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Topographic anatomy of the temporalis muscle

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*Vardhman Mahavir Medical College & Safdarjung Hospital, New Delhi, India***Aims and objectives:** To examine the attachments of the temporalis muscle in cadaveric dissection.**Material and methods:** The study was performed on thirty embalmed adult cadaveric head-halves. Dissection of the infratemporal fossa was carried out and anatomical details of the temporalis muscle were studied. This investigation was conducted in the Department of Anatomy, VMCM and Safdarjung Hospital, New Delhi.**Results:** The cranial attachment of the temporalis muscle was found to be from the floor of the temporal fossa and from the deep surface of the temporal fascia in all of the specimens examined. However in two of the cases, an additional aponeurotic part of the temporalis muscle was found originating from the mastoid portion of the temporal bone. The mandibular attachment of the temporalis muscle was found to be on the coronoid process and at the anterior border of the ramus of the mandible. However in one specimen, it was observed that the temporalis muscle had a musculo-aponeurotic insertion encroaching the mandibular notch. In another specimen, there was an unduly extensive insertion of the temporalis muscle which extended up to the body of the mandible.**Conclusion:** Precise knowledge of normal anatomy and morphological variations of the masticatory muscles is relevant for dentists and maxillo-facial surgeons for performing safe surgery. Temporalis muscle flap is beneficial for the reconstruction of both extraoral and intraoral defect.**Conflicts of interest**

The authors have none to declare.

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Evaluation of fetal cardiac dimensions from 18 weeks of gestation to term

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*Post Graduate Institute of Medical Education and Research, Chandigarh, India***Aims and objectives:** To provide data of fetal cardiac dimensions measured in coronal section which is comparable to four-chamber echocardiography and correlate it with gestational age.**Material and methods:** The study was conducted on 33 hearts of formalin preserved stillborn fetuses (gestational age 19–39 weeks). Coronal section through crux of heart to expose four-chambers was made. Cardiac measurements in four-chamber view were taken with digital caliper of precision 0.02 mm under stereo zoom microscope.**Results:** Increase in cardiac dimension from 19 to 39 weeks was as follows: Tricuspid annulus (TA) and mitral annulus (MA) diameters increased from 2.6 mm to 12 mm and 2.1 mm to 10.4 mm respectively. Right ventricular diameter (RVD) and left ventricular diameter (LVD) increased from 3.27 mm to 12.90 mm and 2.69 mm to 12.67 mm respectively. Length of right ventricular cavity increased from 7.47 mm to 21.83 mm and of left ventricular cavity from 7.47 mm to 22.50 mm. Diameters of aortic orifice (AO)and pulmonary orifice (PO) increased from 2.10 mm to 4.59 mm and from 1.8 mm to 5.88 mm respectively. Steady increase in TA, MA, LVD, RVD with increasing gestational age was seen. However, increase in these dimensions was more in ≥ 28 weeks than in < 28 weeks gestational age. Although LVD/RVD ratio increased significantly in ≥ 28 weeks gestational age, MA/TA ratio did not show significant change in two age groups. Pearson correlation coefficient showed good positive correlation with the crown rump and crown heel lengths.**Conclusion:** In case of suspected cardiac defect, data obtained may be a valuable in the prenatal assessment of cardiac malformations.**Conflicts of interest**

The authors have none to declare.

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Surgical anatomy and regional drainage pattern of pancreatic ducts in the head and uncinete process of the pancreas: A cadaveric studyHarsimranjit Singh^{1,*}, S. Sahni¹, A. Aggarwal¹, R.K. Kocchar², T.D. Yadav³, T. Gupta¹¹ Department of Anatomy, Postgraduate Institute of Medical Education and Research, Chandigarh, India² Department of Gastroenterology, Postgraduate Institute of Medical Education and Research, Chandigarh, India³ Department of General Surgery, Postgraduate Institute of Medical Education and Research, Chandigarh, India**Aims and objectives:** Pancreatic tumors like intraductal papillary mucin neoplasm (IPMNS) which spread along the branches of main pancreatic duct (MPD), particularly draining the head and uncinete process. Surgical removal of these tumors poses the risk of development of post-operative fistula and leakage from the smaller ducts. To minimize these complications, it is essential to recognize the normal and variant anatomy and spatial arrangement of pancreatic ducts and their branches in head and uncinete process.**Material and methods:** The present study was conducted on 50 formalin fixed enbloc specimens consisting of duodenum, pancreas, spleen and superior mesenteric vessels. MPD was injected with green colored latex solution at the tail of pancreas. Main and accessory pancreatic ducts and their branches were dissection out. Ductal drainage patterns of head and uncinete process of pancreas were recorded and variations in their branching pattern were noted.**Results:** Pancreas divisum was seen in two cases. Accessory pancreatic duct (APD) was absent in 14% cases. APD was confined to upper half of head of pancreas in 70% and in the remaining specimen lies in lower part. Lower part of head and uncinete process drained into MPD in 40% cases, into the APD in 12% cases and into both ducts in 46% cases. Head of pancreas was divided into 4 quadrants regional drainage each was identified.**Conclusion:** A comprehensive knowledge of arrangement of ducts in head and uncinete process of pancreas would help in precise localization and complete removal of benign and low grade malignant pancreatic tumors and diagnostic and surgical strategies to reduce the post operative complication.