NATIONAL OVARIAN AND TESTICULAR TRANSPORT AND CRYOPRESERVATION SERVIC (NOTTCS): CHALLANGES IN THE HARSH AND VAST CONTINENT 'DOWN UNDER'!

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Abstract Body

Background: Ovarian tissue cryopreservation prior to cancer treatment, and autologous grafting of cryopreserved ovarian tissue, has resulted in more than 200 live births worldwide. This technique is no longer experimental, as reflected in current cancer treatment guidelines. Extraction and use of testicular tissue from pre-pubertal boys is experimental but recent evidence showing successful live births in a primate model is encouraging. NOTTCS was established at RWH Melbourne to facilitate access to fertility preservation for young cancer patients with transport of gonadal tissue for cryopreservation in a central cryobank.

Aim: To demonstrate the feasibility and the logistic challenges of establishing a national service transporting gonadal tissue, overcoming high environmental temperatures and long geographical distances.

Method: Expanding an established service within a metropolitan centre of excellence, utilising world recognised standards of best practice, for adult and paediatric gonadal tissue fertility preservation to a national program.

Results: Successfully transported 50 ovarian and 5 testicular tissue biopsies distances up to 4,000km with no regular or direct flights and environmental conditions of 40+°C. This involved:

1)development of protocols to transport gonadal tissue for cryopreservation

2)establishing QA testing of ovarian tissue

3)appointing a coordinator working flexible part time hours

4)engaging local gynaecologists, fertility specialists and surgeons to perform the retrievals and prepare the tissue for transport

5)educating haematologists and oncologists regarding optimal fertility preservation counselling

6)engaging with a reliable specialist logistics company

7)utilising specially conditioned credo cube™ to maintain temperature at 2-8°C for up to 96hrs

8)minimising transport timelines with afternoon retrievals, overnight transport, and early morning delivery to cryobank site.

Conclusions: The NOTTCS service has been successfully established, with high level coordination, technical expertise, quality control and proven logistical capabilities. Successfully transporting 54 of 55 tissues within 24 hours from retrieval sites Australia wide to specialised centralised location, providing equitable access of gonadal tissue fertility preservation to all Australians.