A CASE
OF
ANEURISM OF THE CAROTID ARTERY,

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COMMUNICATED BY MR. EARLE.

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I AM induced to lay the particulars of the following case before the Medical and Chirurgical Society, as it relates to, I believe, the largest aneurism of the carotid, in which a ligature has been applied to that artery in this country. Though the patient did not eventually recover, yet as he lived sufficiently long to prove the success of the operation, and as he may be considered to have died from causes in a great measure independent of it, I trust the peculiar features of the case may be deemed worthy of the attention of future operators.

It has, in fact, been truly observed, that much

may be learned from the relation of unsuccessful cases; and if what I have to detail should be thought useful, I shall be amply gratified.

Thomas Turner, forty-one years of age, of Coombe Bissett, in the county of Wilts, by trade a sawyer, had served fourteen years in a dragoon regiment, and for the last eighteen months, as an agricultural labourer, was admitted as patient in the Salisbury General Infirmary, the 16th December, 1815, with an aneurismal tumor of the left carotid, which measured five inches and a half in length, and four in depth. It extended beyond the mastoid process, throwing up, and in part hiding the ear, and it covered the edge of the lower maxilla, to within half an inch of the chin, where it became conical.

One portion was inflamed to about an inch in diameter, in the centre of which was a small eschar, ulceration having commenced. The skin at this point was extremely thin and compressible, and the pulsation very strong. From hence it gradually enlarged, and reached to within an inch of the clavicle, remaining wide to the posterior edge. There was a considerable depression obliquely in the direction of the mastoideus muscle*. The contents of the tumor were obvi-

* The annexed engraving will give a more perfect idea of the size and shape of the tumor, than any description. For the draw-

ously fluid. The pulsation was very strong, and observable at some distance. The patient complained of constant pain in the head, from the beating (as he expressed it) of the tumor. By pressure the tumor might be partly emptied, but it produced an increase of pain in the head. In pressing the posterior part, the blood was felt to thrill with considerable force into the aneurismal sac. He could not sit up long without great increase of his sufferings, and he had in consequence been confined to his bed, the last six weeks. Since the tumor had attained so great a magnitude, he had been troubled with a slight cough. From the pressure on the trachea and œsophagus, he breathed and swallowed with difficulty, and expectorated profusely, he thought, to the quantity of nearly three pints of mucus in the course of twenty-four hours. Indeed, the accumulation of mucus was so abundant during sleep, that he could rest only at short intervals.

The pupil of the left eye was much more contracted than that of the right, and the vision on that side was imperfect. His articulation also was

ing, I am indebted to the ingenuity of my pupil Mr. J. H. Boyce, who took the sketch immediately after the admission of the patient, when it was acknowledged to be a very correct representation. The finished drawing for the engraving was made from the original sketch, by Mr. J. Grey, a young artist of great merit.

indistinct. His pulse was at 90, full and strong, his tongue white, and bowels costive.

His general health had hitherto been good. The only account he gave of his case was, that in the preceding June he had discovered a small throbbing swelling, about the size of a hazel nut, on the outside of his neck, near the angle of the jaw, which gave way on pressure. Conceiving it to be a glandular enlargement, arising from cold, and having as he thought, had similar affections before, he took little notice of it. The swelling increasing, he consulted several practitioners, who not understanding the nature of the case, recommended various applications, which were ill calculated to afford relief.

On his admission to the hospital, judging it of consequence to lower the circulation, he was directed to lose ten ounces of blood, and to take a weak infusion of digitalis.

He was bled again on the 19th and 21st, to the quantity of six ounces. By this treatment the strength and frequency of his pulse were much diminished, being then only 76 and soft. He said he felt more comfortable, and had less pain in his head. The tumor was much improved in appearance, and was certainly diminished in size at the anterior portion, where the inflammation had entirely subsided, and the eschar dried and peeled off.

