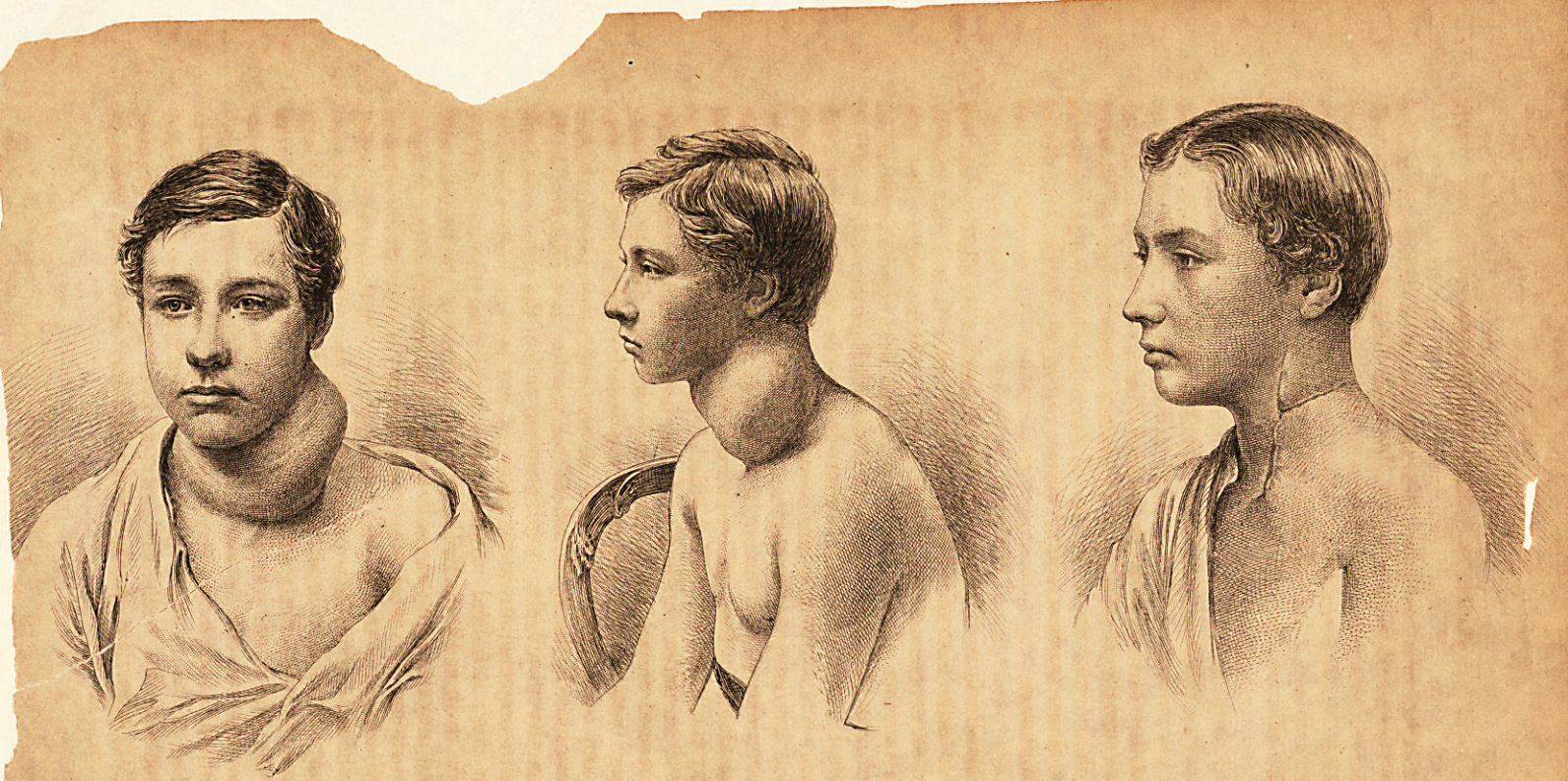

PROFESSOR SPENCE'S CASE OF TUMOUR.

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Part First.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*Case of large deep-seated Tumour of the Neck successfully removed by Operation.* By JAMES SPENCE, Esq., F.R.S.E., President of the Royal College of Surgeons, Edinburgh, Surgeon to the Queen for Scotland, Professor of Surgery in the University of Edinburgh.

