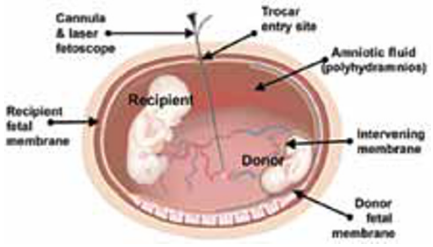
Volume 78 No. 3 September 2015

doi:10.1038/pr.2015.126

Fetal membranes in surgery



Preterm, premature rupture of membranes remains a major complication after fetoscopic laser surgery (FLS) for twin–twin transfusion syndrome (TTTS). Papanna and colleagues studied the fetal membranes in 31 pregnant women who underwent FLS for TTTS at delivery. The surgery was performed at different sites: the trocar site of the recipient sac and, at a distance, the donor sac and the inter-twin membrane. Following the invasive procedure of FLS for TTTS, the fetal membranes did not heal.
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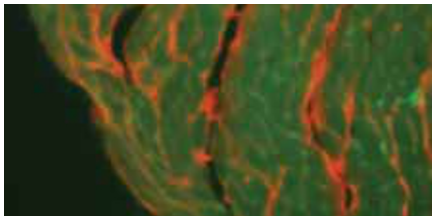
Marfan-related cardiomyopathy



Little is known about the long-term evolution and pathophysiology of mild intrinsic cardiomyopathy in patients with Marfan syndrome (MFS). Campens and colleagues conducted longitudinal ultrasound studies using a representative and well-characterized murine model for MFS and compared their findings with the human cardiac phenotype. In analogy with what is observed in the majority of MFS patients, the mouse model demonstrated mild intrinsic left ventricular dysfunction. This model may enable therapeutic interventions on the myocardium in MFS.
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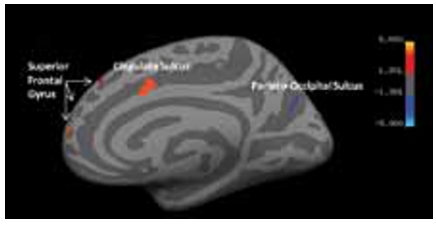
Congenital hypothyroidism and the cortex



Clairman *et al*. used an automated neuroimaging technique to investigate whether cortical thickness (CT) in children with congenital hypothyroidism (CH) differed from that in typically developing controls (TDCs) and whether the regions showing CT differences would predict later neuropsychological functioning. Magnetic resonance images from 41 CH and 42 TDC children aged 9–16 years revealed that CH patients had cortical thinning and thickening in multiple regions of both hemispheres. The authors also found that cortical thickening of frontal, temporal, and occipital regions in CH was associated with poorer cognitive outcome.
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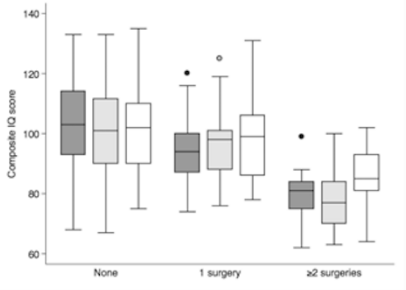
Anesthesia and cognition in preterm newborns



Gano and coinvestigators evaluated the relationship between timing of exposure to surgical anesthesia and cognitive outcome. In this cohort study, premature newborns exposed to anesthesia for surgery were prospectively evaluated with neonatal magnetic resonance imaging and neurodevelopmental testing at 3–6 years of age. Two or more surgeries before term-equivalent age were associated with significantly lower composite IQ scores at 4.6 ± 0.6 years, after adjusting for gestational age and illness severity. **See page 323**

Cognition after prenatal drug exposure

Previous studies indicated a higher risk of neuropsychological difficulties in young children prenatally exposed to opioids and polysubstances, but longitudinal information is scarce. Nygaard and colleagues assessed the cognitive functioning of 72 children with prenatal opioid and polysubstance exposure and 58 children without any established prenatal risk at 1, 2, 3, 4½, and 8½ years of age. Among other results, they found that the exposed group had significantly lower IQ scores than the control group and that the differences increased over time for girls who had been exposed.
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Pubertal growth spurt and final height

The exact nature of the relationship between the age at onset of puberty and final height in normally maturing children is controversial. Limony and coauthors hypothesized that both height and age at onset of the pubertal growth spurt (PGS) are correlated with final height. The height measurements of 335 children were analyzed in an observational retrospective study, and age and height at the onset of PGS were computed. The results suggest that a delayed PGS has a positive effect on final height. **See page 351**