

**Results:** atd angle is increased in both right and left hands of combined series of male and female epileptics and only in left hand of female epileptics which is statistically significant

**Interpretation and Conclusion:** There is significant difference in the epileptic patients in various dermatoglyphic features when compared to controls. One of them is with respect to atd angle. Hence, it is possible to identify 'at risk' population with the help of dermatoglyphics

**Keywords:** Dermatoglyphics; Epilepsy; atd angle

#### Conflicts of interest

The author has none to declare.

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15

#### Morphometric study of foramen magnum in human skulls



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**Introduction:** Foramen Magnum (Latin-great hole) is a largest foramen in base of the skull. Foramen magnum is an important landmark in skull base. Neurovascular structures pass through the foramen magnum, it may compress in cases of herniation of tonsil of the cerebellum, meningiomas, achondroplasia.

**Material & methods:** One hundred dry, adult human skulls of male and female obtained from the department of Anatomy, Kamini Academy of Medical Science and Research Centre, L.B. Nagar, Hyderabad and other medical colleges. CT scan of brains obtained from department of Radiology, Mamata general hospital to taken the measurements. Foramen magnum was measured with the help of simple Vernier calipers, thread and scale.

**Results & Observations:** Antero Postero Lateral, Transverse Diameter, Foramen magnum index, Circumference of FM & surface area of FM were also calculated.

APL: Male - Mean 3.67 cm (4.2 to 3.3), Female - Mean 3.21(3.3 to 3.0)

TDL: Male - Mean 2.97(3.32 to 2.5), Female - Mean 2.61(3.0 to 2.3)

**Conclusion:** Foramen Magnum mean value will be helpful in radiological diagnostic procedures, Forensic medicine, anthropology, Neuro-Surgical Procedures, research in evolution of fossils. Sex determination in Medico-Legal Cases.

**Keywords:** Morphometry; Skull base; Foramen Magnum; Vernier calipers

#### Conflicts of interest

The authors have none to declare.

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16

#### A morphometric & histological study on tendon of infundibulum and other possible connections between ascending aorta & pulmonary trunk



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**Introduction:** Knowledge of normal cardiac anatomy is indispensable for the proper understanding of cardiac disease. The presence or absence of tendon or ligament has not been confirmed at the present time. Moreover, some thread like connections have been described between ascending aorta and pulmonary trunk during routine anatomical dissection. But no comprehensive study has been conducted so far to establish the nature and distribution of such structures.

**Objective:** The purpose of the present study, therefore, is to determine the existence and character of any connection between the ascending aorta and pulmonary trunk.

**Methods:** A descriptive observational study with cross sectional design of data collection was conducted in Calcutta National Medical College & Hospital over a period of six months. Forty-four cadaveric hearts were dissected and collected tissues were processed and stained by Hematoxylin-Eosin and also Van Gieson.

**Result:** No specific band was found at the root of the ascending aorta & pulmonary trunk in any case but separate band like connections were found in forty-two cases at a higher level. In one case double band was also noted. After processing and staining, it was found that the nature of such bands was mixture collagenous and fatty tissue. Tissues adjacent to the roots of the ascending aorta and pulmonary trunk were studied. It reveals discrete collagenous and fatty tissue within the cardiac muscles.

**Conclusion:** Intricate and extensive study is needed in future for detailed understanding of the nature of the bands, connecting ascending aorta & pulmonary trunk.

**Keywords:** Tendon of Infundibulum; Hematoxylin-Eosin stain; Van Gieson stain

#### Conflicts of interest

The authors have none to declare.

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17

#### Morphological study of talar facets and its association with calcaneal spur in dried calcaneum



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The calcaneum is one of the largest tarsal bone of the foot. The superior surface of calcaneum bears three facets anterior, middle and posterior which articulate with the talus and forms talocalcaneal joint or subtalar joint which maintains inversion and eversion of foot. Morphology of these talar articular facets play an important role in statics and dynamics of foot.

**Aims & objectives:** The study was done to observe the variations in the morphology of talar articular facets on superior surface of calcaneum and its association with calcaneal spur.

**Material & methods:** The study was conducted in 96 dried calcaneum of unknown sex from osteology bank of VIMSAR, Burla. The

association of calcaneal spur with the different talar articular facets was studied. Further the talar facets were categorized in type I, II, III, IV & V.

