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CASE

OF

WOUND OF INTERNAL CAROTID ARTERY

SUCCESSFULLY LIGATURED.

BY

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EDINBURGH :

SUTHERLAND AND KNOX, GEORGE STREET.

MDCCCLI.

CASE

WOUND OF INTERNAL CAROTID ARTERY

SUCCESSFULLY TREATED

[FROM THE MONTHLY JOURNAL OF MEDICAL SCIENCE, FOR MAY 1851.]

WILLIAM RUTH AND HENRY J. ...

EDINBURGH:

MURRAY AND REID, GEORGE STREET

CASE OF WOUND OF INTERNAL CAROTID ARTERY.

ELIZA KENNEDY, aged 25, native of Ireland, employed as a power-loom weaver, was admitted into the hospital on the 20th of December 1850, at 11 a.m., complaining of pain in the left side of the pharynx, and difficulty of deglutition, arising from the presence of a large pin which she had accidentally swallowed the day before, about nine in the morning; at least she infers it must have been at that time, as she remembers, faintly, having put a pin in her mouth, and of being at the time seized with a fit of coughing, when, she supposes, the pin had slipped down. It was, however, towards three o'clock in the afternoon, before she was made sensibly aware of what had happened, by a pricking sensation on attempting to swallow. She came at that hour to the Infirmary—was seen, and examined by one of the resident staff, Dr Rattray, who felt the head of the pin below and behind the left tonsil, but entirely covered by the lining membrane of the pharynx,—the pin extending downwards and forward toward the upper edge of the thyroid cartilage, in which its point seemed lodged; because, although the shaft of the pin could be felt easily, at the same moment, from without and from within, yet no ordinary manipulation could in any way alter its position.

No operative interference was practised at that time. She was invited to return on the following morning at the hour of visit, and came accordingly, as stated above.

On examination with a finger down the throat, and another opposing it externally beneath the angle of the lower-jaw on the left side, a pin, at least one-and-a-half inches long, was distinctly felt, in the exact position which it had occupied on the preceding day. No part of the pin was bare, it was entirely hid, and covered by the mucous membrane of the pharynx.

Several efforts were made to dislodge the point of the pin from its insertion in the thyroid cartilage, but in vain; and efforts were made to let the head present in the pharynx, by scraping through the membrane covering it. These having also failed, the head of

the pin was made to project inwards, and a nitch made with a probe-pointed scissors. This exposed the pin, but the opening in the membrane was fully half an inch below the head of the pin, so that, though a hold was got, the head was still entangled, and the scissors were again applied to liberate it. On the snip being made, by the blades closing on the pinhead, blood flowed in mouthfuls so large as to lead to the instant conviction, that the pinhead had been lodged sufficiently deep to lift the internal carotid, and present it to the scissor blades when the clip was made.

The thumb of the operator, applied instantly on the common carotid, effectually controlled the hemorrhage, and as no doubt existed as to the precise vessel injured, so, not a moment was lost in procuring the instruments necessary for taking up and tying the internal carotid. A scalpel, dissecting forceps, and aneurism needle, were got in two minutes. She was laid down on the floor of the physician's room, in which she was at the time sitting; her head was supported by a pillow; her face turned towards the right shoulder. An assistant having taken command of the common trunk, an incision was made from below the ear, in front of the mastoid process, along the ramus of the lower jaw to below its angle. No hemorrhage occurred to obscure the dissection, and the vessel was speedily exposed; a simple aneurism needle, armed with a double ligature, was passed under it with more ease than was anticipated, when the depth at which the vessel lay was first viewed in connection with the rather limited extent of the external wound. The needle withdrawn, the least possible disturbance having been given to the artery, one ply of silk was drawn home on the vessel at the upper point of its exposure, and secured. The pressure being now wholly removed from the common carotid, no hemorrhage whatever recurred. The spare thread was, therefore, immediately withdrawn, both ends of the ligature preserved, and brought out near to, but above, the centre of the wound. The external wound was closed by three stitches, and the patient carried up-stairs to bed. She had lost perhaps six or eight ounces of blood in the first half minute—given forth in large gushes—between each of three or four sentences which she found breath to utter only singly after emptying her throat and mouth,—“Arrah, you've done for me now,”—“What will become of my child?” &c. &c. These, accompanied by the usual national gesticulations with head and arms, for a few seconds, forbade the possibility of commanding the bleeding vessel; but as life hung on a slender thread at that moment, and seconds were of vital importance, one peremptory order to sit still as she valued her life, and an assurance on honour that her child should be well cared for, calmed her at once, and the vessel was under complete control. Her quiescence, and the cessation of the bleeding, were no doubt much aided by decided faintness, which then came on, and which continued until some time after the operation. Her pulse, however, continued distinct the whole time. The facial

and temporal arteries were found to pulsate firmly after the whole was concluded. Heat was applied to her lower limbs, and moderate re-action established by 4 A.M. The pulse firm, good, and slow. One sputum of coagulated blood came up within an hour after she was put to bed.

6 P.M.—Is comfortably warm. Pulse 60, firm. No other sputum s come up, and no other sign seen of further hemorrhage. The two house-surgeons, Messrs Thomson and Pirie, take watch about in her closet.

9 P.M.—One other small clot of blood has come up, but there is no appearance of any fresh hemorrhage.

21st December, 7 A.M.—Has slept pretty well through the night. Three colourless sputa of clean mucus have come up in the course of the night, without even a trace of blood. Breasts turgid with milk. She still suckles a child fifteen months old. Has, notwithstanding, menstruated regularly for four months past, and chanced to be in the middle of that process at the time of the operation.

