

The artery in adults was relatively constant in relation to surrounding structures in the petrous, cavernous and cerebral portions. The petrous ICA coursed superolaterally in carotid carteryanal, which was directed obliquely, i.e. anteromedially and the structures related to it or the artery with in it were disposed anterolateral and posteromedial to the canal. Furthermore, the cerebral part of the artery became thin walled and took gentle posterolateral curve before terminating as anterior and middle cerebral branches. The ICA in fetuses ran a relatively straighter course taking gentle curves at four sites (two intrapetrous, one cavernous and one cerebral).

#### Conflicts of interest

The authors have none to declare.

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#### Variations of the muscles of first extensor compartment of forearm

Harsimranjit Kaur<sup>1,\*</sup>, A. Sheth<sup>2</sup>, M. Singh<sup>3</sup>

<sup>1</sup> Govt. Medical College, Patiala, India

<sup>2</sup> Dr. HSJ Institute of Dental Sciences & Research, Chandigarh, India

<sup>3</sup> MMIMSR, Mullana, Ambala, Haryana, India

**Aims and objectives:** To study: (i) variations in muscles of first extensor compartment of forearm with their phylogenetic and ontogenic basis; and (ii) to analyze anatomical basis of possible clinical and applied entities related to the variations.

**Material and methods:** For present study, 50 upper limbs from 25 adult human cadavers were dissected. Out of them, 28 were male and 22 were female limbs. Extensor compartments were opened and site, origin and insertion of muscles of first compartment were studied.

**Results:** Of two tendons, tendons of abductor pollicis longus (APL) were found to vary the most. This tendon was split into two to four slips in 49 of 50 (98%) cases. These slips inserted at various sites in order of frequency-base of first metacarpal, trapezium, abductor pollicis brevis, capsule of first carpometacarpal joint and volar carpal ligament. Muscle belly of extensor pollicis brevis (EPB) was present in 49 cases, either entirely distinct (30 cases), or fused to variable extent (19 cases) with muscle bellies of APL. EPB absent in 1 limb.

**Conclusion:** Multistranded tendon of APL offers an advantage in tendon transfer procedures. Sporadic absence of muscle belly of EPB reflects that it is phylogenetically young structure, found as a separate entity only in humans. Fusion indicates that phylogenetically EPB and APL are differentiations from a common muscle. Knowledge of existence of accessory tendons of EPB has been used for reconstructive hand surgery.

#### Conflicts of interest

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#### Estimation of stature from transtuberular breadth

Parul\*, M. Jain, L. Shukla

Maharaja Agrasen Medical College, Agroha, Hisar, Haryana, India

**Aims and objectives:** Stature estimation is an important tool both for medico-legal experts for identification of an individual and in the field of anthropometry. Although a number of studies have been done on stature estimation by using different body parts (foot, hand, long bones etc) but very few of them have used transtuberular breadth. The present study was undertaken to estimate stature from transtuberular breadth and to estimate the stature of individuals from transtuberular breadth using regression equations separately for males and females.

**Material and methods:** The present study was conducted on 200 subjects (100 male and 100 female) of 20–40 years of age. Stature was measured using anthropometer rod while transtuberular breadth was measured using round tipped spreading caliper. The collected data was recorded and statistically analyzed by using SPSS software version 20.0.

**Results and conclusion:** Regression equations were derived with confidence interval –0.232 to 0.927 and –0.030 to 1.009, i.e. with in 95% confidence interval in male and female respectively.

#### Conflicts of interest

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#### Entrapment neuropathy in the scapular region

M.M. Pai, P.P. Reshma Muhamed\*, L.V. Prabhu, B.V. Murlimanju, A. Krishnamurthy

Kasturba Medical College, Mangalore, Manipal University, Karnataka, India

**Aims and objectives:** To define the prevalence of entrapment neuropathy in the scapular region and to investigate the factors leading to neural compression.

**Material and Methods:** 28 scapula regions obtained from human cadavers belonging to the age group between 40 and 80 years which were dissected during the routine MBBS course and studied for a period of 2 years.

**Results:** Of the 28 scapular regions, 3 cases showed evidences of neural compression. One was an accessory subscapularis muscle, also known as subscapularis minor or subscapularis secundum entrapping the axillary and inferior subscapular nerves. The accessory subscapularis muscle arose from ventral surface of subscapularis and ran upwards and laterally to fuse with capsule of shoulder joint. In the other two cases a communicating nerve between the radial and axillary nerve was found to be entrapped under split fibres of latissimus dorsi.

**Conclusion:** Entrapment neuropathy is one of the most fascinating yet most complex aspects of limb surgery. It is also quite often the most rewarding surgery in terms of clinical outcomes. A precise working knowledge of these variations and possible compressive neuropathy is important for orthopaedic surgeons, plastic surgeons and physiotherapists.