He continued his medicines in reduced quantities till the 25th, when I was called to him, in consequence of an attack of vertigo and vomiting. He also complained of great pain in the tumor, which was tender to the touch. This he said had been the case since the preceding day, when it had been examined by several surgeons, who from curiosity had called to see him.

26th. Passed a very indifferent night. The sickness continued, though he did not vomit so frequently. Two doses of five drops of nitric acid in water completely relieved him. He remained as well as before, till the 29th, when the symptoms returned with increased violence. He was directed again to take the nitric acid, but without effect; he complained of increase of pain in the tumor and in his head. I ascribe these symptoms to the pressure just alluded to, as he stated it to have been considerable at the time, and referred his pain and subsequent sufferings to that period, and he had not taken the digitalis since the 24th. He was ordered a grain of solid opium in the evening, which quieted his stomach, and he slept an hour, but awoke with pain in his head.

30th. No return of sickness. The bowels were evacuated by two drachms of carbonated magnesia.

Jan. 3d. As the application of a ligature on the trunk of the artery presented the only means of

saving the poor man's life, and as it afforded him a chance of recovery, I determined to resort to this expedient. The patient being seated in a chair, with his head supported by assistants, and the chin in a line with the sternum, I made an incision, commencing on the base of the tumor, near the posterior edge of the mastoideus, and terminating at the clavicle, about an inch and half in length. It was continued to the same distance, in a line with the clavicle towards the shoulder. The head was then turned to the left shoulder, and the muscle was detached from its cellular union, as well as some of the fibres at its insertion into the clavicle. The divided parts were held separate by two blunt hooks, the tumor drawn upwards, and the dissection continued down to the sheath of the artery, which from the pressure of the aneurismal sac, lay very deep. This was attended with much difficulty, in consequence of the small space which I could obtain to reach the vessel. The jugular vein presented no obstruction, as in the case recorded by Mr. Astley Cooper, the return of blood being stopped by the pressure of the tumor.

The sheath of the artery being opened, a moderately sized ligature of waxed thread was passed under it, by an aneurismal needle, and tied. The pulsation in the tumor instantly ceased, and the patient grew faint, but he soon recovered. The wound was drawn together by straps of adhesive

plaster, and he was placed in bed. He however continued faint for some minutes, but afterwards became composed. Scarcely an ounce of blood was lost during the operation. He was ordered to take some gruel.

4 P. M. He remained tranquil ; pulse 90. At 8, I was summoned in consequence of what was considered as a slight convulsion. He attempted to get out of bed and take off the dressing. I believe it arose from a sense of suffocation, occasioned by the difficulty of separating the mucus from the trachea. He was directed to take immediately 45 drops of tincture of opium, and two drachms were to be administered in a common enema. Directions were given to the house apothecary, Mr. G. Langstaff, in case of any increase of circulation, to take blood from the arm.

4th. It was reported that the pulse at 10 o'clock rose to 120 in a minute, full and hard, and that according to my directions he had been bled from a large orifice, which produced syncope. He soon recovered, and was much relieved. Passed afterwards a good night, and slept some time. His pulse is 90, and soft, and tongue rather white. Not having had any evacuation from the bowels, since the operation, a soap enema was immediately injected. To take a saline draught, with antimonial solution, every two hours.

10 P. M. pulse 85, to which it had sunk soon after the enema, which brought away a quantity of hardened fæces. Passed a tranquil day.

5th. Passed the night without any unfavourable symptom. Pulse 90, but rather feeble. The mixture continued, and mutton broth ordered for his diet.

He complains of slight pain in his neck, and in the tumor. To take a castor oil draught.

6th. Passed a tolerable night. Pulse 80. Tongue clean, the oil operated early in the morning. Complains of slight pain in the crown, and left side of the head. The wound examined for the second time. Suppuration had commenced, and it presented a favourable appearance. It was dressed as at first, and his medicines were continued.

10 P. M. Complains of increased pain in his head. Pulse still at 80, he is very restless and irritable—ordered a draught with 25 drops of tincture of opium, which had the effect of relieving the pain and procuring sleep. For the three following nights the opiate was repeated, and costiveness obviated by purgatives.