IN the Dublin Quarterly Journal for November 1863, I published a memoir of the case of Mrs Jepson, from whom I had successfully removed an enormous deep-seated tumour of the neck. The following is another example of the excision of a growth similar in character, though presenting some local peculiarities:—

George Manson, æt. 16, recommended to me by Dr Grant Smith of Thurso on account of a large cervical tumour, was admitted into the Royal Infirmary under my care on the 9th of June 1867.

On examination, the tumour, which was somewhat irregular in form, nodulated on the surface, and of a firm consistence, was found to occupy the whole of the left side of the neck. Commencing at a point close under the angle of the jaw, it passed beneath the sterno-mastoid muscle, and then projected towards the surface, extending back to and elevating the anterior margin of the trapezius, and occupying the whole of the supra-scapular and subclavian regions of the neck, where it lay below the posterior belly of the omo-hyoid muscle. On the mesial side of the sterno-mastoid, the tumour projected inwards, pressing the larynx and trachea to the right side; it bulged upwards to a level with the os hyoides, and below, it dipped beneath the muscles in front of the trachea, and descended into the supra-sternal fossa. The growth seemed movable, and its margins were pretty well defined, except at the sternal region, where it appeared to pass deeply, and where the superimposed textures bound down its surface so as to prevent its connexions from being so clearly ascertained as in other directions. It was not moved by the efforts of deglutition, but the position of the belly of the omo-hyoid was very distinctly seen over the posterior portion of the tumour during such efforts. The superficial veins of the left side of the neck were somewhat larger and more numerous than those of the opposite side. The history of the case showed that the tumour had been originally, and for many years, of slow growth. It was first noticed when the boy was three years of

age, and increased little for the first eight or nine years; but of late it had progressed more rapidly, especially during the last two years. There was no pain in the tumour, nor interference with deglutition, but for some months the breathing at night had become oppressed, and at times spasmodic. The lad's health was good; there was no appearance of emaciation, and all the functions were natural.

The tumour was firm, and apparently solid throughout, and, as I have said, tolerably well defined. The youth and his friends were anxious that something should be attempted to relieve the increasing difficulty of breathing; and on my stating that I thought the removal of the tumour advisable, they readily consented to the operation.

On the 12th of June, I performed the operation for the removal of the tumour in the following manner:—I first made an incision along the course of the sterno-mastoid, from the angle of the jaw to beyond the sterno-clavicular articulation. Then at its lower termination I made a small transverse incision, about an inch and a half in length, so as to enable me to expose more fully the part where the tumour passed into the sternal fossa. Lastly, I carried a third incision, four inches long, from the middle of the first incision backwards to the anterior margin of the trapezius. I then dissected the skin and platysma, so as to expose the anterior portion of the tumour as far inwards as the tracheal margin, which I cleared from the fascial covering, and elevated. Next passing my finger beneath the fascia and the fibres of the omo-hyoid muscle, which were stretched over the growth at the lower part of the neck, I divided them, and had the satisfaction to find that the substernal portion was defined and unattached, and could be readily turned out. I now proceeded to clear the remainder of the tumour by dividing the sterno-mastoid transversely and dissecting it, and the other coverings off from the surface in two flaps, as marked out by the incisions. In doing this, some small superficial vessels were tied. On fully exposing the tumour, a large vein was seen on its surface at the upper part. This vein, though distended above, was obliterated where it lay over the lower part of the growth. The distended part of the vein I included in two ligatures and divided it between them. The whole mass being now fully exposed, I proceeded to dissect it out from before backwards, feeling with my left fore-finger for the vessels, so as to protect them from risk of injury. On clearing and raising outwards the anterior portion of the growth from its deep connexions, the carotid artery and pneumo-gastric nerve were seen bare, as if dissected from their sheath, but the internal jugular vein could not be seen, and the pneumo-gastric lay somewhat in front of the carotid at its lower part. As I could neither see nor feel anything of the internal jugular, I next dissected the tumour from its posterior aspect, and then from the subclavian space, cutting with the edge of knife close towards the deep surface

of the tumour, so as to avoid the phrenic and sympathetic nerves and the thoracic duct in the deep dissection at the inferior region of the neck. At one part the tumour was closely adherent to the fascia over the upper part of the scalenus anticus, but by dissecting the fascia from the muscle the whole growth was removed entire.