### Conflicts of interest

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### Tortuosity of forearm arteries in adult Indian cadavers



V. Gupta, Sheetal Kotgirwar\*, S.A. Athavale

All India Institute of Medical Sciences, Bhopal,  
Madhya Pradesh, India

**Aims and objectives:** Radial arteries are increasingly being used now a days for percutaneous coronary intervention, however this procedure encounters a high failure rate due to radial artery variations especially its tortuosity. Although clinical cases of syndromes like Guyon's canal syndrome and arm vibration syndrome have been ascribed to the tortuosity of ulnar artery but a systematic study on ulnar artery tortuosity is wanting.

**Material and methods:** The present study was conducted in sixty-one embalmed upper limbs, to report the tortuous character in different segments of forearm arteries.

**Results:** The radial artery was found to be tortuous in about 12% of the limbs. This tortuous character was more pronounced on the bony bed of the radial artery near the wrist joint. The ulnar artery was found to be tortuous in about 23% of the limbs, proximal and distal to the Guyon's canal and in 16% limbs within and adjoining the canal.

**Conclusion:** In the present study it was observed that the superficial segment, the segments which are subject to traction and terminal parts of the arteries are more tortuous. This may be a response to (a) regulate the pressure and (b) a result of reduced elastic tissue in the vessel wall.

### Conflicts of interest

The authors have none to declare.

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### Study of left coronary artery in cadaveric human hearts



Pratik P. Khona\*, V.B. Hukkeri

Belagavi Institute of Medical Sciences, Belagavi, India

**Aims and objectives:** The coronary artery disease and their management modalities have gained increasing importance in developing countries; hence the left coronary artery (LCA) was studied under the headings of origin, dimensions, course, branching pattern, angle of bifurcation and termination to add more insight.

**Material and methods:** The present study was done on 85 adult heart specimens obtained from routine dissection conducted for undergraduate students in the Department of Anatomy at Belagavi Institute of Medical Sciences, Belagavi. The origin, dimensions, course, branching pattern, angle of bifurcation and termination of LCA was noted and photographs were taken. The data obtained was tabulated and analyzed statistically.

**Results:** In all the specimens LCA had a single ostium which was seen in left posterior aortic sinus. Out of 85 specimens studied in 88.23% specimens the ostium was present below the supra-avalvular ridge. The mean length of LCA was  $1.65 \pm 0.436$  cm and its outer

diameter was  $0.48 \pm 0.097$  cm. The LCA terminated as bifurcation (57.66%), trifurcation (37.66%), quadrifurcation (3.5%) and penat-furcation (1.18%). The angle of bifurcation of main trunk of LCA was  $72^\circ \pm 15.77^\circ$ . The left circumflex artery (LCx) terminated before crux in 90.59% specimens. The left anterior descending artery (LAD) terminated before apex in 9.41% specimens. The posterior interventricular artery (PIVA) originated from LCx in 10.59% specimens.

**Conclusion:** This study will help the Cardiologists, Radiologists and Cardiothoracic surgeons in proper planning of coronary angiography, interventional procedures and myocardial revascularization.

### Conflicts of interest

The authors have none to declare.

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### Estimation of stature in living north Indian females by correlation of percutaneous length of tibia with body height



Prerna Gupta\*, P. Kumar, A. Gaharwar, H. Ansari

Integral Institute of Medical Sciences and Research,  
Kursi Road, Lucknow Uttar Pradesh, India

**Aims and objectives:** Stature or "Height of an individual is an inherent character and is considered as one of the important parameters of personal identification". In mass disasters like explosions the only part of body that can help in identification is the skeleton. Tibia is the second largest bone of the human body and landmarks on it are easily available. Therefore percutaneous measurement of tibia was taken. The aim was to correlate length of right and left tibia with body height of subject in age group of 18–24 years and to estimate stature of female by derived regression formula.

**Material and methods:** The study was conducted in the Department of Anatomy, GSVM Medical College Kanpur taking 150 female MBBS students in the age group of 18–24 years. The height and tibial length was measured in cm with the help of spreading vernier calipers respectively.

**Results and conclusion:** A positive correlation was found between length of tibia and stature. Height of subjects ranged between 141 and 180 cm with mean length of tibia on right side as 34.09 and on left side as 34.11. A regression formula was derived after applying various statistical tools. The derived formulae are as follows: (i)  $y_1 = 42.30 + 3.35x_1$  and  $y_2 = 41.88 + 3.36x_2$ ; where  $y_1$  and  $y_2$  are estimated height in cm and  $x_1$  and  $x_2$  are tibial height in cm.

### Conflicts of interest

The authors have none to declare.

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