Statutory Approvals Committee – minutes

Centre 0327 (Boston Place)

Pre-implantation Genetic Diagnosis (PGD) application for Dilated Cardiomyopathy Type 1P (CMD1P), OMIM #609909

Thursday, 27 August 2020

HFEA, 10 Spring Gardens, London, SW1A 2BU via Teleconference

Committee members	Margaret Gilmore (Chair) Emma Cave Anne Lampe Tony Rutherford	
Members of the Executive	Moya Berry Catherine Burwood	Committee Officer Licensing Manager
Specialist Adviser	Professor Peter Turnpenny	
Legal Adviser	Jane Williams	Mills & Reeve LLP

Declarations of interest:

- Members of the committee declared that they had no conflicts of interest in relation to this item.

Apologies:

- Apologies were received from Ruth Wilde.

The committee had before it:

- 9th 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
- Additional paper from the peer reviewer
- Statutory Approvals Committee Minutes for previous Cardiomyopathy PGD Applications:
  - 2019-05-30 SAC minutes, centre 0201 - Dilated Cardiomyopathy 1G, OMIM #604145 and Cardiomyopathy Familial Hypertrophic 9, OMIM ~613765
  - 2016-05-26 SAC minutes, centre 0102 - Dilated Cardiomyopathy and Left Ventricular Noncompaction 5, OMIM #613426
  - 2015-09-24 SAC Minutes, centre 0044 - Dilated Cardiomyopathy Type 1A OMIM #115200

- 2015-08-27 SAC Minutes, centre 0078 - Dilated cardiomyopathy (DCM) caused by a mutation in the Tropomyosin alpha-1 chain gene, OMIM #611878
- 2014-09-25 SAC Minutes, centre 0119 - Familial Dilated Cardiomyopathy caused by mutations in TROPONIN T2 gene (TNNT2), OMIM #191045

1. Consideration of application

1.1. The committee welcomed the advice of its specialist adviser, Professor Peter Turnpenny, who confirmed that the condition was as described in the papers.

1.2. The committee noted that the description in the PGD application for Dilated Cardiomyopathy Type 1P (CMD1P) OMIM #609909, is consistent with the peer review. The committee also noted an additional paper from the peer reviewer to support this application. The additional paper included a reference to a detailed literature review documented in an executive summary presented to the Statutory Approvals Committee on the 30 May 2019.

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

1.4. The committee noted that a Genetic Alliance UK statement had not been provided for this application.

1.5. 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.

1.6. 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 Dilated Cardiomyopathy Type 1P (CMD1P), OMIM #609909, is inherited in an autosomal dominant manner, which means there is a 50% chance of an embryo being affected by the condition in each pregnancy if either parent has a relevant mutation.

1.8. The committee noted that the penetrance of the condition is variable and generally cannot be predicted from the specific gene mutation.

1.9. Dilated Cardiomyopathy Type 1P, (CMD1P) OMIM #609909, is characterised by intermittent malignant cardiac arrhythmias, which can lead to sudden death from early adulthood. Dilated cardiomyopathy is a cardinal feature of the condition and leads to heart failure, most commonly in the fifth decade.

1.10. There is no cure for this condition and treatment focuses on managing the symptoms of individual patients. Drugs are available which can ameliorate heart failure and implantable cardiac defibrillators (ICD's) can reduce the risk of irreversible cardiac arrest. Heart transplant may replace an inadequately contracting heart but requires long term immunosuppressant therapy and the operation has significant risks; donor organs are also in short supply.

1.11. The committee noted the executive's request to consider Dilated Cardiomyopathy Type 1P (CMD1P), OMIM #609909, for inclusion on the list of conditions approved for PGD. The committee agreed to consider the application on this basis.

1.12. The committee noted the peer reviewer's commitment to provide a further peer review of multiple other types of dilated cardiomyopathy of genetic etiology.

2. Decision

2.1. The committee considered that, in the worst-case scenario, Dilated Cardiomyopathy Type 1P (CMD1P), OMIM #609909, is a potentially life limiting condition that can carry the risk of sudden unexpected death from early adulthood and teenage years, usually as a result of cardiac arrhythmia. The committee considered the potentially devastating physical and psychological impact on those living with cardiomyopathy and the lifetime uncertainty of sudden death.

2.2. The committee had regard to its explanatory note and confirmed that, on the basis of the information presented, it was satisfied that there is a particular risk that an embryo may have the abnormality in question and that there is a significant risk that a person with such an abnormality will, given the condition's worst symptoms, have or develop a serious physical disability, a serious illness or any other serious medical condition.

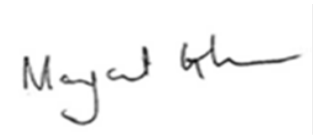
2.3. The committee was therefore satisfied that the following conditions meet the criteria for testing under paragraph 1ZA(1)(b) and (2) of Schedule 2 of the Act. The committee agreed to authorise testing for:

- Dilated Cardiomyopathy Type 1P, (CMD1P) OMIM #609909

3. Chairs signature

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

Signature



Name
Margaret Gilmore

Date
15 September 2020