

SECOND CASE

OF

CAROTID ANEURISM.

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IN the year 1806, I had the honour of presenting to this Society an account of an operation for carotid aneurism, which terminated unsuccessfully.

I then took the liberty of observing, that I thought that the result of that case ought to have no influence in preventing a similar operation under more favourable circumstances, as the death of the patient was attributable to the advanced stage of the disease at the time of the operation. The aneurismal tumour had become so large, as to press upon the air tube, and occasion cough, difficulty of breathing, and even effusion of coagulable lymph upon its internal surface; and it had also compressed the pharynx, in a degree to prevent even the passage of fluids into the stomach.

I had no apprehension of the functions of the brain sustaining any permanent injury from a ligature on the carotid artery, having the evidence of Dr. Baillie to prove, that one carotid had been entirely obstructed, and the diameter of the other considerably lessened in the same person, without any apparent ill effects. I have also given a drawing in my former paper, of the left carotid artery being obstructed by the pressure of an aneurism of the aorta; and we have the analogy of animals to show, that both carotids may be tied without any visible effect upon the functions of the nervous system. I had many years ago made the experiment of tying these vessels in the dog, and immediately as it was concluded the animal was placed upon the ground, and shewed no diminution of voluntary powers. It exhibited the same fears and affections as before, and betrayed no greater loss of appetite, or disposition to sleep than an animal usually does who has been the subject of an experiment which gives some pain, but does not injure the vital functions. A preparation made from this dog has been long preserved in the collection at St. Thomas's Hospital; and the parts have been injected to shew the principal vessels which carry on the circulation, which are the two thyroideal arteries, and two branches from each vertebral, passing under the angles of the lower jaw.

I was therefore resolved to take the first opportunity of repeating the operation before the disease

had advanced so far as to interrupt, in a considerable degree, any other function than that of the passage of blood through the carotid artery ; and my friend, Mr. George Young, surgeon, had the kindness to furnish me with a case of the most favourable nature, by sending, first to my house, and afterwards to Guy's Hospital, a man who was in all respects the subject I should have chosen. He had a mind cool and firm, yet obedient to every injunction : a body equally unirritable as his mind — the tumour only about two inches and a half in diameter, and the neck of considerable length, so as to give ample space for exposing the carotid artery. The history of this case is as follows : —

HUMPHREY HUMPHREYS, aged fifty, who has been employed to carry loads of iron * as a porter, observed six or seven months ago, a tumour, having a pulsatory motion, and about the size of a walnut, on the left side of the neck, just under the angle of the jaw, and extending from thence downwards to the thyroid cartilage. It was accompanied with great pain on the left side of the head, which began about five months ago, and was attended with a sense of pulsatory motion in the brain. The tumour affected his speech, so as to make him extremely hoarse ; and he had more recently a cough, attended with slight

* The employment consists in this : — A collar of wood is placed around the neck and upon the shoulders, and he carries bars of iron on each shoulder, thus protected.

difficulty of breathing, and which seemed to be the effect of the pressure of the swelling on the larynx. His appetite was sometimes affected by it ; for three or four days he ate heartily, and then for many lost his relish for food. He had a sense of coldness succeeded by heat in his left ear, and he often became sick when eating, but did not vomit. Upon attempting to stoop at any time from that period, he had an insupportable feeling as if his head would burst ; a giddiness ; loss of sight ; and almost total insensibility.

The left eye, which had for some time been gradually closing, appeared now not above half as large as the right ; yet its power of vision was equally perfect.

A blister was at this time ordered to be applied on the head by Dr. Hamilton, which lessened his pain. A month ago he applied another with the same relief ; but it lasted only for a few days. He continued at work until the day previous to the operation.

The dilatation of the carotid artery was seated just below the angle of the jaw, and about the acute angle which is made by the great division of the common carotid. The tumour was about the size of a pullet's egg, and prominent in its middle.

The pulsation of the aneurism on the day of the

operation was remarkably strong ; when the sac was emptied by pressure on the artery below, the tumour sprang to its original size with one contraction of the heart.

I proposed to tie the common carotid below the dilated part, and the operation was performed at one o'clock on the twenty-second of June 1808, at Guy's Hospital.

I began my incision opposite the middle of the thyroid cartilage from the base of the tumour, and extended it to within an inch of the clavicle, on the inner side of the mastoid muscle. On raising the margin of this muscle, the omo-hyoideus could be distinctly seen crossing the sheath of the vessels, and the nervus descendens noni was also exposed. I next separated the mastoid from the omo-hyoideus muscle, and the jugular vein became apparent, which being distended at every expiration spread itself over the artery. Drawing aside the vein, the par vagum was evident, lying between it and the carotid artery, but a little to its outer side. This nerve was easily avoided.

A blunt iron probe constructed for the purpose was then passed under the artery, carrying a double ligature with it. Two ligatures being thus conveyed under the artery the lower was immediately tied. I next detached the artery from the surrounding

parts, to the extent of an inch above the lower ligature, and then tied the upper. Lastly, a needle and thread were passed through the artery above one ligature and below the other. The division of the artery was then performed.

Nothing now remained but to dress the patient, and this was done by drawing the parts together, by adhesive straps, the ligatures hanging from each end of the wound, and by laying on a piece of lint retained by straps of adhesive plaster.

