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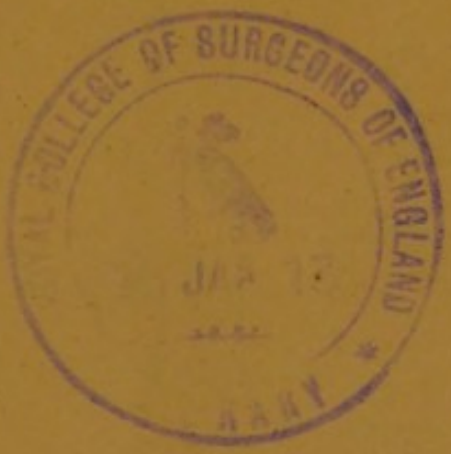

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ANATOMICAL VARIATIONS.

(III.)

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During the past Session 1877-78 thirty-one bodies have been dissected. In these we have noticed the following more interesting variations :—

Pterygoideus Proprius.

An example of this muscle occurred in a male subject. The superficial fibres of the external pterygoid arose from its under surface. It was attached above to the pterygoid ridge, and below to the outer surface of the external pterygoid plate, and was almost entirely muscular. The maxillary head of the external pterygoid was deficient but not absent.

Similar cases have been reported by us,[1] and by Henle, Gruber, and Theile.

[1] 'St. Thomas's Hospital Reports,' vol. vi, p. 75; 'Journ. Anat. Phys.,' vol. vii, p. 160.

Supernumerary fibres to Scalenus anticus.

This variation was observed in the left side of the neck of a male body. It consisted of a number of fibres, arising by tendon from the inner border of the upper surface of the first rib, immediately behind and continuous with the rest of the *scal. anticus,* also from the anterior surface of the apex of the pleura, and inserted by two digitations into the anterior tubercles of the transverse processes of the sixth and seventh cervical vertebræ. The slip was two inches long, tendinous at its origin and fleshy at its insertion. It lay behind the second stage of the subclavian artery, parallel with the *scalenus anticus,* and at its insertion sent forward a few fleshy fibres to blend with that muscle.

The more common accessory scaleni bundles have been arranged under distinctive names from the time of Albinus, and the present case is one of the varieties known as sc. minimus. The sc. lateralis is a separate portion of the sc. posticus, and the sc. accessorius similarly a hinder and free portion of the sc. medius. These and the unnamed varieties are perhaps of value as indicating the transition from levatores costarum which the scaleni appear allied to, a relation borne out by their arrangement in birds (Mivart).

This appears to have been a case in which the scalenus anticus was perforated by the subclavian artery, and the deeper portion remained very distinct and attached to the pleura. It is described by Meckel after Albinus as the *sc. minimus,* but no mention is made by him of attachment to the pleura, and Meckel states[1] that it usually lies in front of the axillary vessels. Macalister,[2] however, makes the *sc. minimus* to be attached to the second rib, and, curiously enough, on Meckel's authority. The original text[3] of Albinus is clear enough: "minimus, qui valde parvus, oritur a summo margine costæ primæ, statim pone Priorem" (*i.e.* sc. ant. vel prior), but the relation of this slip to the artery and to the pleura is not here referred to. Dr. Sibson has described the attachment of fibres

[1] 'Descriptive Anatomy,' vol. i, p. 224.

[2] 'Trans. Royal Irish Academy,' vol. xxv.

[3] Albinus, 'Hist. Musculorum hom.,' p. 404.

from this muscle to the pleura, but these observations do not seem to have been noted in anatomical text-books.

Third belly to digastric muscle.

On the right side of the neck of a male subject the digastric presented a third belly, arisising from the lower border of the body of the inferior maxilla just by the groove for the facial artery. From this origin the fibres passed downwards and forwards to blend with the anterior belly of the muscle, a kind of tendinous septum being interposed between the two at their line of junction. The extra head was fleshy in its entire extent, and very nearly as large as the anterior belly. The facial artery lay upon it, as it crossed the lower border of the jaw.

This variety is interesting, as in those cases in which the digastric receives an accessory slip from the lower jaw, that slip usually joins with the posterior and not the anterior belly (Henle). Macalister[1] describes as many as nineteen varieties of this muscle, but among these there is none resembling the present case. He refers to a special set of fibres extending from the hyoid bone to the chin in front of the anterior belly (*mentohyoid*) as a differentiated portion of the *platysma*, and some others of the varieties connected with the anterior belly may be of the same nature, but in the present case the fibres lay too deeply and ran in a wrong direction for such an origin to be suggested.