**Results:** Its was studied Type I was (21.87%), II (38.5%), III (34.7%), IV (2.08%) & V (3.12%). Calcaneal spur was predominantly found in type III (47.22%) whereas absence of spur in type V.

**Conclusion:** Configuration of articular facets influence subtalar joint stability. Therefore good knowledge of these talar articular patterns would be helpful to the orthopedic surgeons to assist better treatment & management for calcaneal fractures.

**Keywords:** Calcaneum; Calcaneal spur; Subtalar joint

#### Conflicts of interest

The authors have none to declare.

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18

#### A cadaveric study of fibular (peroneal) artery continuing as dorsalis pedis artery associated with hypoplastic anterior tibial artery and its developmental basis



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**Introduction:** Palpation of peripheral arterial pulses are used to evaluate patients with arterial diseases. The dorsalis pedis artery is one of the most commonly used, to evaluate arteriosclerotic diseases in the lower limb.

**Aim:** To observe the variations of the fibular (peroneal) artery continuing as dorsalis pedis artery, associated with hypoplastic anterior tibial artery and its developmental basis.

**Materials & Methodology:** Sixty one (61) formalin embalmed, lower limb specimens were dissected and studied, to observe the anatomical variations of fibular (peroneal) artery continuing as dorsalis pedis artery, associated with hypoplastic anterior tibial artery.

**Results:** In one specimen of lower limb, the fibular (peroneal) artery was larger than usual and crossed the lower end of interosseous membrane and continued as dorsalis pedis artery. Posterior tibial artery had a normal course and divided distally into medial and lateral plantar arteries. However, the anterior tibial artery was found to be hypoplastic.

**Conclusions:** A good knowledge about the arterial variations around the ankle, which can be attributed to their development, is important to the vascular and orthopaedic surgeons, to prevent the occurrence of any complications during reconstructive surgeries.

#### Conflicts of interest

The authors have none to declare.

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19

#### Metrical study of sexual dimorphism in clavicle



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**Background:** To determine sex from unknown skeletal remains is vital. In general male bones are heavier larger and muscular markings are more prominently seen as compared to female bones.

**Objectives:** The objective of this study was to find out comparative differences between the right and left clavicles from certain metrical parameters and to enable assessment of sex from unknown clavicles.

**Methods:** The study was conducted on 200 adult clavicles, out of which 72 were of the clavicles of male and 128 were clavicle of female. The maximum length of clavicles in mm was taken and demarking points were established by adding and subtracting  $3 \times SD$  from means.

**Results:** The mean length of right clavicle male was  $140.76 \text{ mm} \pm 10.56 \text{ mm SD}$  and that of female was  $126.75 \text{ mm} \pm 15.08 \text{ mm SD}$ . For left clavicle male, mean was  $142.86 \text{ mm} \pm 11.34 \text{ mm SD}$  and that of female was  $126.75 \text{ mm} \pm 15.08 \text{ mm SD}$ . It has been observed that left clavicle is longer than right clavicle. Depending upon length of clavicle, the sex can be decided in 1.71% female in left clavicles in my study.

**Conclusions:** The left clavicle was longer compared to right clavicle. Demarking points (DP) give 99.75% accurate data, measured by adding & subtracting  $3 \times SD$  from means. DP for length of clavicles were  $>171.99 \text{ mm}$  for male &  $<109.09 \text{ mm}$  for females. For the left side the DP was  $>172.66 \text{ mm}$  for male and  $<108.79 \text{ mm}$  for female.

#### Conflicts of interest

The authors have none to declare.

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20

#### A cross-sectional study of correlation of heart diameter and cardiothoracic ratio with body habitus for evaluation of cardiac enlargement in a population of West Bengal



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**Objectives:** The cardiac enlargement can be evaluated by routine chest x-ray by the maximum transverse diameter of the heart (HD) & the cardio thoracic ratio (CTR). The reference values of the upper limits of HD & CTR are mainly based on studies conducted on Western Population. As HD&CTR may vary from different parameters of body habitus and the body habitus exhibits racial differences. So, evaluation of cardiac enlargement by HD&CTR depends upon the built of the individual which in turn depends upon the parameters of body habitus. We perform the study to delineate out of HD & CTR which one is least affected by the body habitus and that one will give more accurate and impartial evaluation of predicting cardiac enlargement.

**Methods:** 850 people meeting the desired criteria are chosen. Chest X rays are taken. Body weight and heights are measured. We calculate the T.D, CTR, BMI, BSA from measured data. Statistical