Mr. Vose, my dresser, (whose attention to the case was unremitting, and to whose care and knowledge many of my patients have been indebted for their recovery) now asked the patient if he experienced any unusual sensations about his head. He answered, that for the first time since two months after the formation of the tumour, he was relieved from a distressing pain which extended up the left temple, accompanied by a violent throbbing of all the arteries of that side. This pain never returned.

The pulsation in the tumour, however, had not entirely ceased, although it was so much diminished as to become obscure; but it was felt by my colleague, Mr. Forster, by Mr. George Young, Mr. Dubois, jun. from Paris, who accompanied Mr. Young, by Dr. de Souza, and many others who were present at the operation. I concluded it to be the effect of

the return of blood by the internal carotid artery from the brain, in consequence of the free anastomosis which exists between the blood-vessels within the skull.

The patient was put to bed, with his head elevated, and in this position he felt quite comfortable.

Three p. m. Pulse was moderate, skin cool, suffered very little pain. Pulsation in the tumour perceptible, but inconsiderable, when contrasted with its force before the vessel was tied.

Five p. m. Pulse stronger and fuller, but in other respects as before ; head entirely free from pain.

Eight p. m. Patient's pulse reduced to the healthy standard, skin cool ; says he feels no pain.

June 23. — Six a. m. Patient passed a good night.

One p. m. I saw the patient ; he had a slight cough ; has had no evacuation since the operation ; pulse was not quicker than natural.

Ten p. m. The patient got out of bed, and went to the water-closet, and had an evacuation.

June 24. — Six a. m. Pulse natural ; pulsation in

the tumour continues; tumour sore when compressed; has become firm, for the blood which was fluid in it prior to the operation and all yesterday is now coagulated; pain, and a sense of fulness felt on the right side of the head.

June 25. — Six a. m. Patient says he no longer feels pain in any part; has had a good night; has only one troublesome symptom, viz. an occasional rattling in the larynx from accumulated mucus; pulse this morning quite temperate.

Three p. m. The tumour is considerably diminished; pulse moderate; no constitutional irritation.

June 26. — Eight a. m. Patient had a good night; pulse still moderate; skin cool.

Eleven p. m. Still free from any disagreeable symptom.

June 27. — Seven a. m. Patient very restless during the night; coughed much and had pain in the head: spirits depressed; pulse natural.

Half past one p. m. Pulse eighty-four; feels much better than in the morning; has had an evacuation from the bowels since last night.

June 28. — Seven a. m. Pulse natural; had a tolerable night; bowels open; no pain.

One p. m. I saw the patient; pulse eighty-four; slight pulsation still to be felt in the tumour, which is much diminished.

June 29. Pulse natural; no pain, pulsation still perceptible; tumour so much less that the skin is wrinkled over it.

June 30. Wound dressed the first time, and has united by the first intention as far as the ligatures would permit; he is free from irritation.

July 1. Pulse natural; man tranquil; pulsation very obscure; tumour firm; he is very hoarse.

July 2. No stool; ordered opening medicine; very hoarse, so as to speak only in a loud whisper.

July 3. Pulsation doubtful; man healthy.

July 4. Going on well.

July 5. Wound looks well; man appears natural; but the hoarseness continues.

July 6. He is free from any symptoms of irritation.

July 8. Patient says the tumour is now only half its size at the time of the operation.

July 9. Ordered a poultice.

July 12. Ligatures projecting more; and much more discharge from the wound.

July 14. Upper ligature came away, being removed by Mr. Vose.

July 15. Lower ligature came away; pulsation very obscure.

July 17. Man walked out of his ward; the tumour at this period was reduced to less than half its size. The pulsation in it was with difficulty perceived; but it continued until the beginning of September, at which period all who saw him agreed that the pulsation had ceased, and the tumour was then scarcely apparent. The facial and temporal arteries on the left side cannot be felt.

The wound was a long time in healing, first from a sinus in the course of the ligatures, and afterwards from a fungus where the sinus had been placed.

The man was discharged cured, on the 14th day of September, and returned to the occupation of a porter at Crawshay's iron wharf, Thames-street.

The result of this case afforded me a degree of pleasure which compensated for the disappointment

I felt in the issue of the former. In a professional point of view, it was highly desirable to ascertain the possibility of saving life in a case which had hitherto proved generally fatal; and I could not but feel more than common interest in the fate of a man, who, although he well knew that the trial was new, and the risk considerable, never betrayed the smallest signs of apprehension.

Near eight months have now elapsed since the operation was performed, and he has returned to his former employment without any diminution of his mental or corporeal powers, excepting the lessened action of the temporal and facial arteries on the side in which he was operated. The tumour has disappeared, and he has not been since subject to that pain in the head, by which he had been so much distressed prior to the operation.

This aneurism, from the depth of its situation, was, I believe, seated in the internal carotid artery, and this led me to hope that the regurgitation of the blood, although at first sufficient to produce a slight pulsation in the tumour, would not continue to support its growth, because as the internal carotid passes through a foramen in the skull, a little above the swelling, it could not dilate at that part to bring down any additional quantity of blood into the sac; so that its first effect was likely to be as great as any it could produce. But if the aneurism had been of the external carotid artery, owing to the number of

communicating vessels, I should not have been equally sanguine in my expectation that the pulsation would have ceased, as I have known two instances, one of a wounded radial artery, and the other of aneurism of the anterior tibial, in which the tumour continued to grow by anastomosis, after the arteries had been tied above the swellings.