Costo-thyroid muscle.

This abnormality, present on the right side of the neck of a muscular male, was a flattened band of muscular fibre arising from the inner border and lower surface of the first rib, immediately behind the impression for the rhomboid ligament, and inserted into the posterior extremity of the oblique line of the thyroid cartilage. In its course it crossed over the internal

[1] Loc. cit., p. 32.

mammary artery, the first part of the subclavian, and lay on the front of the carotid sheath.

The muscle was about half an inch broad, and fleshy throughout. It was separated from the sterno thyroid of the same side by the sterno hyoid.

This variety is probably a displaced slip of the sterno thyroid attached to the first rib farther out than the rest of the muscle. Somewhat similar arrangements have been described by Wood,[1] Hallet,[2] Haller,[3] and Macalister,[4] and Albinus[5] refers in general terms to it.

Accessory Genio-hyoid muscle.

This occurred in a female body, and arose from the front of the body, also from the lesser and part of the greater horns of the hyoid bone, and was inserted into the upper genial tubercle of the lower jaw. It lay superficial to both genio hyoids, overlapped the anterior part of the hyoglossi, and was covered by the mylohyoid. The muscle was a distinct mesial slip, triangular in form with base downwards, and with no indication of being divided into halves.

It seemed very much like the mentohyoid (Macalister), occupying a position deep to the mylohyoid instead of over it. Such an arrangement has not, as far as we are aware, been described before. Macalister[6] mentions that in one instance he saw the mentohyoid inserted into the geniohyoid when the mylohyoid was partly deficient, but such was not the condition in the present case.

Levator anguli scapulæ.

In one case, in both sides of the neck of a muscular male, a strong fasciculus of muscle arose in common with the first

[1] 'Proceed. Roy. Soc.'
[2] 'Edin. Med. Journ.,' 1854.
[3] 'Element. Physiol.,' vol. iii.
[4] Loc. cit., p. 26.
[5] 'Hist. Muscul.,' p. 204.
[6] Loc. cit., p. 33.

digitation of the levator anguli scapulæ, and was intimately blended with it for an inch and a half of its course. It then ran parallel with the lower fibres of the splenius, across the other digitations of the levator anguli scapulæ, and was inserted by aponeurotic fibres, interlacing with the posterior surface of the tendon of the serratus posticus superior.

This extra slip was probably a separate piece of the splenius colli, arising in common with the levator anguli scapulæ, but it has been described under different names by observers *adjutor splenii* (Walther), *singularis splenii accessorius* (Haller) and is evidently continuous with the *rhombo-atloideus* of Macalister.

In another case the levator anguli scapulæ had a distinct attachment by tendon to the upper surfacc of the first rib, between the attachments of the Scalenus medius and cervicalis ascendens. This appears to be very unusual.

Stylo-chondrohyoideus

occurred in the left side of the neck of a female subject, and had the same anatomy as a similar variety described by us in a previous paper.[1]

In the present case the styloid process was very short, all the styloid muscles arising together. The muscle replacing the stylo-hyoid ligament was about half an inch broad, fleshy throughout, except an inch at its lower end. It arose from the apex of the short styloid process, and was inserted into the lesser horn of the hyoid bone.

Transversus nuchæ.

This variety was observed in one case, and in that present on the right side only. The muscle was made up of four or five isolated bundles of fleshy fibre attached internally to the external occipital protuberance, and externally to the skin over the mastoid process. It lay superficial to the sterno-mastoid, which had an attachment to the entire length of the superior curved line of the occiput.

[1] 'St. Thomas's Hospital Reports,' vol. vii, p. 241.

Our experience does not lead us to the same conclusions as Professor F. E. Schultze[1] as to the frequency of this muscle. In eighteen out of twenty-five cases he found some modification of it, and Macalister found it in seven out of twenty.[2] The latter author says, "this muscle is always symmetrical, and the two opposite sides usually are connected in the middle line," but it is somewhat uncertain whether this observation may not refer to the deep form of transversus nuchæ. In the case here noted it was unilateral.

Muscular slips on central tendon of diaphragm.

