

HFEA Statutory Approvals Committee

19 December 2013

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

Minutes – Item 4

Centre 0035 (Oxford Fertility Unit) – PGD application for Mitochondrial DNA Depletion Syndrome 2 (myopathic type) OMIM #609560

Members of the Committee: David Archard (lay) Chair Sue Price (professional) Hossam Abdalla (professional) Jane Dibblin (lay)	Committee Secretary: Lauren Crawford
Advisor: Dr Ed Blair	Legal Adviser: Graham Miles, Morgan Cole
	Observing: Sam Hartley, Head of Governance and Licensing, HFEA

Declarations of Interest: The Members declared no conflicts in relation to this item. The Advisor, Ed Blair, works with the Oxford PGD unit, but this was not seen as a conflict as he did not partake in the decision making process and also declared that he had no commercial, scientific or professional interest in this item.

The following papers were considered by the Committee

- Executive summary
- Application form
- Redacted peer review
- 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

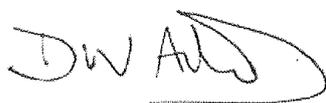
1. The Committee had regard to its Decision Tree. The Committee noted that the Centre is licensed to carry out PGD. The Committee was also satisfied that the Centre has experience of carrying out PGD and that generic patient information about its PGD programme and associated consent forms had previously 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 Mitochondrial DNA Depletion Syndrome 2 (myopathic type) (OMIM #609560) is 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 Mitochondrial DNA Depletion Syndrome 2 is characterised primarily by childhood onset of muscle weakness associated with depletion of mtDNA in skeletal muscle. There is wide clinical variability; some patients have onset in infancy and show a rapidly progressive course with early death due to respiratory failure, whereas others have later onset of a more slowly progressive myopathy.
5. The Committee noted that as muscle weakness progresses, people with the disorder lose motor skills such as standing, walking, eating and talking. Some affected individuals have increasing weakness in the muscles that control eye movement, leading to droopy eyelids (progressive external ophthalmoplegia). Most often the muscles are the only affected tissues however the liver may be enlarged (hepatomegaly), seizures can occur, and hearing loss caused by nerve damage in the inner ear (sensorineural hearing loss) may be present.

As the disorder worsens, the muscles that control breathing become weakened and affected individuals frequently have to rely on mechanical ventilation.

6. The Committee noted that there is no known treatment for Mitochondrial DNA Depletion Syndrome 2.
7. The Committee noted that the application is supported by the Genetic Alliance UK and the Peer Reviewer.
8. The Committee welcomed the advice of its Advisor, Ed Blair, who confirmed that the condition was as described in the papers.
9. The Committee considered that the condition is serious because respiratory failure may require mechanical ventilation. Myopathy, occurrence of seizures, hearing loss and respiratory problems significantly impact upon the affected individual's quality of life.
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 Mitochondrial DNA Depletion Syndrome 2 (myopathic type) (OMIM #609560).

Signed:

Date: 08/01/2014

A handwritten signature in black ink, appearing to read 'DWA' followed by a stylized flourish.

David Archard (Chair)