FERTILITY SOCIETY OF AUSTRALIA AND NEW ZEALAND

Reproductive Technology Accreditation Committee (RTAC)

RTAC
REPRODUCTIVE TECHNOLOGY ACCREDITATION COMMITTEE

TECHNICAL BULLETIN 13

Transport of Cryopreserved Gametes and Embryos

12 September 2022

To enhance the quality of service for patients, RTAC may communicate to units regarding issues, questions, or comments related to assisted reproductive technologies (ART). A Technical Bulletin is an educational communication to all ART Units, and bodies certifying ART Units to the RTAC Code of Practice, offering advice and guidance. Generally, it is not enforceable unless incorporated into the RTAC Code of Practice.

Background

Recently RTAC was made aware of an incident that occurred when shipping some embryos and sperm from New Zealand to Australia. The result was that the samples had completely defrosted upon receipt and were unviable. This was investigated by both parties and the results of that investigation were discussed with the RTAC Chair and the RTAC Committee with a recommendation that the investigation is shared as a technical bulletin. This Technical bulletin supplements section 2.9.1 of the Code of Practice and provides expanded recommendations as a result of the investigatiuon of this incident that should be applicable to all ART Units in Australia and New Zealand.

Advice to ART Units

Patient safety is of paramount importance, therefore policies must address the following issues

1. The transport process is complex and involves many external contractors who are likely to be unknown to either the sending or receiving ART units. In many instances especially if the transport is an overseas destination the clinic may have no say in what shipper is being used, and when and how it was primed. RTAC recommends that when transporting frozen gametes/embryos each ART unit determine the chain of custody and the details of those involved in that custody chain and develop a risk assessment plan accordingly. As such RTAC recommends that for carriers engaged by the unit, the unit should undertake due diligence of the carrier, and consider a service agreement that covers aspects such as training of couriers handling dry shippers, responsibilities of the carrier and the unit, and level of tracking during shipment. If the carrier provides the dry shipper, the service agreement should include the maximumholding time of shippers used, and the methodology for priming and checking integrity of the shipper before each trip. For shippers that are reused there should be available a periodic (annual) revalidation of this holding time as moisture can build up in tanks not properly dried artificially increasing their weight.

2. It is important to factor in time zone changes when tracking movements and using electronic tracking systems. Discrepancies were identified in the above incident that may have contributed to the adverse outcome.

3. It is strongly recommended that a data logger be included in all shipments especially if the transport period is > 24 hours. This was one of the key recommendations arising from the incident investigation

    - When a shipping is arranged, which may be made by the patient directly with the shipping company the following information must be requested by the sender and this information provided to the receiving clinic and also attached to the shipper

        - The container should be appropriately labled. For example "TISSUES AND CELLS" "HANDLE WITH CARE"
        - Identification of the Sending clinic including address and contact details and a 24/7 contact
        - Identification of the receiving clinic including address and contact details and a 24/7 contact
        - Full specifications including identification codes of the genetic material being transported.
        - The weight of the shipper plus protective case with no liquid nitrogen, and when fully primed
        - Date and time of the start of transportation
        - Date primed
        - The working static holding time of the shipper, and the date the static holding time ends
        - Planned start date and end dates for each leg of the journey, eg:
            - One way A to B
            - Return A to B, and B to A
        - Whether the receiving clinic should prime before sending returning (ie before B to A)
            - This might be conditional, eg. if the shipper takes more than X days on the journey A to B
            - If so, priming instructions
        - Shipping agent contact person(s) (24/7) if questions arise
        - If there are any other samples from elsewhere already in the shipper

4. There must be discussion with patients about the risks involved in shipping embryos and gametes from point A to point B and this discussion must be documented. Part of that discussion must include the splitting of shipments which further reduces the risk of loss of valuable sometimes irreplaceable genetic material.

5. RTAC strongly recommends that ART units improve their communication both between the sender and receiver and with the carrier as well. The sender must take into account the receiver's circumstances when organising a shipment, especially timing (weekends, public holidays) which can affect transit time.

Both parties to the incident are happy to discuss the matter and if a unit wishes to contact them this can be organised by contacting Kim O'Dea at the FSANZ Secretariat, kimo@wsm.com.au.

Reference

https://www.hfea.gov.uk/media/3437/code-of-practice-annexes-october-2021.pdf Annex 6, Packaging, distribution and recall of gametes and embryos, page 91