The parts now represented a deep dissection of the whole side of the neck, but no trace of the internal jugular vein in its natural relation could be seen, and it was concluded that the vein tied on the surface of the tumour was the jugular. There was very little bleeding, only a few small arteries requiring to be tied; but the last touch of the knife, separating the tumour, divided a small vein, which retracted between the transverse processes of the vertebræ, and as it could not be seized, the troublesome oozing from it required to be arrested by pressure. The surface of the wound was painted over with tincture of iodine, and the integuments were replaced and united by sutures, except at the posterior angle of the transverse incision, which was left open to permit any discharge to escape, a compress of sponge supported by a bandage being placed over the wound to prevent venous oozing. The patient was then removed to the ward and placed in bed, his head properly supported. In the evening, some recurrence of bleeding necessitated opening the posterior part of wound. The bleeding was found to proceed from a small artery, which was tied. No further bleeding from the vein had taken place, and the wound was finally closed with sutures.

On the 13*th.*—The patient was pretty well. Pulse 100. Some nausea from chloroform. Ordered a saline aperient mixture.

14*th.*—Free from sickness; bowels have acted freely; tongue clean; skin cool. Pulse 90.

15*th.*—Continues doing well. Pulse 84.

16*th*—Pulse 76. Most of the stitches removed.

17*th.*—Incision along sterno-mastoid entirely united, as also the small incision at sternum. A good deal of healthy discharge from the transverse incision. Pulse 80.

20*th.*—Pulse 64. All ligatures except two have come away. Slight pressure with strapping to be applied over the corner of wound, near the ear, where pus has a tendency to lodge. Wound dressed with weak solution of tincture of iodine in water. From this time the patient's progress to recovery was uninterrupted. On 31st July the wound was healed throughout, except the surface of the cicatrix; he was able to be out of bed and walking through the ward with the head unsupported; and he was dismissed from hospital on the 24th of August.

The photograph showing the recently cicatrized wound left after removal of the tumour was taken on the 2d of August.

Examination of the Tumour.—The tumour, which presented an irregular nodulated surface, was of somewhat ovoid shape, broader below than above, and of a uniformly firm consistence. On making

a longitudinal section, it presented much the appearance of the section of a gland mixed with fibrous texture; and, on more minute examination, it had all the usual characters of the adenoid growth. About the centre of the section, two small portions had a dark bloody colour, and felt softer than the rest of the growth; but, on careful examination, they were found to be essentially of the same structure as the rest of the tumour.

In my memoir of Mrs Jepson's case, I adverted to the want of success which has hitherto attended operations for the removal of such deep-seated cervical tumours, as I could find no record at that time of any case in which a large tumour situated under the sterno-mastoid had been completely removed, with ultimate success; none, indeed, where complete removal had been effected. As it seemed to me that this want of success had led some surgeons to express strong opinions against operations for the removal of deep-seated cervical growths, I stated my opinion that the certainty of complete and safe removal of such tumours depended on the selection of proper cases for operation, by careful attention to the history of the case, and to the diagnosis of the character of the growth; for if the tumour was of slow growth and simple character, we could calculate on its comparative definition and circumscription. I mentioned that these were the conditions which decided me in operating in Mrs Jepson's case, although other surgeons had declined. Contrasting the history and vital manifestations of the tumour in her case with those of the cases operated on by John Bell, Warren, and Liston, in which complete removal had been found impossible, and in which the growth had returned, I pointed out that the histories of the latter cases showed evidences of malignant character which, in my opinion, rendered operation improper in the present state of our knowledge; but that, so far from deterring from operative interference in favourable cases, they rather gave encouragement, by showing how much could be done even under unfavourable conditions.

Unfortunately, the proportion of malignant cervical growths is much greater than of those suitable for interference. Out of a very large number of such tumours which I have seen, especially since the successful operation on Mrs Jepson, with the single exception of the present case, I have met with none in which operation would have been warrantable (I do not include ordinary parotid tumour), as they were all marked by the characteristics of malignancy.

When the tumour has been of rapid growth from the first, is of irregular consistence, and presents the general features of malignant disease, I believe that operative interference is very doubtful, as the chances of complete removal and ultimate successful issue are very small. Even though there be considerable mobility and apparent definition, such growths very generally arise from or involve at an early period, the transverse processes of the vertebræ, whilst their superficial margins feel loose and defined. Mobility of the tumour,

though an important consideration in deciding on the question of operation, is only of real value when taken in conjunction with the nature of the growth. A malignant tumour may not only adhere to, but involve the great vessels and nerves, and yet be very moveable, for these structures, being loosely connected in front of the vertebræ, move readily along with the morbid mass. In my remarks on Mrs Jepson's case, I entered so fully on the special circumstances to be considered in deciding on the propriety of operating, that I would merely refer to it for information on these points, and limit my further observations on the present case to peculiarities in regard to its anatomical relations.

