Statutory Approvals Committee - minutes

Centre 0044 (The Centre for Reproductive and Genetic Health)

Preimplantation Genetic Diagnosis (PGD) application for Radioulnar synostosis with amegakaryocytic thrombocytopenia type 1 (RUSAT1), OMIM #605432 & Radioulnar synostosis with amegakaryocytic thrombocytopenia type 2 (RUSAT2), OMIM #616738

Date:	27 May 2021
Venue:	Microsoft Teams Meeting
Committee Members:	Margaret Gilmore (Chair) Emma Cave Anne Lampe Ruth Wilde Jason Kasraie
Specialist Adviser:	Alison Male
Legal Adviser:	Graham Miles – Blake Morgan LLP
Members of the Executive:	Moya Berry - Committee officer Catherine Burwood - Licensing Manager
Observers:	Dina Halai- Senior Scientific Policy Manager HFEA India Hickey – Research Officer (Induction)
Apologies:	No apologies were received for the meeting
Declarations of Interest:	Members of the committee declared that they had no conflicts of interest in relation to this item.

The Committee had before it:

- HFEA Code of Practice 9th edition
- Standard Licensing and Approvals Pack

The following papers were considered by the committee:

- Executive Summary
- PGD Application form
- Redacted Peer review
- Genetic Alliance (UK) statement

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 Radioulnar synostosis with amegakaryocytic thrombocytopenia type 1 (RUSAT1), OMIM #605432, & Radioulnar synostosis with amegakaryocytic thrombocytopenia type 2 (RUSAT2), OMIM # 616738, is consistent with the peer review.

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

1.4. The committee noted that the Genetic Alliance (UK) statement provided a perspective on the impact of the condition on patients, their families, and carers.

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 Radioulnar synostosis with amegakaryocytic thrombocytopenia type 1 (RUSAT1), OMIM #605432, and Radioulnar synostosis with amegakaryocytic thrombocytopenia type 2 (RUSAT2), OMIM # 616738, are 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 conditions is not well characterised and can vary in presentation between affected members of the same family, however severe outcomes due to bone marrow failure have been reported in both conditions.

1.9. Radioulnar synostosis with amegakaryocytic thrombocytopenia type 1 (RUSAT1), OMIM #605432, and Radioulnar synostosis with amegakaryocytic thrombocytopenia type 2 (RUSAT2), OMIM # 616738, rare conditions characterised by severe anaemia (low oxygen in red blood cells causing weakness and long-term medical complications), neutropenia (inability to fight infection) and thrombocytopenia (poor platelet formation causing bleeding). These abnormalities can be life threatening. Skeletal abnormalities of the fingers and lower arms also occur from birth in both conditions.

1.10. There is no cure for this condition. Affected children usually require surgery for the skeletal malformations. Treatment for their bone marrow failure involves platelet and red cell transfusions, but eventually bone marrow or stem cell transplantation may be required, which may not be effective and is not without its own significant risks.

1.11. The committee noted the executive's request to consider Radioulnar synostosis with amegakaryocytic thrombocytopenia type 1 (RUSAT1), OMIM #605432, and Radioulnar synostosis with amegakaryocytic thrombocytopenia type 2 (RUSAT2), OMIM # 616738, 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, Radioulnar synostosis with amegakaryocytic thrombocytopenia type 1 (RUSAT1), OMIM #605432, and Radioulnar synostosis with amegakaryocytic thrombocytopenia type 2 (RUSAT2), OMIM # 616738 are rare, painful. and life-threatening conditions, with symptoms that are apparent from birth. Children may require early bone marrow transplants which are not without significant risk and complications. Multiple painful surgeries for skeletal malformations may also be required. The committee considered the potential serious implications for, and the physical and psychological impact on the quality of life of those affected by 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.

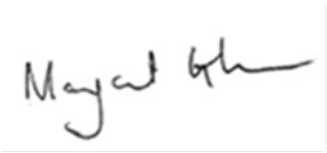
2.3. The committee was therefore satisfied that the following conditions meet the criteria for testing under paragraph 1ZA(1)(b) and (2) of Schedule 2 of the Act. The committee agreed to authorise testing for:

- Radioulnar synostosis with amegakaryocytic thrombocytopenia type 1 (RUSAT1), OMIM #605432
- Radioulnar synostosis with amegakaryocytic thrombocytopenia type 2 (RUSAT2), OMIM # 616738

3. Chair's signature

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

Signature



Name

Margaret Gilmore

Date

21 June 2021