44. Determination of gestational age by measurements of foot – A morphometric study in human foetuses

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Objectives: Determination of gestational age is important in civil and criminal cases. Though a reasonable assessment of gestational age can be made by measuring physical parameters such as crown-heel length, weight of foetus and by noting morphological features, organ development and appearance of ossification centres, an alternative parameter is desirable in some instances. This study was planned to establish a correlation between foetal foot parameters and gestational age. 30-formalin fixed human foetuses were obtained from Museum of Department of Anatomy, Jawaharlal Nehru Medical College, Aligarh. Foetuses were divided into five groups: Group I: <17 wks, Group II: 17–20 wks, Group III: 21–25 wks, Group IV: 26–30 wks, Group V: >30 wks. Foetal foot parameters are length and breadth of foot, and length of Great Toe, 2nd Toe, 3rd Toe, 4th Toe and 5th Toe was measured using vernier callipers. It was concluded that foetal foot, Great Toe and 3rd Toe lengths are significantly ($p<0.05$) correlated with gestational age, and therefore, these parameters could be utilized to estimate gestational age. This may serve as an important parameter in the medico legal cases in which only foot or part of it is available for estimation of gestational age.

45. Morphogenesis and histogenesis of prostate gland in human foetuses

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Objective: To study the morphogenesis and histogenesis of prostate gland in human foetuses.
Methods: 112 foetuses of different gestational ages ranging from 14 weeks (85 mm) to 40 weeks (440 mm), products of terminated pregnancies under MTP Act of India, 1971 and stillbirths were collected from the Department of Obstetrics and Gynaecology, RIMS, Imphal and utilised for the present study.
Results & Observations: The first time of appearance of the prostate gland to the naked eye till its definitive adult shape and their corresponding histogenesis (at term) is studied in detail. Growth and development at a specific time at different age groups and cytoarchitecture are described.
Conclusion: Increase in vertical and transverse dimensions, assumption of adult shape and various cytoarchitectural changes were noted as the age changes.

46. Unusual origin of thymic artery from distal ascending aorta or proximal arch of aorta

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Abstract: The thymus, one of the two primary lymphoid organs located in the superior & anterior mediastinum, is supplied mainly by branches of internal thoracic and inferior thyroid arteries. Sometimes a branch from superior thyroid may be present. However, only very few studies have been reported on the variations of thymic artery. This paper deals with observations made on the variations in the origin of thymic artery during routine surgery for correction of congenital heart defects. Variations in the origin of the thymic artery were observed in 100 subjects, all of whom were infants and neonates. Out of the 100 surgeries performed in infants undergoing surgery for the correction of congenital heart defects, we found in 15% of the cases, in addition to the two branches from internal thoracic and two from the thyroid arteries, a thymic artery arising from the distal part of ascending aorta or from the proximal part of the arch of aorta. It arose from the anterior surface of the aorta a little to the left. This is a small 1–2 mm artery that enters the pericardium at its reflection (from visceral to parietal) on the aorta. It arises as one and divides on the posterior aspect of the thymus to form two branches, one to each lobe. The size was variable. A common variation to the arterial supply to the thymus in neonates and infants is presented here. In addition to the two branches from the internal thoracic and two from the thyroid arteries, there is one common variant from the aorta in the midline. Since this variation was present in 15% of the cases, being aware of its presence could avoid troublesome bleeding during surgical thymectomy. The clinical relevance & embryological basis for the variation are discussed in the paper.

47. "This is no Hollow Work" – A study of the Vena Cava

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Objective: Vena cava anomalies may form part of a spectrum of complex congenital anomalies or may be a silent structural stand-alone feature. Keeping in mind its widespread implications on cardiac procedures and a causative factor of cardiac disturbances, we have studied the superior vena cava metrically, morphologically and for the presence of anomalies.
Methods: A serial study of the vena cava was conducted over three years on 24 cadavers used for routine dissection for the first year medical students of Amrita Institute of Medical Sciences. The dimensions were measured using divider, thread, and scale.
Results: The average length ranges between 4.8 and 6.2 cm, and circumference ranges between 3.9 and 4.5 cm. The anomalies included persistent left superior vena cava and dilated coronary ostia.
Conclusion: These parameters add to the existing compendium of information, which is essential to the interventionalist. The embryological basis has been considered in the interest of the academician.