These lay on the left side of the abdominal or under surface of the central tendon, occupying a position internal and external to one another.

The internal one, one and a half inch long by three quarters of an inch broad, was attached to the middle of the left leaflet, and anteriorly blended with the muscular fibres on the left side of the œsophageal opening. The external slip, 2 inches long, one and a quarter inch broad, was attached posteriorly in common with the internal one, passed forwards and inwards, and lost itself on the middle leaflet near its junction with the left one. Both bundles of fibres lay on the part of the diaphragm opposite the apex of the heart.

Very few irregularities of this kind appear to have been recorded. Merkel quotes Huber[3] as having described "on a part of the inferior face of this tendon muscular fibres separate from the others," and other slips are described extending from the central tendon to the liver, &c., but, as far as we are aware, not resembling the case here recorded. The muscular fibres did not appear to be a direct continuation with any of the normal fibres of the diaphragm, although they blended somewhat with some by the left side of the œsophageal opening.

Rectus sternalis.

Only one specimen of this has occurred this session, and was

[1] 'Schmidt's Jahrbuch,' bd. cxxvii, p. 288.

[2] Loc. cit., p. 4.

[3] From Sœmmerring's 'Muskellehre,' p. 162.

found on both sides, the right being smaller than the left, which was half an inch broad, and extended from the cartilage of the seventh rib close to sternum to the fascia over the first part of the gladiolus.

Chondro-epitrochlearis.

This was noticed twice. In one case it was present on the right side only of a male body. It arose by a fascial origin from the cartilage of the sixth rib, and was inserted into the internal intermuscular septum near the internal condyle. The band, immediately after its origin, became muscular, and in its course lay parallel and close to the lower border of the pectoralis major, and in the upper part of the arm completely covered the brachial artery. At the junction of the middle and lower thirds of the arm it became tendinous, was joined by strong aponeurotic fibres from the fascia over the triceps, and then passed underneath the brachial artery from without inwards to blend with the internal intermuscular septum.

In the other case, the muscle was present in both arms of a female subject. It arose from the posterior plane of insertion of the pectoralis major, and blended with the internal intermuscular septum at the internal condyle. The band, in this instance, was tendinous throughout, and had very much the same size and appearance as an ordinary plantaris tendon. It crossed in front of the brachial artery and the junction of the lower and middle thirds.

Examples of this abnormality have been fully described, especially by Wood,[1] Struthers,[2] Curnow, and others, and we record them simply as occurrences of no great rarity.

Pectoralis minor.

In one instance the pectoralis minor was very slightly attached to the coracoid process, but sent a large tendon of insertion underneath the acromion to blend with the anterior border of the coraco-humeral ligament.

[1] 'Proc. Roy. Soc.'

[2] 'Anat. and Phys. Obs.'

This tendon did not join with the coraco-acromion ligament, as detached slips of the insertion of the pectoralis minor from the coracoid process usually do, when present. One case is reported by De Souza[1] in which almost similarly the *pectoralis minor* tendon passed entirely into the capsule of the shoulder-joint.

Accessory supinator muscle.

This arose in common with the supinator longus, from the front of the upper two thirds of the external intermuscular septum, and was inserted into the oblique line of the radius. The muscle was flat, about an inch broad, and four inches and a half long, and fleshy throughout. In its course it lay on the musculo-spiral nerve, radial recurrent artery, and tendon of the biceps.

Its presence could not be ascertained in the opposite arm, as amputation had been performed through its middle third.

Among the comparatively few abnormalities to which the supinator longus is liable we find only one case resembling this, described by Mr. John Wood, and in this the muscle did not appear to be so distinctly an accessory muscle, but rather, as he describes it, a double tendon of insertion.

This variety is interesting, as it presents a close resemblance to what is found in some reptiles. In the Iguana and chameleon the supinator longus is large and double (Mivart),[2] and the deeper portion (s. accessorius) appears to have a very similar attachment to the abnormality here described.

Second head to palmaris longus.

This was derived from the inner side of the fleshy part of the flexor carpi radialis, and had very much the same size and appearance as an ordinary palmaris longus. Its muscular part was about one inch and a half long, and its tendinous about three inches. It blended with the outer border of the palmaris longus tendon in the lower third of the forearm.

[1] 'Gaz. Med. de Paris,' 1855, No. 12.

