

6th International Conference on Gynecology and Obstetrics Pathology August 23-24, 2022 | Webinar

Volume: 10

Quantification Of Antenatal Adrenal Volumes In Fetuses That Delivered <32 Weeks' Gestation Using MRI: A Retrospective Cohort Study

Elise du Crest

Medical Student, Department of Women's Health
King's College London

Preterm birth is defined as birth before 37 weeks of gestation, and affects 7.4% of all deliveries in the UK. Up to 85% of neonatal deaths are attributable to preterm birth. It is also associated with morbidity such as neurological and pulmonary sequelae. Infection is known to play a role in the aetiology of preterm birth; diagnosis to date relies exclusively on maternal symptoms. There is a need to develop non-invasive tools to diagnose intrauterine infection. The adrenal glands are known to participate in the response to infection. This study aims to create normative ranges for adrenal gland volume, and to compare adrenal volume between fetuses subsequently born preterm (<32 weeks gestation) and those born at term (>37 weeks gestation) using advanced MRI technique. We retrospectively acquired datasets from 15 fetuses delivered <32 weeks gestation. The control group, 55 fetuses delivered >37 weeks, consisted of existing datasets from several other studies. Using MRI, T2 weighted stacks of the fetal abdomen were carried out at 1.5T and 3T. These images were motion corrected and 3D reconstructed. The body and adrenal glands were segmented. We generated normative ranges for fetal adrenal volume between 20-32 weeks gestation. We found that in fetuses subsequently born preterm (<32 weeks), the adrenal glands were larger than in fetuses subsequently born at term (Figure 1), a finding that persisted when standardized for fetal size. There was no relationship between adrenal size and presence of infection in the preterm group.

Biography

Du Crest is currently a 4th year medical student at King's College London. Her focus is on Women's Health and Fetal Health. After graduating from medical school, she plans to specialise in Obstetrics and Gynaecology.

elise.ducrest@gmail.com