HFEA Statutory Approvals Committee

30 October 2014

Finsbury Tower, 103-105 Bunhill Row, London, EC1Y 8HF

Minutes – Item 2

Centre 0102 (Guy's Hospital) – PGD application for Meckel-Gruber Syndrome Types 1,2,4,5,6,7,8,9,10 and 11 OMIM #249000, #603194, #611134, #611561, #612284, #267010, #613885, #614209, #614175 and #615397

Members of the Committee:	Committee Secretary:
David Archard (lay) Chair	Lauren Crawford, Committee Officer
Sue Price (professional)	
Debbie Barber (professional)	
Rebekah Dundas (lay)	Legal Adviser:
Jane Dibblin (lay)	Dawn Brathwaite, Mills & Reeve
Advisor: Dr Peter Turnpenny	

Declarations of Interest: The Members declared no conflicts in relation to this item.

The following papers were considered by the Committee:

- Executive summary
- PGD application form
- Redacted Peer Review form
- Genetic Alliance Opinion

The Committee also had before it:

- HFEA Protocol for the Conduct of Licence Committee Meetings and Hearings
- 8th edition of the HFEA Code of Practice
- Human Fertilisation and Embryology Act 1990 (as amended) ("the Act")
- Decision trees for granting and renewing licences and considering requests to vary a licence (including the PGD decision tree); and
- Guidance for members of Authority and Committees on the handling of conflicts of interest approved by the Authority on 21 January 2009.
- Guidance on periods for which new or renewed licences should be granted
- Standing Orders and Instrument of Delegation

- Indicative Sanctions Guidance
- HFEA Directions 0000 – 0012
- Guide to Licensing
- Compliance and Enforcement Policy
- Policy on Publication of Authority and Committee Papers
- HFEA Pre-Implantation Diagnostic Testing ("PGD") Explanatory Note For Licence Committee

Discussion

1. The Committee had regard to its Decision Tree. The Committee noted that the Centre is licensed to carry out PGD. The Committee was also satisfied that the Centre has experience of carrying out PGD and that generic patient information about its PGD programme and associated consent forms had previously been received by the HFEA.

2. The Committee noted that the proposed purpose of testing the embryos was as set out in paragraph 1ZA(1)(b) of schedule 2 of the Act, i.e. 'where there is a particular risk that the embryo may have any gene, chromosome or mitochondrion abnormality, establishing whether it has that abnormality or any other gene, chromosome or mitochondrion abnormality'.

3. The Committee noted that Meckel-Gruber Syndrome Types 1,2,4,5,6,7,8,9,10 and 11 OMIM #249000, #603194, #611134, #611561, #612284, #267010, #613885, #614209, #614175 and #615397 are inherited in an autosomal recessive pattern and there is a 1 in 4 chance of an embryo being affected with the condition where both parents are carriers.

4. The Committee noted that Meckel-Gruber syndrome (or Meckel syndrome) is a severe genetic condition that affects multiple systems, typically presenting with a triad of features: encephalocele (a sac-like protrusion of the brain), polydactyly (extra fingers and toes), and renal and hepatic ductal dysplasia and cysts (polycystic kidneys and liver abnormalities). Some other associated features include problems with development of the heart, bones, urinary system, genitalia and facial features (including eye abnormalities and cleft palate). As it is caused by mutations in a number of genes, all types of the condition affect early embryological development and result in similar features. It results in significant foetal malformation, with some features evident on first trimester scans. As well as those listed above, symptoms can include incomplete formation of neural tube (the structure in embryos that develops into the brain and spinal cord), sightlessness and microphthalmia (an unnatural smallness of the eyes). This is a variable condition and does not always present with the complete

triad of symptoms, and presentation of other associated symptoms is also variable. The condition is fully penetrant.

5. The Committee noted that symptoms arise as the embryo develops, meaning that most babies die in the new born period if they survive to term.

6. There is no treatment or cure for Meckel-Gruber syndrome. Despite being a variable condition, it is always severe and lethal, usually in the prenatal or perinatal period. The main cause of death is respiratory or renal failure.

7. The Committee welcomed the advice of its advisor, Dr Peter Turnpenny. Dr Turnpenny confirmed that the condition is very serious and that affected newborns rarely survive beyond hours or days. He also explained the seriousness of the organ abnormalities.

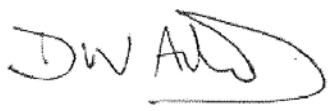
8. The Committee noted that the application is consistent with the Peer Review and is also supported by the Genetic Alliance.

9. The Committee considered that the condition is serious because it is a congenital disorder which affects the vital organs and usually results in death shortly after birth - if the child is born.

10. The Committee had regard to its explanatory note and noted that on the basis of the information presented, given the condition's worst symptoms, it was satisfied that there is a significant risk that a person with the abnormality will have or develop a serious physical or mental disability, a serious illness or any other serious medical condition. The Committee was therefore satisfied that the condition meets the criteria for testing under paragraph 1ZA(1)(b) and (2) of Schedule 2 to the Act.

11. The Committee agreed to authorise the testing of embryos for Meckel-Gruber Syndrome Types 1,2,4,5,6,7,8,9,10 and 11 OMIM #249000, #603194, #611134, #611561, #612284, #267010, #613885, #614209, #614175 and #615397.

Signed: Date: 13/11/2014



David Archard (Chair)