ABSTRACT

“Morphometric Study of Aorta, Pulmonary Trunk and Ductus Arteriosus with Gross and Histological Correlations in Human Fetuses of Tamilnadu Population.”

Introduction: Materno – Fetal healthcare is one of the most rapidly evolving fields in medicine focusing on the medical and surgical management of high-risk pregnancies. Basic researches carried out in the fetus leads to an in-depth understanding of its structural and functional aspects eventually for the better care for pregnant mother and her growing fetus.

Materials and methods: To study the morphometric details of Aorta, Pulmonary Trunk and Ductus Arteriosus in the human fetuses between 14th to 36th week gestation: In-utero ultrasonographic study with histo-topographical correlations in aborted fetuses 100 samples were collected from PSG Hospitals, out of which 50 aborted fetuses and 50 ultra-sonographic images of fetuses aged between 14-36 weeks of gestation was collected.

Results & Discussion : In the present study mean aortic and pulmonary internal diameters were 2.3, 2.5 mm respectively for 14-20 weeks of gestation. From 21-30 weeks it was 3.4, 3.7 and for 31-36 weeks it is 5.7 and 6.5 mm. The association of gestational age with tunica media thickness of aorta and pulmonary trunk showed high correlation with a r value of 0.926 &0 .914 The association of gestational age with thickness of ductus arteriosus showed moderate correlation with a r value of .828. Histological basis of ductal closure by formation of the intimal mounds and interruption of internal elastic lamina (around 20th week ) can further be extended to an ultra structural level.

Materno-Fetal health care as addressed through this study will be explored more by the researcher in the near future.…

Keywords: Materno –Fetal Healthcare (MFH); Morphometrics; Ultrasonography (USG),