[2] 'Elem. Anat.,' p. 333.

Peculiarities in this most eccentric of all muscles in the body have been fully described in a special memoir by Gruber, and the present is only one of the many varieties of a double-headed palmaris.

Extensor ossis metacarpi pollicis.

In two bodies, and in both forearms of each, the extensor ossis metacarpi pollicis had the following arrangement. A little above the wrist it divided into three tendons of nearly equal size, all passing through the same sheath in the annular ligament.

The outer tendon joined the abductor pollicis, the middle was the tendon of the ossis metacarpi in normal position, and the inner one became the extensor primi internodii.

Cases similar to this have been described by Curnow,[1] and a very similar arrangement is recorded by Carver[2] to have been found in an idiot.

Varieties in peroneus tertius.

In a female body there was no peroneus tertius in its ordinary position, but upon the dorsum of the foot a tendinous slip ran from the front of the peroneus brevis tendon behind the external malleolus. This shortly became muscular, and split into two parts near the little toe, the tibial portion ending in a tendon on the base of the first phalanx of the little toe, the fibular portion being muscular and inserted into the base of the fifth metatarsal bone on the dorsum.

In another case (female, left side) a slip passed on to the dorsum of the fifth metatarsal and adjacent side of fourth. A good-sized slip was continued to the base of the fifth proximal phalanx.

In a third (male, right side) the peroneus tertius was inserted into base of fifth, and continued to the bases of fourth and third metatarsals. In this case the *ext. prop. poll.* sent a tendinous process to the base of the first phalanx.

[1] 'Journ. of Anat. and Phys.,' vol. x, pt. iii.

[2] 'Journ. An. Phys.,' vol. viii.

In a fourth male the muscle was large, and was inserted into the bases of fourth and fifth metastarsals.

Peroneus tertius is often eccentric in its arrangement, and at its attachment to the fibula can usually be traced considerably higher than is usually described.[1]

A bronchial artery arising from the internal mammary.

This rare variation was present in the right side of a female subject. It arose from the right internal mammary, about a quarter of an inch from the commencement of the artery, and passed down by the side of the trachea, under the vena azygos major, to enter the posterior surface of the root of the right lung. The artery was the size of a good-sized probe, and rather tortuous in its course. Besides this means of supply to the lung there was a normal bronchial artery coming from the first aortic intercostal. The superior intercostal also of the right side gave off a number of œsophageal branches.

Varieties in thyroid arteries.

In the right side of neck of a male body the common carotid gave off a short thick branch to the thyroid gland from which two or three small branches descended along the side and front of the trachea to supply the fascia and glands at the root of the neck.

The descending branch of the superior thyroid artery also took a curious course. After going off the crico-thyroid branch it entered the substance of the thyroid gland, made one or two twists, giving off a few small branches to the gland, and then recurved over the carotid sheath to become the sterno-mastoid artery.

The inferior thyroid artery of the same side arose directly from the first part of the subclavian, and then ran normally to its distribution. A small thyroidea rima was present from the innominate.

These varieties were absent on the opposite side.

[1] Compare Wagstaffe, 'Journ. Anat. Phys.,' vol. v, p. 277.

Posterior scapular artery.

In one case this artery ran thus :—It arose from the *first* stage of the axillary, ran down on the axillary surface of the serratus magnus for the distance of an inch and a half, then pierced the muscle and ascended on its dorsal surface to the upper angle of the scapula, from which it descended in its normal position.

There was a small transversalis colli present ending as the ascending cervical branch.

Common iliac veins and vena azygos minor.

In one case the common iliac vein of the left side did not join the right one in the usual position, but passed up the left side of the aorta, and after receiving the left renal vein crossed in front of the aorta to unite with the right one.

A small vein, about a quarter of an inch in diameter and three inches and a half long, ascended from the right internal illiac to join the left common iliac vein on the last lumbar vertebra. This cross branch received the middle sacral vein.

In another subject there were two left common iliac veins, placed one above the other, and uniting with the right one at the beginning and ending of its course. The last lumbar vein of the left side joined the upper branch.

In a third case the vena asygos minor was very large. It united with the left common iliac vein below, and passed through the normal opening in the diaphragm. On its way it received the left lumbar veins, and joined the left renal, which in this case crossed behind the aorta.