9th. Passed the best night since the operation. Pulse 80 and soft. The wound was dressed, looked extremely healthy, with a free suppuration.

11th. The discharge is lessened. The aneurismal tumor diminished, I think to nearly half the original size. The contents of the sac remain fluid, and the coats flaccid. The shape is materially altered; the anterior conical end having flattened and sunk lower, as well as the part near the ear.

12th. The wound dressed. The discharge diminishes, some meat allowed at the wish of the patient.

13th & 14th. Dressed. Appears much better, passes good nights, and seems free from all apprehension. The contracted pupil of the left eye has dilated to nearly its natural diameter, is become more sensible to light, and he thinks he can see better with that eye. The tumor much reduced within the last three days.

15th & 16th. Dressed. The discharge diminished, the wound looking very healthy. His pulse has been for some days, and still remains steady at 80. His appetite improved. The expectoration much lessened, and the tumor diminished. He sat up to day for the first time upwards of an hour. The anodyne draught continued.

21st. The tumor considered by several gentlemen who have seen him, to be diminished, at least two-thirds. His health is daily improving. Sat up nearly two hours the last two days.

23d. The discharge much diminished. The pupil of the left eye nearly equal in diameter to that of the right, his vision continues to improve. He daily sits up, but cannot exceed two hours without fatigue and headach.

Feb. 3d. He was allowed to walk the garden for the second time, it being a warm mild morning. He did not however remain many minutes, as he found himself chilly. The wound looks healthy ; but the granulations flabby.

4th. Has passed a very uncomfortable night, is feverish. His pulse 95. Complains of great uneasiness in the trachea. His cough very troublesome. Great difficulty in separating the mucus. Directed to take small quantities of oxymel of squill, in warm water, which relieved him.

5th. Passed a good night, coughed very little ; has less fever ; pulse 90. The neck on both sides much swollen, the aneurismal tumor greatly enlarged, and tender to the touch ; a general blush of inflammation on both sides of the neck, particularly on the left. Complains of much pain in his throat, but none in the tumor. Eight leeches to be immediately applied, and to take four grains of calomel. The bleeding from the leeches to be encouraged, and afterwards a cloth wet with the acetate of ammonia to be laid over the neck.

8 P. M. The leech-bites bleed profusely, and he had one copious evacuation from the bowels. The tumefaction has on the whole diminished. He seems anxious and alarmed. Expectorates rather more freely. To take a saline draught, with minute quantities of tartrate of antimony, every three hours. Pulse 95. The mixture produced slight nausea, and moisture on the skin. The enlargement of the neck remains nearly the same. Still complains of his throat, though not so painful. Has slept at intervals this afternoon. To continue his mixture less frequently, with four drops of tincture of digitalis in each dose, and to take a saline draught, with eight drops of the same tincture, and twenty of tincture of opium; to gargle his throat with infusion of roses.

6th. His pulse remaining hard. He was bled about 11 o'clock to six ounces. Blood buffy. Pulse 80. Afterwards slept at intervals. His bowels have not been relieved. The gargle he thinks, eased his throat. The tumor soft at its anterior part, and an increased appearance of inflammation, as well as evident fluctuation. Pressure gave him pain. He breathes easier.

9 P. M. Pulse 90. The inflammatory appearance of the skin has much increased. The size of the tumor is nearly the same, and the anterior part still soft. I determined to discharge the contents, and accordingly made an opening in the

prominent part, from which issued about seven ounces of fetid blood mixed with pus. He breathed easier immediately, and was greatly relieved.

7th. Passed a good night. Pulse 85. A copious discharge from the tumor. The bowels copiously evacuated by a dose of calomel followed by an enema.

8th. Passed a good night. To take ʒiiss of decoction of cascarilla thrice a-day.

13th. Pulse 76 and languid, the discharge considerable from both wounds. To have a gill of wine in the course of the day.

