Morphological brain changes and CC size were evaluated using standard MRI sequences. The MRI evaluators were not informed about the results of visual examinations.

**Results** Impaired visual acuity was detected in 9/12 cases with abnormal CC (75%) and in 10% of children with normal CC (p < 0.01). There was a significant correlation between the CC size and Frostig test results (abnormal CC group vs. normal CC group: 91 vs. 80.7 points; p = 0.03 adjusted for history of ROP). Absence of stereoscopic vision was more frequent in the group of abnormal CC (7/12 vs. 2/20; p = 0.03). The frequency of abnormal VEP was similar in the both groups.

**Conclusion** A strong correlation between vision impairment and CC size was observed. This suggests that CC plays important function in integration of visual perception.

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**PO-0416 2ND TRIMESTER HEAD SIZE IN FETUSES WITH CONGENITAL HEART DISEASE: A COHORT STUDY**

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**Background and aims** Congenital heart disease (CHD) is associated with neuro-developmental disorder. The influence of CHD on the brain is believed to begin during pregnancy. The aim of this study is to describe a 2-year cohort of fetuses with major and minor CHD and to investigate if and when during pregnancy cerebral growth is disrupted. We hypothesise that fetal cerebral growth is impaired as early as 2nd trimester.

**Method** Pregnant women in Denmark (more than 95%) attend two publicly funded ultrasound scans; at 12 weeks gestational age (GA) and at 19–20 weeks GA. Fetal biometrics and abnormal ultrasound findings are registered. Fetuses in Western Denmark (2.9 million inhabitants) screened between January 1st 2012 and December 31st 2013, diagnosed with any structural, non-syndromic CHD either during pregnancy or up to six months after birth, are included in the study.

**Results** 129 fetuses with CHD were identified prenatally. Ninety-eight (76%) were genetically screened, primarily using chromosomal micro-array analysis (n = 72). Nineteen pregnant women (15%) declined invasive testing. Twenty-three fetuses (18%) were excluded due to genetic syndromes, mainly aneuploidies (n = 14) and seven (5%) were excluded due to extra-cardiac malformations. Ninety-nine fetuses (77%) with presumed non-syndromic CHD were included. Head circumference in week 19–20 was significantly smaller than average with a mean z score of -0.4 (95% CI: -0.7, -0.2) (p < 0.01). Analyses are undergoing and results will be presented at the meeting.

**Conclusions** Preliminary unadjusted results suggest that fetal cerebral growth in children with CHD may be disrupted as early as 2nd trimester.

**PO-0417 WITHDRAWN**