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**The acromion and its different forms in North Indian population**

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**Introduction:** The scapula is composed of a spine, neck, body, glenoid cavity and two processes-acromion and coracoid process. Acromion is on the posterior side of the scapula as a widening and flattening extension of the osseous process called spine to the lateral side. In the description of the acromion a superior rough surface is considered to be in direct relation with the skin and concave lower surface that covers the shoulder joint. Subacromial compression is a clinical condition which appears due to compression of supraspinatus tendon in the subacromial space and causes severe shoulder pain. The dimension and variation of the acromion process form has been studied by different authors, who classified the acromion in type I plane, type II curved and type III hooked acromion.

**Material and method:** Total 450 dried macerated adult North Indian human scapulae of both sexes were taken for morphologic study of acromion process from the Department of Anatomy, K.G. Medical University, UP, Lucknow. The instruments used were measuring tape, and scale. Photography was done by Sony DSC-W35 digital camera.

**Result:** The results of the shape of the acromion and its different dimensions demonstrate that in the scapulae study, the acromion type I (plane) presented in 8%, type II (curved) in 50%, and in type III (hooked) in 42% and width of the acromion was 22.6 mm and average length was 65.8 mm.

**Conclusion:** Variations in the size and shape of the acromion process which were observed in the current study will be of great help for orthopedic surgeons to understand the shoulder pathology.

**Conflicts of interest**

The authors have none to declare.

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## 4

**Morphometry of Profunda Femoris artery – A cadaveric study**

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**Background:** The Profunda Femoris artery (PFA) is of clinical importance as it provides to be main feeder artery for the anastomosis in the back of thigh through the perforator branches. It is useful for many invasive and noninvasive procedures like Doppler, ultrasonography, arteriography, etc. The main objective of the study was to study the origin of the PFA, distance of origin from the bony landmarks, its branches and its external caliber.

**Material and methods:** 20 cadavers (20 right and 20 left lower limbs) were used for the study. The site of origin of the PFA with respect to the Femoral artery was noted. The distance of origin of the PFA from the pubic tubercle (PT), midinguinal point (MIP) and anterior superior iliac spine (ASIS) was measured in cms. The branches of the PFA were noted for any variations.

**Results:** The PFA originated from the Femoral artery in the entire specimen most commonly on the postero-lateral aspect. The external caliber of PFA was 0.55 and 0.54 cm on the left and right side

respectively. The distance of the origin of PFA from the ASIS, PT and MIP was 9.52, 6.05, 5.98 (right side) and 9.71, 6.32, 6.06 (left side) respectively. The most common variation in the branching pattern of the PFA was origin of Lateral circumflex femoral artery arising from the femoral trunk instead of PFA.

**Conclusion:** The knowledge of variations and difference in site of origin and morphometry of Profunda Femoris artery facilitates the surgeons while planning for their investigative procedures.

**Conflicts of interest**

The author has none to declare.

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## 5

**Exploration of morphological variants of Subscapularis muscle**

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**Aims and objectives:** To study the morphological variations of Subscapularis muscle.

**Material and methods:** Dissection of thirty adult cadaveric shoulders was performed to delineate the fibres of Subscapularis muscle from their site of origin on Scapula up to their site of insertion on humerus. The patterns of attachments of Subscapularis muscle along with morphological profile were studied.

**Results:** In sixteen specimens the humeral attachment of Subscapularis muscle extended up to the surgical neck of humerus. In twenty specimens, Subscapularis displayed tendinous humeral attachment. Nine out of remaining ten specimens displayed, tendomuscular humeral attachment. In eight out of these nine specimens, the upper part of muscle insertion was tendinous extending up to lesser tubercle, whereas the lower part of insertion was fleshy extending up to surgical neck of humerus. Further in one out of the nine specimens, Subscapularis muscle trifurcated into superior part with fleshy attachment, middle part with tendinous attachment both on lesser tubercle and inferior part with fleshy attachment on surgical neck of humerus. In another specimen, Subscapularis displayed muscular insertion on lesser tubercle. In one cadaveric shoulder an accessory belly of Subscapularis was noticed. The accessory belly originated from the ventral surface of the lateral border of scapula and displayed fleshy insertion on surgical neck.

**Conclusion:** The extended fleshy insertion up to the surgical neck of humerus, suggests phylogenetic progression of the muscle. Awareness of morphological variants of Subscapularis muscle is relevant during reconstructive procedures in cases of rotator cuff injury.

**Conflicts of interest**

The authors have none to declare.

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