14th to 20th. Passed good days, the discharge still great. Had night sweats. To continue his wine, and to have ʒiiss of infusion of cinchona, acidulated with sulphuric acid. Had walked about the house several days. Says he feels comfortable and in spirits.

21st. Walked in the garden, by which he was refreshed. The discharge from the sac much diminished. Dressed as usual.

22d. Had several motions yesterday, otherwise going on favourably. To omit his medicines, but to continue his wine.

Nothing particular occurred, till the 25th, when I found him rather feverish, and his tongue white. These symptoms were removed by a dose of calomel, and the discontinuance of the wine.

27th. 3 A. M. I was called up, in great haste, in consequence of an hæmorrhage from his neck. I soon reached the house, and learned that he had lost about six ounces of florid blood, which on examination I found had issued from the opening in the aneurismal sac. The hæmorrhage had soon ceased, and there was not the least oozing when I saw him. A compress of lint applied near the opening, and retained by adhesive straps, and a roller.

12 M. His pulse had risen to 100 and hard, his tongue rather white. He was uneasy. A slight stain of blood on the dressings, and a few drops escaped when they were removed. His neck was rather enlarged and tender. The wound where the ligature was tied looked healthy, and had healed rapidly, the last week. To take two grains of calomel immediately. An embrocation of the acetated ammonia, with spirit, to be applied to the neck, and frequently renewed.—His pulse continuing hard towards the evening, he was bled. The blood was much buffed. His pulse was lowered to 90, and was softer. The calomel produced two evacuations. Complained of pain in the head and throat, and a choaking sensation. On examination

I found both the tonsils enlarged. Has coughed, and the mucus in the throat distressed him much. No hæmorrhage had occurred, but the dressings were much discoloured by a bloody discharge, and some coagula were pressed out of the wound. Is very uneasy and low spirited. Directed to gargle his throat frequently with infusion of roses.

28th. 1 P. M. Passed an indifferent night. Complaints of pain. Pulse 98. No return of hæmorrhage, though a small quantity of blood oozed from the wound. The tonsils less inflamed. Is very low.

29th. Being absent, I did not see him till the 29th at 5 P. M., when I found that he had lost about four ounces of blood from the tumor soon after I left him, that the hæmorrhage returned about 5 P. M. to near six ounces, and that a small quantity issued at seven o'clock this morning. The tumor hard and tender. Six leeches had been applied this morning, which bled freely. Pulse 110, and weak. The tumor hard and painful on pressure. Dark coloured fetid blood escaped from the opening. Much pain in the back of the neck. Expectorates a large quantity of mucus, and is much teased by a short cough. The tonsils less inflamed, but enlarged. The lower wound healed rapidly the last two days. Has taken very little food. He lost a small quantity of blood in the evening, and was very languid. Pulse 118 and

weak. Complains of pain in the upper and back part of the tumor which is hard, except near the opening, and very tender. The right tonsil is reduced to its natural size, the left still much enlarged, and seems disposed to suppurate. He has expectorated very freely, and has dozed at intervals all the afternoon. To take a grain of opium, and as he had no evacuation since yesterday, a castor oil draught early in the morning.

March 1st. 12 M. Had passed a very indifferent night. A large quantity of fetid coagula discharged by pressure from the tumor. Pulse 100, and small. Tongue very foul. The edges of the wound languid. To take ʒiiss of decoction of cinchona with tincture and acid, every six hours. His throat is much less inflamed, and he swallows with less difficulty. The skin covering the sac is discoloured. The lower wound much healed. A poultice to be applied over the tumor.

2d. 12 M. Has passed a good night. Pulse 85, and soft. Tongue much cleaner. Is in better spirits, and has relished some cocoa for his breakfast. A purulent discharge, in considerable quantity and tinged with blood, was pressed from the wound.

3 P. M. I was summoned in haste as the hæmorrhage had returned. The attendants stated, that they believed he had lost a pint of blood,

which was evidently arterial, and was said to have been thrown from the opening in the sac, to some distance. He immediately fainted, when the bleeding ceased. I found him recovered from his fainting fit, pale and very weak, his pulse small and quick.