In the lad Manson, though the tumour was a very large one, it was entirely confined to the region of the neck, and hence did not give rise to the same amount of deformity as in Mrs Jepson, in whom the growth occupied the parotid as well as the cervical region. In Manson, however, the tumour passed lower down into the subclavian and sternal regions, and from being placed on the left side, lay in a position to press upon the thoracic duct and left recurrent nerve; whilst the textures covering it in the sternal fossa rendered it impossible to ascertain positively its definition or attachments there. The perfect nutrition of the patient, however, showed that, though in close relation with the thoracic duct, it could not have involved that structure; and though the spasmodic difficulty of breathing at night, which he occasionally felt, might be due to pressure on the left recurrent laryngeal, the symptom was only of recent occurrence and not constant, and hence was more likely to arise from pressure owing to the proximity of the tumour, than from the nerve being involved in or adherent to it. These considerations, taken in connexion with the simple nature of the growth, and its origin high up in the neck, seemed to warrant the conclusion that its substernal portion was free, and merely bound down by the fascia and muscles.

During the operation some peculiarities showed themselves, which I think worthy of notice as exemplifying the difficulties we must be prepared for, and the care required in such operations, or rather dissections of the neck. When the anterior margins of the tumour had been freed, and its deep surface dissected and raised off from the position of the carotid sheath, the whole length of the cervical portion of the carotid artery and vagus nerve were seen bare as if dissected, but there was no appearance of the internal jugular vein. This made me proceed very cautiously, for two reasons: *first*, the great vein might be partly involved or displaced by the tumour, and thus liable to be wounded at some unexpected part; and, *secondly*, by the absence of the vein the sympathetic nerve and thoracic duct were left uncovered, and these important structures, undistinguishable amongst the tissues discoloured by blood, were exposed to great risk of injury. The phrenic nerve, from its white colour and comparatively superficial position, was easily enough seen and guarded. Indeed, the absence of the vein from its natural position,

and the uncertainty as to whither it might be displaced, I consider the most embarrassing conditions in the operation.

In describing the operation, I have stated that on dissecting the flaps from the surface of the upper part of the tumour I tied a large vein, which I was inclined to think was the displaced internal jugular vein; and my reason for supposing this was, that the vessel could be traced from the angle of the jaw passing downwards over and partly in a groove on the surface of the tumour in relation with the deep surface of the sterno-mastoid, and very much in the line of the jugular; but as it was obliterated about the middle of the neck, its continuity could not be traced lower down. The pervious portion was about the bulk of the fore-finger, and full of blood for about two inches, when it became a flattened cord. I should presume, from the relations of the tumour, that it had probably originated at an earlier age even than that stated, viz. the third year, when it was first noticed by the patient's friends, and that it had developed itself from above downwards, and thus insinuated itself between the parts which usually occupy the common sheath, raising the vein on its surface and pressing the artery and vagus inwards, before its bulk overlapped them. I draw attention to this point, because it is well to be prepared for similar difficulties; and I believe that the history of the case may guide us, as these anatomical relations seem to me to depend specially on the original position and development of the growth in early life, before the cellular texture of the common sheath has become condensed, and are not likely to be met with in cases where the tumour commences at a later period of life; for, as a rule, a simple tumour, whilst it may adhere to, or compress, or push aside structures, has no tendency to destroy texture or separate parts contained in a common fibro-cellular sheath.

In conclusion, I may state that neither in Manson nor Mrs Jepson was the division of the sterno-mastoid attended by any malposition, or even by any interference with the movements of the head; nor was the section of the cervical portion of the spinal accessory nerve followed by any appreciable bad effect.

ARTICLE II.—*Cases of Poisoning by Susumber Berries.* By Dr MANNERS of Jamaica. With Observations by JOHN MILLAR, Esq., M.D., F.R.C.S.E.

THE following notes of two cases of poisoning by means of susumber berries, collected by Dr Manners, coroner for St Dorothy, Jamaica, are not only of intrinsic merit, but also of considerable interest, from the fact that, as far as I am aware, they are the first cases recorded of poisoning in the island of Jamaica through the indiscriminate use of the two varieties of the susumber berries. Notwithstanding the probability that other cases may have occurred