Mitochondrial Donation

Discuss potential approaches to systematically studying and gathering evidence about MRT.

Issues:

• Relatively little follow up data on any new IVF technique including PGD, ICIS, blastocyst transfer
• Large numbers required if defects subtle
• Patient choice
• Situation in UK
Mitochondrial Donation

Discuss potential approaches to systematically studying and gathering evidence about MRT. Considerations include:

• How to determine efficacy in a clinical investigation? What would be the role of PGD and prenatal diagnosis techniques (risks versus benefits – depending on preclinical data (<5%))? New born blood sample for heteroplasm 
• How could the intended and adverse effects of the techniques be distinguished and measured in the research setting? Patient numbers and what sort of defect expected
• How many women, children, and families would need to be enrolled in a clinical investigation? Is there a control group for comparison? ?PGD
How would children born from MRT be assessed in the short- and long-term?
Follow up of children

Balance between collecting information and not medicalising children

Routine NHS care during pregnancy and follow up with additional tests

5-8 days Neonatal bloodspot (heelprick) test– midwife
(We would encourage parents to consent to providing a sample of the baby’s blood for mtDNA analysis at the same time as the heelprick/bloodspot test on day 5-8).

12-18 months Review by Consultant Paediatric Neurologist at Newcastle clinic