Statutory Approvals Committee – minutes

Centre 0102 (Guys Hospital)

Pre-implantation Genetic Diagnosis (PGD) application for

Langers Mesomelic Dysplasia (LMD), OMIM #249700

Thursday, 30 March 2017

HFEA, 10 Spring Gardens, London, SW1A 2BU

Committee members	Margaret Gilmore (Chair) Anne Lampe Anthony Rutherford Bobbie Farsides	
Members of the Executive	Dee Knoyle Erin Barton	Secretary Governance Manager
External adviser	Dr Alison Male	
Legal Adviser	Sarah Ellson	Fieldfisher
Observers		

Declarations of interest

- Members of the panel declared that they had no conflicts of interest in relation to this item.
- Bobbie Farsides declared that she knows the author of the academic paper submitted with the application, 'A Small Matter of Equality: Living with Restricted Growth'. The Legal Adviser confirmed that Bobbie Farsides has no conflict of interest with this item.

The committee had before it:

- 8th edition of the HFEA Code of Practice
- Standard licensing and approvals pack for committee members.

The following papers were considered by the committee:

- Executive Summary
- PGD Application Form
- Redacted peer review
- Genetic Alliance Opinion
- Academic paper submitted with the application: ‘A Small Matter of Equality: Living with Restricted Growth’

1. Consideration of application

1.1. The committee welcomed the advice of its specialist adviser, Dr Alison Male, who confirmed that the condition was as described in the papers.

1.2. The committee noted that the description in the PGD application for Langers Mesomelic Dysplasia (LMD), OMIM #249700 is consistent with the Peer Review.

1.3. The committee noted that the Genetic Alliance opinion provided a patient's perspective and supported the application.

1.4. 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.

1.5. The committee noted that the condition being applied for is not on the list of approved PGD conditions.

1.6. 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'.

1.7. The committee noted that LMD has a complex pseudo-autosomal recessive pattern of inheritance via the X and Y chromosomes. If both parents have a relevant mutation there is a 25% chance of having a child affected by LMD in each pregnancy.

1.8. The committee noted that LMD is an extremely rare condition which is fully penetrant and present from birth, causing severe short stature and disproportionate shortening of the limbs with other severe limb malformations and missing part of the fibula. Some of those affected have an underdevelopment of the lower jaw bone. Intelligence is unaffected and the life span is normal.

1.9. The significant and disproportionate short stature means that final adult height is around 130cm. This results in major restrictions to conducting the usual activities of daily living, with notable impact upon mobility and functionality. Affected individuals need regular one-to-one assistance and their employment choices are restricted. In addition, pain affecting the limbs reduces capacity to undertake regular exercise, leading to a risk of obesity and concomitant medical complications.

1.10. LMD affects males and females and is caused by mutation or deletion of the SHOX gene on both sex chromosomes in an individual. The SHOX gene is found on the pseudo-autosomal region of the X or Y chromosome and so the condition is inherited like an autosomal recessive condition. Carriers with one mutated or deleted SHOX gene have a milder presentation called Leri-Weill dyschondrosteosis.

1.11. The committee noted that there is no curative treatment for the condition.

1.12. The committee noted the inspectorate’s recommendation to consider the approval of LMD to be included on the PGD List. The committee agreed to consider the application on this basis.

2. Decision

2.1. The committee considered that the condition is serious. It presents from birth and causes disproportionate shortening of the limbs with other severe limb malformations including missing part of the fibula resulting in short statue. The limb malformations may require surgical procedures affecting an individual's quality of life. Affected individuals may endure pain and live with restricted mobility, leading to the risk of obesity and medical complications. Individuals may have major restrictions to conducting daily activities, requiring one-to-one assistance. Employment choices are also restricted.

2.2. 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.

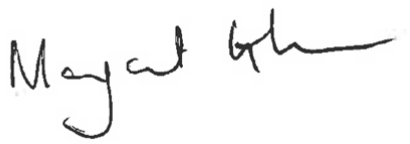
2.3. The committee agreed to authorise the testing of embryos for Langers Mesomelic Dysplasia (LMD), OMIM #249700.

2.4. The committee made a clear distinction between Langers Mesomelic Dysplasia (LMD) and Leri-Weill dyschondrosteosis and emphasised that there was no decision at this meeting to approve the testing of embryos for Leri-Weill dyschondrosteosis.

3. Chair's signature

3.1. I confirm this is a true and accurate record of the meeting.

Signature



Name

Margaret Gilmore

Date

30 March 2017