8 P. M. Pulse 100; very thirsty. Had slept a few minutes twice in the course of the evening. Had taken half a tea cup of cocoa, and a little small beer, for which he had expressed a wish. No hæmorrhage since 3 o'clock, but he still feels faint and very languid.

3d. 11 A. M. Has passed a very restless night, he dozed occasionally. Pulse 98. Tongue foul. Is very languid. No hæmorrhage since yesterday, but a quantity of bloody pus discharged from the sac. In the evening the tongue had got cleaner, but he was still very languid, and had not slept. The purulent discharge was discoloured and offensive. An opiate ordered.

4th. 11 A. M. Passed a very good night. Pulse 86, and soft. The discharge much diminished, but purulent and tinged with blood. More composed and sufficiently strong to sit up in bed.

From the 5th to the 9th he went on well. The discharge from both wounds continued to diminish, and no hæmorrhage took place.

9th. Pulse 85, and soft. He is much improved in every respect, and in good spirits. The lower wound has healed in the centre and upper part. A little blood has escaped from the sac.

12th. Return of hæmorrhage about 11 last night, which recurred about 3 o'clock in the morning. He was supposed to have lost near ten ounces. It ceased, and a small quantity of bloody discharge escaped from the wound in the sac. The opening much closed. I therefore enlarged it.

13th. Passed a very bad night. Complains of great pain in his neck. Pulse 120, and small. On removing the dressings, a copious bloody discharge escaped from the sac. He was afterwards easier, but very weak and languid.

10 P. M. No return of hæmorrhage, but he is extremely reduced. His pulse is small and quick. His tongue foul, and his fauces covered with a thick glutinous mucus, which he has the greatest difficulty to throw off. The sac swollen and full of coagula.

14th. The report this morning was bad. I found him pale and languid with a small quick pulse, great difficulty of swallowing, anxiety with hiccough, and encreased exertion in discharging the mucus. He has taken scarcely any food. He continued to sink throughout

the day, and expired about eight o'clock in the evening.

March 15th. Dissection.

The body was examined sixteen hours after death. The wound at which the ligature was applied, was nearly healed. The sternum was removed, the left cavicle thrown back, and the course of the carotid traced upwards. The ligature had been tied on the artery an inch and an half above its origin. The artery itself was impervious for about an inch, and seemed to be converted into a solid incompressible substance. The skin covering the tumor being dissected back, and its upper edge detached from the lower maxilla, a branch of an artery was divided. It readily received a probe, which passed into the cavity of the sac.

The arch of the aorta being divided, injecting pipes were introduced into both carotids. Warm water was thrown with some force, and the left was found perfectly impervious.

The dissection was then continued, and the whole mass removed, including the trachea, œsophagus, and tongue. On detaching the tumor from the spine, it was found that the posterior part of the sac, adhered to the bodies of four of the vertebral bones, and could not be removed with-

out making an opening into the sac, on doing which a large quantity of coagula escaped. A part of the coagulable lymph lining the sac, was organized.

The lungs were perfectly healthy in structure, though slight adhesions to the pleura were observed in two points. The viscera of the abdomen were also quite sound, and no other aneurismal enlargement of any part of the arterial system could be discovered.

Reviewing the circumstances of this case, it may be a question whether the contents of the aneurismal sac should not have been earlier discharged. It was indeed originally my intention to do so, had not the absorption proceeded with rapidity, so early after the operation. I think I would adopt this course should a similar case occur to me; for it appears that the coagula produced the severe symptoms of local inflammation, which caused the enlargement of the anastomosing vessels, and subsequent hæmorrhage. But I had a difficult and delicate course to steer, with few examples for my guidance, and the exact limit to which an operator may proceed in such unusual cases, can be determined only by successive experiments.

by J. Gray from a sketch by J. H. Beyer

Engraved by George Me

Thomas Turner aetat. 41.

Aneurism of the Carotid Artery.