HFEA Licence Committee Meeting

14 June 2012

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

Minutes – Item 4

Centre 0102 (Guy's Hospital) – PGD for Lowe Oculocerebrorenal Syndrome (OMIM #309000)

Members of the Committee:	Committee Secretary:
David Archard (lay) Chair Sue Price (professional) Mair Crouch (lay) Jane Dibblin (lay) Debbie Barber (professional)	Lauren Crawford Legal Adviser: Juliet Oliver, Field Fisher Waterhouse

Declarations of Interest: members of the Committee declared that they had no conflicts of interest in relation to this item.

The following papers were considered by the Committee

- Cover sheet
- Executive Summary
- PGD Application form
- Redacted Peer Review
- Genetic Alliance opinion

The Committee also had before it

1. HFEA Protocol for the Conduct of Licence Committee Meetings and Hearings
2. 8th edition of the HFEA Code of Practice
3. Human Fertilisation and Embryology Act 1990 (as amended)
4. Decision trees for granting and renewing licences and considering requests to vary a licence (including the PGD decision tree); and
5. Guidance for members of Authority and Committees on the handling of conflicts of interest approved by the Authority on 21 January 2009.
6. Guidance on periods for which new or renewed licences should be granted
7. Standing Orders and Instrument of Delegation
8. Indicative Sanctions Guidance
9. HFEA Directions 0000 – 0012
10. Guide to Licensing

11. Compliance and Enforcement Policy
12. Policy on Publication of Authority and Committee Papers
13. 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 considerable 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 received legal advice that they were entitled to authorise testing of an embryo for one or more of the purposes under paragraph 1ZA(1) of schedule 2 to the Act. Where the centre wishes to test an embryo to establish its sex, the Committee must consider whether the criteria in paragraph (1)(c) are met; they must then go on, if the centre wishes also to test whether the embryo has an abnormality or any other gene, chromosome or mitochondrion abnormality, to consider whether the criteria in paragraph (1)(b) and (2) are met.

3. The Committee noted that the Centre's proposed purpose of testing the embryos was both: (1) as set out in paragraph 1ZA(1)(b) of schedule 2 of the Act, ie. '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'; and (2) as set out in paragraph 1ZA(1)(c) of schedule 2, 'to establish the sex of the embryo in case where there is a particular risk that any resulting child will have or develop a gender-related serious physical or mental disability'.

4. The Committee noted that Lowe Oculocerebrorenal Syndrome (OMIM #309000) is a disorder that is inherited in an X-linked recessive manner. This means that a carrier female has a 50% chance of having an affected male and a 50% chance of having a carrier female in any pregnancy.

5. The Committee considered that there is a significant risk that a male person with the abnormality will develop a serious medical condition because it is fully penetrant in affected males. Carrier females are less likely to manifest symptoms.

6. The Committee noted that Lowe Oculocerebrorenal Syndrome is an inherited condition affecting boys. It is caused by mutations in the OCRL gene. It is a multisystem genetic disorder that generally affects boys only. Penetrance is complete in males. It involves the eyes, central nervous system, and kidneys. All affected boys are born with dense cataracts (clouding of the lens) in their eyes, and 50% have infantile glaucoma (high pressure causing damage to optic nerves). Further symptoms relating to the central nervous system and kidneys can occur concurrently or develop later.

7. The Committee noted that in addition to visual problems boys with the condition are born with poor muscle tone, and never achieve normal strength, and therefore are delayed in their motor milestones. They have varying degrees of kidney ~~function~~impairment which leads to progressive renal failure. Generalized hypotonia is noted at birth and is of central (brain) origin. Deep tendon reflexes are usually absent. Almost all affected males have some degree of intellectual impairment ranging from low to severe and profound mental handicap. In addition to this, affected boys may have short stature, reduced bone density leading to fractures, dental cysts and dysplastic teeth, skin cysts and prolonged bleeding following surgeries.

8. The Committee noted Lowe Oculocerebrorenal Syndrome is not a curable condition. Treatments are available and include early removal of cataracts; nasogastric tube feedings or feeding gastrostomy to achieve appropriate nutrition; occupational or speech therapy to address feeding problems; standard measures for gastroesophageal reflux; programs to promote optimal psychomotor development; behaviour modification plan with antidepressant and/or antipsychotic medications as needed. For those with renal problems treatment involves various oral supplements, chronic dialysis and renal transplant may be required for some individuals.

9. The Committee considered that the condition is serious because the effects of Lowe Oculocerebrorenal Syndrome are typically present at birth having developed in utero but further symptoms, such as kidney problems may present later in childhood. This disorder can result in infant death and most sufferers do not exceed 40 years of age.

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 male person with the abnormality will have or develop a serious physical or mental disability, a serious illness or any other serious medical condition. Accordingly, it was

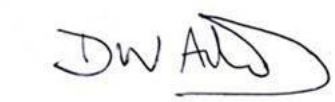
appropriate to grant the application under paragraph 1ZA(1)(b) of Schedule 2 to the Act.

11. The Committee noted that the condition only affected the male sex, or affected the male sex significantly more than the female sex, and was also therefore satisfied that there is a particular risk that any resulting child will have or develop a gender-related serious physical or mental disability. It considered that it was appropriate to grant the application under paragraph 1ZA(1)(c) of Schedule to the Act.

12. The Committee noted that the application is supported by the Peer Reviewer as well as by Genetic Alliance UK.

13. The Committee agreed to authorise the testing of embryos for Lowe Oculocerebrorenal Syndrome (OMIM #309000) to define affected male embryos only. The Committee confirmed that this authorisation will be added to the published list of conditions for which PGD may be carried out.

Signed: Date: 28/06/2012



David Archard (Chair)