

ART. XXVII.—*Notes on some Anatomical Anomalies.*\* By F. T. HEUSTON, M.D., M.Ch., F.R.C.S.I.; Lecturer on Anatomy, and Registrar of the Carmichael College of Medicine, Dublin.

IN this paper I have departed from my original intention, which was to have mentioned, for statistical purposes, all the anomalies found in the Carmichael College Dissecting-room during the past Session, but on collecting my notes I found they were of too voluminous a nature to be included in one paper, so I selected the following five examples of muscular and five examples of vascular anomalies:—

#### MUSCULAR.

I. *Female, No. 6.*—*Left upper extremity; biceps.*—A well-developed muscle, arising between the insertion of coraco-brachialis and the origin of the brachialis anticus, passing on the inner side of the biceps, to which it had a fascial attachment, and being finally inserted into the semilunar fascia of the biceps.

II. *Male, No. 24.*—*Right upper extremity.*—The biceps having arisen by an additional head, similar to the preceding, and which was also inserted into the semilunar fascia, which, being thus very strong, gave origin to two distinct sets of fibres—(1) an outer or superficial head to the flexor carpi radialis, which united with that muscle about two inches below its origin; (2) from the deep surface of this muscle and fascia another set of fibres passed to be inserted into the radial aspect of the pronator radii teres about its centre. The origin and insertion of both pronator radii teres and flexor carpi radialis were normal.

III. *Male, No. 36.*—*Left upper extremity.*—The biceps arose by four heads; the central pair of which represented the normal long and short heads; the external arising from the tendinous attachment of the deltoid, and slightly from the neighbouring bone, between the origins of the triceps and the external prolongation of the brachialis anticus, was inserted into the external border of the biceps close to its tendon. The internal head had the same origin as the additional head in the two former cases.

*Remarks.*—The biceps being one of the most variable muscles in the body (holding third place in this class), would seem to present no room for extra description, but as there existed a couple of points in the above cases which have not received attention, I thought they were worthy of notice. With regard to an extra head to the muscle, the frequency of occurrence is great, being found by Hallet once in every eight subjects; Wood, 18 in 175;

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Theile, 1 in 9; Macalister, 1 in 10. Hyrtl states that the usual additional head is an aberrant slip of the brachialis anticus, but from what I have observed, not alone in the above cases, but in numerous other examples I have met, I must agree with Macalister in stating that this is not ordinarily the case. Macalister ("Muscular Anomalies in Human Anatomy") notes an additional origin of the pronator radii teres from the biceps tendon and semilunar fascia, as also origin of the flexor carpi radialis from same source; but I can find no record of a double origin as found in my second case, which, combined with the triple origin of the biceps, renders it of interest. Four heads to the muscle are much rarer, Macalister noting 2, Theile 1, Henle 1, Meckel 1, and Wood 1, which last is the only example with an origin similar to my case.

IV. *Female, No. 21.—Right lower extremity.*—A well-developed muscle arose from the lower fourth of the postero-internal surface and posterior border of the shaft of the fibula, and slightly from the malleolus; it soon terminated in a tendon, which passed through the internal calcaneo-malleolar groove, to be inserted in the inner border of the flexor accessorius and fibrous connexion between the tendons of the flexor longus digitorum and flexor longus pollicis.

V.—In the same subject another well-developed muscle arose from the posterior surface and internal border of the tibia for its lower fourth, the tendon passing through the internal calcaneo-malleolar groove, to be inserted into the internal border of the flexor accessorius. In both of the foregoing cases the tendon of the flexor brevis digitorum to the fifth toe was absent.

*Remarks.*—Although "Quain's Anatomy," 9th edition, states the above muscle (flexor accessorius longus digitorum) to be of frequent occurrence, I cannot find any satisfactory accounts as to the exact relations of the muscle to the flexor longus digitorum, particularly as to its usual insertion and frequency of occurrence; and I considered this case as being particularly interesting, showing in the one subject examples of the different origins described—viz., from fibula in the one extremity and tibia in the other, with practically the same insertion in both of the extremities. The symmetrical absence of the fourth tendon of the flexor brevis digitorum in this case was also interesting.

#### VASCULAR.

I. *Female, No. 5.*—On the left side the foramen spinosum was absent, while on the right side a small foramen existed, through which a minute artery passed. The place of the middle meningeal artery was taken on

both sides by a branch of the ophthalmic artery, which, having its origin within the orbit, passed through the superior and external angle of the sphenoidal fissure, to be distributed after the manner of a normal middle meningeal artery.

II. *Female, No. 25.—Right upper extremity.*—An aberrant artery, which arose from the axillary, above the origin of its subscapular branch, passed in the arm to the inner side of the brachial artery, to unite with the radial about two inches below its commencement. In this case the brachial artery bifurcated about one inch above its normal position.

III. *Male, No. 28.—Right upper extremity.*—In this case also an artery arose from the axillary, opposite the upper border of the teres major muscle, and passing between the heads of the median nerve, proceeded down on the outer side of the brachial artery, to unite with the radial recurrent, which was of large size, in the anticubital fossa.

IV. *Female, No. 25.—Left upper extremity.*—The suprascapular artery, arising from the axillary opposite the second rib, passed upwards beneath the clavicle through the cords of the brachial plexus, and having given a branch to the subscapularis muscle, passed beneath the transverse ligament with the suprascapular nerve, to be distributed as usual.

V. *Female, No. 34.—Right upper extremity.*—The ulnar artery, arising from the brachial at its usual place of origin, passed superficial to the flexor muscles of the forearm, giving off no important branch. The radial artery, while in the anticubital fossa, gave off a large branch, from which the following vessels had their origin—viz., anterior and posterior ulnar recurrent, radial recurrent, comes nervi mediani, and anterior and posterior interosseous, all of which had a normal distribution.

*Remarks.*—With reference to the foregoing, No. I. is stated by Quain as having been noted, although he does not state that the origin of the vessel was within the orbit.

Aberrant arteries are comparatively common, having been noted by Harrison in the proportion of three out of forty cases. Quain mentions nine examples out of 1,040 subjects examined. The most interesting points in those I bring under your notice are to be found in No. III., where the artery passed between the heads of the median nerve, and terminated in the radial recurrent artery. Quain mentions having seen an example of termination in the radial recurrent, which, however, took its origin from the ulnar artery. Monro and Meckel give examples of termination in the ulnar artery.

The fourth of my series (abnormal suprascapular) has been seen by Quain in three cases, but he does not state the relation borne by the vessels to the brachial plexus or to the supra-scapular ligament.