10 A.M.—Going on most favourably. Allowed her a small basin of boiled “sowens,” which she swallowed with considerable facility,—not, however, without pain. Pulse 60. Skin cool. Feels the pin at times; and has occasional, but transient, spasm of the glottis.

4 P.M.—Sleeping soundly.

8 P.M.—Seems much refreshed. Gave her “sowens” until she was quite satisfied. Sputum to-day comes up easily, clear and colourless. The menstrual discharge, after having suddenly ceased, has come on again.

22d December, 10 A.M.—Slept well. Sputa moderate in quantity, and colourless. A small skin-looking clot came up in the morning, but has been lost. Pulse 60, soft. Can now swallow her “sowens” and drink fluids with more ease. Bowels not open since admission; an enema to be given.

1 P.M.—Enema has brought off a copious stool of scybala and digested blood.

23rd December.—Slept well. Pulse, skin, and tongue natural. The same soft diet continued.

24th December.—As at last report. Bowels opened in the evening by an enema.

25th December.—Removed the lowest two stitches in the external wound, and supported the edges by two fresh strips of isinglass plaster. The wound seems firmly united.

3 P.M.—Gave her some “sowens.” She mentioned before beginning that she had a feeling as if she would not be able to swallow them, as she thought the pin had shifted its place, and was like to choke her. The first spoonful excited slight coughing, but the morsel went down, and along with it the pin. She felt a sensation as if it pricked her slightly some way down the œsophagus, and then all sense of its presence was lost. She drank her milk and swallowed

her "sowens" with perfect freedom, expressing her entire conviction that the pin was gone.

9 P.M.—Throat feels raw. Complains of debility. Bowels moved by enema.

26th.—Egg allowed to breakfast and soup to dinner. Bowels moved naturally.

27th.—Removed the remaining stitch and all the plasters from the wound in the neck, and found it firmly united from end to end. One drop only of moisture, and that a surface ooze, seen at the inferior angle of the wound. No moisture or redness around the ligature, which comes out at and behind the angle of the jaw.

28th December.—Bowels three times opened, stools mucous and faintly tinged with blood. Pricking pains felt occasionally in right side of belly.

29th December.—A large consistent stool followed the administration of a dose of castor oil. Is quite easy since. The pin searched for, but not found.

30th December.—Going on well. Easy in every respect. Appetite good; bowels easily regulated; wound whole; requiring no dressing. The ligature retains its hold of the vessel.

In consequence of this fact, though up and going about, she was detained in the hospital.

10th February 1851.—The report is,—On trying the ligature, it came away easily—this being the fifty-second day since the vessel was secured.

17th February.—She was dismissed cured.

She continues well up to this date,—8th March 1851. The case is brought forward, chiefly as a duty to the profession,—to put on record a casualty, and that of a very grave nature, occurring in the midst of what might be deemed a trifling act of surgical manipulation—to show how it must be met should the like happen again, and to show that, in some circumstances, a single ligature may suffice to stop hemorrhage from the internal carotid artery when wounded.

While recording this case—all successful as it has been—I should ill discharge my self-imposed task, if I did not accompany it by the expression of my strongest conviction, that such a case must be exceptional. Early impressed by the writings of John, and the lectures of Sir Charles, Bell, with the absolute necessity of tying both ends of a wounded artery, it has ever been with me a downlaid *axiom*; and my wonder has often been excited by the alleged backwardness of surgeons to see and act upon it.

Deeply grateful ought the profession to be to the talented Guthrie, for so ably, graphically, convincingly, pressing on us this vital rule. It is surely admitted and adopted more generally than he imagines, for reason and common sense should settle the whole question, with any possessed of a tyro's knowledge of anatomy and physiology. In the case recorded, a double ligature was passed under the vessel, the object in view being, if the hemorrhage should not cease after

one ligature was tied, to enable the operator to adopt Mr Guthrie's recent suggestion — (*See Lancet*, Vol. ii., 1850, page 145)—to bisect the lower jaw, and then lifting it out of the way, get free access to the wounded carotid, at a point sufficiently high to command the hemorrhage supplied by collateral circulation through the head.

The hemorrhage, however, ceased after the application of the one ligature, and therefore, according to all sound rules, further interference was at the time uncalled for. The pin was allowed also to remain undisturbed. No subsequent necessity ever arose to warrant the slightest interference; but it is fair to state, that the case was watched day and night for some time, with all the instruments in the ward adjoining, in order to complete, with as little delay as possible, an operation that was felt by the operator, for many days, to be, as it were, only half finished. To account, in the circumstances, for the complete arrest of the hemorrhage by one ligature, it may be supposed that the nitch (\wedge) shape of the wound was favourable to its closing; that the pin-head, lying in or near the wound, would help to entangle and support a clot when once formed; and, lastly, the wound inflicted by the scissors was so far down, that it was thought by the operator that he reached up very close to the wounded part, and that his ligature may have been near enough to give a solid rest to any clot so formed.

257, UNION STREET, ABERDEEN,
8th April 1851.

of patients was first to report the symptoms to a general practitioner. The symptoms were usually of a general nature, such as weakness, loss of weight, and a feeling of being unwell. The symptoms were usually of a general nature, such as weakness, loss of weight, and a feeling of being unwell. The symptoms were usually of a general nature, such as weakness, loss of weight, and a feeling of being unwell.

In a number of cases, however, the symptoms were of a more specific nature, such as a feeling of being unwell, weakness, and loss of weight. The symptoms were usually of a general nature, such as weakness, loss of weight, and a feeling of being unwell. The symptoms were usually of a general nature, such as weakness, loss of weight, and a feeling of being unwell. The symptoms were usually of a general nature, such as weakness, loss of weight, and a feeling of being unwell.

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