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-0418** BRAIN PROCESSING OF MUSIC IN THE NEWBORNS

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In newborns, some basic music processing seems to be present few days after birth (1). Neonatal intensive care units are willing to use music to enrich preterm infant environment. Indeed, researches in neonatal intensive care units showed music impacts on physiological and behavioural responses, caloric intake, and energy expenditure of premature babies (2). The aim of this study is to understand how music is processed in newborns and if premature birth impacts on this processing.

Twenty-four healthy newborns (14 preterm scanned at term equivalent age and 10 full-term infants) have been recruited. Infants underwent functional MRI (fMRI) at 3T during natural sleep or while resting quietly in the scanner without any sedation. FMRI data were realigned, co-registered, normalised to a T2 neonatal template; and smoothed. Random-effect analyses have been done to observe the group activation on all newborns and to compare term and preterm newborns.

At the group level, we observed bilateral activation of auditory regions. At the cluster level, the right auditory cortex (p = 0.028, corrected for multiple comparison, extent = 70 voxels) was more activated than the left auditory cortex (p = 0.067, corrected for multiple comparison, extent = 52 voxels) during music. Furthermore, no difference was found between full-term and premature groups.

Our preliminary results show functional asymmetry in auditory cortex already present at 40 weeks gestational age. Those results corroborate with those found in adults (3), in processing pitch changes in 3- to 6-month-old children (4) and in full-term newborns (1). More analyses are needed to explore further music processing differences in these two populations.

**PO-0419** INCIDENCE OF CEREBRAL OXYGEN DESATURATION AMONG NEONATES UNDERGOING GENERAL ANAESTHESIA

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**Background** Cerebral autoregulation (CA) is a physiologic mechanism ensuring constant blood flow to the brain independent of changes (within physiological limits) in mean systemic blood pressures. Compromised CA can lead to ischemia, associated with hypoxic injury and long term sequelae. The efficiency of CA in neonates is not well-known, especially during general anaesthesia. We aimed to determine incidences of significant cerebral desaturation (S\textsubscript{O\textsubscript{2}}).

**Methods** Observational data were collected from 33 premature and term neonates (up to post-menstrual age 44 weeks), receiving general anaesthesia for surgery. Near infrared spectroscopy (ForeSight™ Cerebral Oximetry, CASMED, USA) was used to non-invasively measure regional S\textsubscript{O\textsubscript{2}}. When used, invasive arterial pressures were recorded electronically. We then calculated the