Statutory Approvals Committee – minutes

Centre 0005 (Fertility Exeter)

Pre-implantation Genetic Diagnosis (PGD) application for TANGO 2-related Metabolic Encephalopathy and Arrhythmias, OMIM #616878

Thursday, 29 October 2020

HFEA, 10 Spring Gardens, London, SW1A 2BU via Teams Meeting

Committee members	Margaret Gilmore (Chair) Anne Lampe Tony Rutherford Ruth Wilde	
Members of the Executive	Moya Berry Catherine Burwood	Committee Officer Licensing Manager
Specialist Adviser	Dr. Ed Blair	
Legal Adviser	Eve Piffaretti	Blake Morgan - LLP
Observers	Bernice Ash	Committee Officer
	Jane Darragh	Research Manager (Induction)

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 Emma Cave

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

1. Consideration of application

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

1.2. The committee noted that the description in the PGD application for TANGO 2-related metabolic encephalopathy and arrhythmias, OMIM #616878, is consistent with the peer review.

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 TANGO 2-related metabolic encephalopathy and arrhythmias, OMIM #616878 is also known as Metabolic Crises, Recurrent, with Rhabdomyolysis, Cardiac Arrhythmias, and Neurodegeneration (MECRCN), OMIM #616878, the primary name for the condition. To ensure consistency with the OMIM website, the condition, for the purposes of this application, will be known as Metabolic Crises, Recurrent, with Rhabdomyolysis, Cardiac Arrhythmias, and Neurodegeneration (MECRCN), OMIM #616878.

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

1.6. The committee had regard to its decision tree. The committee noted that the centre is not licensed to carry out PGD and that the PGD cycle will be undertaken at Guy's Hospital, centre 0102. The committee noted that it is acceptable for centres which are not licensed for embryo testing, to make applications for a condition to be approved for PGD by the HFEA. The committee noted that when a condition is approved for PGD by the HFEA, any centre licensed to carry out PGD can test for it. Although the centre making the application does not have a PGD licence, it had presented relevant information to enable the committee to evaluate the application.

1.7. 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'.

1.8. The committee noted that Metabolic Crises, Recurrent, with Rhabdomyolysis, Cardiac Arrhythmias, and Neurodegeneration (MECRCN), OMIM #616878, is inherited in an autosomal recessive manner, which means there is a 25% chance of an embryo being affected by the condition in each pregnancy if each parent has a relevant mutation.

1.9. The committee noted that the penetrance of the condition is 100%.

1.10. Metabolic Crises, Recurrent, with Rhabdomyolysis, Cardiac Arrhythmias, and Neurodegeneration (MECRCN), OMIM #616878, is characterised by metabolic crises which lead to progressive neurodegeneration causing regression (loss of skills), cognitive impairment, abnormal speech, swallowing difficulties, and epilepsy/seizures. Moreover, metabolic crises can lead to cardiac arrhythmia and sudden death.

1.11. There is no cure for the condition and symptoms are managed with therapies and medication. Affected children usually die in childhood.

1.12. The committee noted the executive's request to consider Metabolic Crises, Recurrent, with Rhabdomyolysis, Cardiac Arrhythmias, and Neurodegeneration (MECRCN), OMIM #616878, for inclusion on the list of conditions approved for PGD. The committee agreed to consider the application on this basis.

2. Decision

2.1. The committee considered that, in the worst-case scenario, Metabolic Crises, Recurrent, with Rhabdomyolysis, Cardiac Arrhythmias, and Neurodegeneration (MECRCN), OMIM #616878,

is a rare, progressive, and lethal neuro-developmental disorder that presents in infancy. The condition causes recurrent episodes of metabolic crises which can lead to developmental delay, childhood onset seizures and severe cardiac arrhythmia. Cardiac involvement with severe arrhythmias is a consistent and potentially life-threatening manifestation. There is no cure for the condition and the committee considered the potentially devastating physical and psychological impact on the quality of life of those affected with the condition.

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 condition meets the criteria for testing under paragraph 1ZA(1)(b) and (2) of Schedule 2 of the Act.

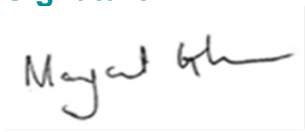
2.4. The committee agreed to authorise testing for:

- Metabolic Crises, Recurrent, with Rhabdomyolysis, Cardiac Arrhythmias, and Neurodegeneration (MECRCN), OMIM #616878

3. Chairs signature

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

Signature



Name
Margaret Gilmore

Date
16 November 2020