

and half niece, and half aunt and half nephew. Most of the births were male and first order. Male:Female ratio was 1:2.3. Frequency of consanguineous marriages was found more in Muslims than Hindus (statistically significant).

**Conclusion:** Congenital malformations were found to occur more common in consanguineous unions than non-consanguineous unions (Statistically insignificant). Cardiovascular anomalies were the most common type of malformation and atrial septal defect, the most common subtype. Consanguinity was found more common to occur in muslim population than hindus.

## 96. Development of parafollicular cells and its relationship with developing thyroid follicles in human fetuses

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**Objective:** The parafollicular cells or C (clear) cells in man is a part of neuroendocrine system, classified under "amine precursor uptake and decarboxylation" (APUD) cells. Their role in adults has been *reputable* but in fetus is still unclear. The present study was a baseline study endeavoring to describe the chronological development of the parafollicular cells with particular focus on its correlation with developing human thyroid follicles.

**Methods:** The study was conducted on 10 aborted fetuses (14-28 weeks), procured from the Department of Obstetrics and Gynaecology, Lok Nayak Hospital, New Delhi. Serial sections of fetal thyroid gland were generated, stained with haematoxylin and eosin, Sevier Munger stain, and immunohistochemistry using the anti-calcitonin antibody and examined qualitatively.

**Results:** In our study, the parafollicular cells were seen as earlier as by 14th week. They became morphologically and functionally mature by 16th week of gestation. The parafollicular cells were getting organized from scattering to parafollicular location then to a more localized area, i.e., intrafollicular along with the follicular development. As the follicles were enlarging, the intrafollicularly located parafollicular cells which were initially present in groups were getting displaced singly between the follicular cells in the same follicle.

**Conclusion:** The sequential development pattern of the parafollicular cells in relation to developing thyroid follicles was established. This immunohistochemical study also concluded that the parafollicular cells might have higher character to play in the early gestational age such as regulation of ossification in the human fetus.

## 97. A morphological and histological study of placentae in respect of hypertensive gravid mother

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**Objective:** A comparative study of placentae of the normotensive and hypertensive mothers was undertaken as perinatal death is a serious public health problem in our country. Many of such deaths are due to birth of preterm babies and hypertension of the gravid mother is one of the high risk factor for the same.

**Methods:** Altogether 60 placentae of which 30 placentae were from normotensive mother and 30 placentae from hypertensive (both pre-existing and pregnancy induced) were collected from the Department of Obstetrics & Gynaecology of I.M.S. & SUM Hospital, Bhubaneswar, Odisha. Study was carried out in the Department of Anatomy of the same Institute. The morphological and morphometrical parameters of both the groups were compared. Care has been taken to note the areas of infarction and calcification. Histological changes were also noted.

**Results:** Placentae from hypertensive gravid mothers were found to be lesser in weight, surface area, thickness and volume. Greater number of areas of calcification and areas of infarction were noted in the study group. Histological study revealed an increase in syncytial knot count and decrease in the percentage of villi.

**Conclusion:** Hypertension of the gravid mothers is responsible for the changes as specified and corroborate with the findings of the previous studies.

## 98. The histomorphometry of islets in the mammalian pancreas

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A study on the histology of the pancreas is undertaken to observe and compare the islets of five different mammals. The main objective of this study is to ascertain possible histomorphometrical closeness of the animal (mammal) pancreatic islet with the human pancreatic islet, so as to explore potential xenogenic sources of donors for organ transplantation. The study was conducted on five mammals – the rat, the rabbit, the goat, the pig and the human being. The pancreas was sectioned and stained for light microscopy by Haematoxylin and Eosin. Well formed islets, acini and ducts were present in all the mammalian pancreases. The islets appeared as light stained encapsulated areas. The islets were observed for their shape, staining character, location, whereas its dimensions were measured with the help of a micrometer slide used with the light microscope. The distribution of islets within the pancreas was another aspect of the study. The biometrical values of different groups were statistically analyzed according to Croxton. The study showed that in the five mammalian groups, variations in length, breadth, diameter, volume of the islets had no significant statistical difference, despite the fact that the mammals had wide differences in average body weights and pancreatic weights.