

HUMAN FERTILISATION AND EMBRYOLOGY AUTHORITY

SCIENTIFIC AND CLINICAL ADVANCES GROUP

SAFETY OF EQUIPMENT USED IN ART LABORATORIES

Introduction

1. A centre recently reported an incident whereby sperm samples stored for patients perished as the dewar storing this samples failed to fill with liquid nitrogen. The dewar was attached to a tank of liquid nitrogen which is designed to automatically top up a sealed 'collar', around the outside of the dewar, with liquid nitrogen (sperm samples were stored in a vapour filled chamber core within the collar). The control panel on top of the tank shows the fill level and temperature. In the event of failure of the automatic filling system the tank was designed to flood with liquid nitrogen, this failed to happen.
2. There have been at least two previous incidents in which sperm samples have perished due to failures in the storage dewars.
3. SCAG is asked to discuss whether the HFEA should include advice on safety of equipment used in ART laboratories at part of its Code of Practice.

Suggestion Action

- Review incident inspection report for reported incident and other similar incidents
- Review all centre files to determine:
 - No of centres that have low level N₂ alarms
 - No of centres with low level O₂ alarms in the laboratories used to house the storage dewars
 - Types of dewars i.e. liquid filled or vapour phase
 - Other protocols e.g. who is responsible for re-filling dewars (laboratory staff or liquid N₂ suppliers)? Checking procedures, maintenance records etc.
- Seek views of ACE, BAS (British Andrology Society), ABA (Association of Biomedical Andrologists) and possibly the BFS re: safety (alarms) and possibility of recommending that samples should be split and stored in separate dewars.
- Review whether, as part of the inspection process, the HFEA should expect all centres to have protocols for ensuring all equipment used in ART laboratories is properly maintained.
- Raise issue at the meeting on 11th August 2003 (Accreditation of Embryology Laboratories)

Issues to be agreed

4. Members are asked to agree the action outlined above and suggest any additional factors that should be addressed.

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