was in a severe struggle violently dashed upon the ground; that he felt excruciating pain in his arm-pit while falling, and when he fell, received on the front of his shoulder the whole weight of the person he was attempting to secure; that he became quite sick from the violence of the pain; that he was unable to move his arm for three or four days, and very soon discovered swelling and pulsation in his arm-pit.

I found the patient to be a man of sanguine temperament, about fifty-one years of age, whose habit of body was full, approaching to obesity, and his neck short and thick. The swelling was of an oval form, pretty distinctly circumscribed, and extended from the axilla to near the clavicle, which was considerably pushed upwards, and could not be pressed downwards without causing uneasiness. By extending both downwards and forwards, the swelling had caused the hollow in the axilla to disappear, and its anterior fold to rise forwards. The swelling was slightly compressible; it had a



whizzing bruit, and pulsation of a distensile, eccentric, and expanding character, which raised the hand, when laid upon any part of the tumour, by a distinct impulse from within. The pulsations were arrested by pressure upon the subclavian artery, which, however, caused great pain; and it was evident that the moment the pressure was removed, the swelling suddenly became enlarged.

Professor Ogston and I agreed that a most careful examination of the chest and abdomen should be made; and, in the event of discovering no signs of a second aneurism, the patient should, for a few days, be put upon a somewhat restricted diet, and enjoined the use of some mild saline aperient; after which, a ligature should be placed upon the subclavian artery, where it passes over the first rib. The very plethoric appearance of the patient seemed to indicate the propriety of this treatment, before proceeding to tie the subclavian artery; and this was instituted for one week previous to the 4th of January, on which day, with the assistance of my two colleagues, Professors Ogston and Lizars, I tied the subclavian, Professor Ogston taking the whole charge of the administration of chloroform, and Professor Lizars assisting in the manipulation in the operation.

The operation being on the left side, the clavicle being pushed upwards, the patient being of a full habit of body, and the neck being very short, all tended to increase the depth of the vessel at the point of deligation; but, notwithstanding its great depth, the artery was exposed, without any difficulty, and a common aneurism-needle placed under it,—every part having been most distinctly visible it was desirable to see; and, what is also very satisfactory in such an operation, no part was brought into view not wished to be seen. The instant the ligature was drawn tightly, my two colleagues simultaneously pronounced the pulsation stopt in the aneurism. When the outer edge of the anterior scalenus muscle was exposed, the inner portion of the brachial plexus was brought into view; but, as the muscle was seen proceeding farther downwards, there was no danger in this instance, even before using the finger to feel for the tubercle of the first rib, of mistaking that portion of the plexus for the artery. The patient continued as well as could be desired, until the morning of the fourth day after the operation, when he was observed to be slightly confused. On the succeeding night, he became exceedingly so—slept none—required two attendants to keep him in bed, and, notwithstanding their efforts to prevent him, he tore the dressings from the wound; but, fortunately, did not get hold of the ligature. On the morning of the fifth day he was still sleepless, restless, and agitated—expressed himself as anxious to escape from strangers and enemies he fancied in his room—his thoughts were troubled—he looked suspiciously to the back of his bed—his skin was damp—his pulse soft, and his tongue moist and creamy. This assemblage of symptoms led to a most searching inquiry into the patient's history; and from the members of his family, it was learned



that, two years previously, he was addicted to intoxication, and that, until ten days before the operation, he always had a glassful of whisky every morning, which they called his morning dram, and two, or perhaps three, in the course of the day. Professor Ogston and I then advised that he should have a wine glassful of whisky, morning, noon, and evening, as well as strong beef-tea several times a-day. We had the satisfaction of finding that he slept well next night, and, without any other treatment whatever, every unpleasant symptom has disappeared, and since, the patient has gone on as favourably as possible. It was only when symptoms of a very alarming character presented themselves that it was possible to arrive at a correct knowledge of the patient's habits; and the discovery filled my mind with the greatest possible apprehension of fatal hemorrhage at the period of the separation of the ligature. In the above described circumstances, I scarcely dared to hope for the desired action going on at the deligated portion of the artery. The ligature, however, came away on the seventeenth day after the operation without hemorrhage, and none has ever occurred. It is now three weeks since the ligature came away, and the wound is perfectly cicatrised. There never has been any return of pulsation in the aneurism, which is now consolidated, as well as considerably reduced in size. This case may therefore be added to the list of successful instances of tying the subclavian artery.

Facility in the performance of this operation is greatly promoted by a free external incision, and safety by having the deep portion of the wound as circumscribed as compatible with the distinct application of the point of the aneurism-needle to the outer coat of a very limited portion of the artery. Except at the point of application, the artery should be disturbed only to the extent unavoidable by the track of the needle. In all deligations of vessels the least possible separation from surrounding connexions is absolutely necessary to diminish the risk of hemorrhage; but in this operation, it is important in lessening the risk of inflammation in the chest, the seat of which is the pleura or pericardium, or both—a more frequent cause of death than even hemorrhage after tying the subclavian. The cellular tissue surrounding the artery is the structure between it and the upper part of the pleura, and the less this is disturbed the less will be the danger of inflammation arising in it and spreading from it to the pleura. This case will make 48 recorded examples of this operation, and the importance of the view just stated must be evident, when it is mentioned that 24 of the patients lived and 24 died, and that the principal causes of death were, in the order of frequency, inflammation within the chest, suppuration in the aneurismal sac, and hemorrhage.



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