

Cardiovascular Adaptation of the Newborn

Background

Unfortunately babies born prematurely are much more likely to experience problems after birth. Our previous work has demonstrated that baby boys do worse than girls. In particular, successful adaptation to life outside the womb requires major changes in the way a baby's heart and lungs work. The processes underlying these changes are not currently understood. We know that low blood pressure is associated with more problems in the immediate newborn period and it has been demonstrated that this may be related, in part, to a particular hormone (cortisol) present in both mother and baby. We have previously shown that there is a difference in the way this hormone is dealt with by the mother's placenta depending on whether she is pregnant with a baby boy or girl. The aim of this study is to establish how the process of adaptation following premature birth is related to the sex of the baby and how certain hormones in the mother and child may contribute to the differences in severity of illness observed between premature boys and girls.



What does the study Involve

Cord blood taken and placental weight measured.

At 6hrs, 24hrs and 72hrs infant assessment using:

- Doppler skin flow
- Video-microscopy
- Urine collection
- Blood collection
- Cardiac echo
- Saliva collection

Infants are then followed up at 3 years.

Contacts

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