

## 24. Morphological study of plantaris muscle

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Plantaris (PM) arises from the lower part of the lateral supracondylar line and the oblique popliteal ligament. It has a small fusiform belly ending in a long slender tendon, and crosses obliquely, in an infero-medial direction, between gastrocnemius and soleus and is inserted into the calcaneus, just medial to the tendo-calcaneus tendon. Functionally, it is of less importance as a plantar flexor and is considered to be a vestigial muscle. The plantaris muscle shows variations like total absence, either unilaterally or bilaterally. In this present study, tendinous origin of the muscle in a single specimen was demonstrated along with usual morphological study of PM.

**Material and Method:** During regular routine dissection in the department, the popliteal region and posterior compartment of leg from both sides of 18 adult human cadavers (36 inferior extremities) were displayed. Dissection of plantaris muscle from its origin to insertion was done and measurements were taken with the help of measuring tape and photographed for records. Observations were analyzed and discussed.

**Results and Conclusion:** In this present study, unilateral and bilateral absence of plantaris muscle was found in 8.33% and 2.77% of cases; it had a tendinous origin in 2.63% and in majority of cases (88.88%) the usual origin and insertion of the plantaris muscle were demonstrated. A unique case, the tendinous origin of plantaris muscle, was demonstrated which showed an intermediate state between the usual type (small muscle belly with long tendon) and complete absence of muscle, suggesting that during the evolution process, the well-developed state of the muscle in monkeys gradually become a vestigial entity in human being.

## 25. Variations of the fissures of human lung – A cadaveric study

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**Objective:** To study the variations of fissures of human lungs of both sides.

**Materials and Methods:** In the present study, 20 pairs of lungs were collected from adult human cadavers from the Department of Anatomy and Department of Forensic Medicine, Gauhati Medical College, Guwahati, after getting formal permission from Institutional Ethical Committee. The specimens were then preserved in 10% formalin and observed for presence and completeness of natural fissures. The anomalous fissures and their patterns were also noted and the specimens were photographed.

**Results:** In the present study, we found the normal pattern of lung fissures on both sides along with incomplete, absent and accessory fissures.

**Conclusion:** The knowledge of the lung fissures is necessary in lobectomies and segmental resection as well as for appropriate interpretation of chest skiagrams, CT scans and MRIs.

Hence, the present work was carried out to gain further insight into the fissural pattern of the human lungs. The details of the work will be dealt during the presentation.

## 26. Anatomic landmarks to simplify safe percutaneous subclavian venous catheterization

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**Objective:** The technique of percutaneous catheterization of subclavian depends upon the localization of subclavian vein. The objective of the study was to see relationship of subclavian vein with the surrounding landmarks, so as to increase the possibility of venous access.

**Methods:** Dissection of infraclavicular region of 32 formalin-fixed adult cadavers placed in supine neutral position simulating clinical practice was done to expose subclavian vein. The point on the lower border of clavicle crossed by the center of subclavian was marked. Distance of this point from deltopectoral groove, tip of coracoid process and sternoclavicular joint was measured. Diameter of vein at this point, angle between the vein and clavicle subtended at this point, length of clavicle and the depth of vein from the skin were measured. **Results:** The vein was lying at the junction of medial and middle third, medial third, middle third of clavicle in 58%, 35% and 7% cases, respectively. The ratio of distance from the center of vein to sternoclavicular joint (VJ) divided by the length of the clavicle (LC) was 0.23–0.40 and 0.27–0.43 on the left and right sides, respectively. The diameter of vein varied from 10 to 17 mm and average angle between the vein and the clavicle was  $38 \pm 5.6^\circ$ . The vein was present at an average distance of  $46 \pm 5.9$  mm from deltopectoral groove and 16.7–2.5 mm deep to skin. There was no statistically significant difference in right and left sides.

**Conclusion:** The data obtained in this study would simplify percutaneous subclavian venous catheterization by infraclavicular approach.

## 27. A study on the anatomical pattern of the circle of Willis of human brain with special reference to its variations

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**Aim:** To study variations of the circle of Willis.

**Materials and Method:** Brains from cadavers in post-mortem dept. of G.M.C.H. were collected and kept in 10% formalin for at least 2 weeks. Brains affected by cranial trauma, cerebral hemorrhages, cerebral neoplasms and head shot were excluded. Permission from institutional ethics committee was taken. Circle of Willis at the base of the brain was dissected and its variations studied. Their line diagrams were drawn and pictures were taken.