

REPRODUCTIVE OUTCOMES FOLLOWING OVARIAN TISSUE GRAFTING AT A LARGE TERTIARY LEVEL CENTRE

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Abstract Body

Introduction: Ovarian tissue cryopreservation (OTC) and subsequent grafting (OTG) is an innovative fertility preservation option, particularly for those patients who cannot delay treatment or are pre-pubertal. Unlike mature oocyte cryopreservation, OTC provides potential multiple opportunities for conception given the large supply of oocytes at immature stage. OTG is increasingly recognised as being successful in re-establishing fertility for women who have had gonadotoxic treatment, with over 200 live births documented worldwide.

Aim: The aim of this study was to examine the reproductive outcomes of our OTG patient group.

Methods: This retrospective case series included all patients undergoing OTG at the Reproductive Services Unit, Royal Women's Hospital, Melbourne, Australia.

Results: Between 2006 and 2022, 47 patients underwent OTG. Of these, 36 (77%) had sought fertility preservation due to an oncological diagnosis and 11 (23%) for non-malignant serious conditions requiring gonadotoxic treatment. The average age at OTC was 28.9 years and at OTG 35.8 years, with the mean storage time being 7.2 years.

Of the 33 women that underwent oocyte pick-up (OPU), 30 (91%) obtained mature oocytes of which 11 did not have immediate plans for pregnancy. Nineteen women underwent 67 embryo transfers leading to 10 biochemical pregnancies, 1 miscarriage, 2 ongoing pregnancies and 12 live births (10 singletons and 1 set of twins), of which 1 was a spontaneous pregnancy. This equates to a clinical pregnancy rate of 22% (15/67) and a live birth rate of 18% (12/67) per embryo transfer. A total of 40 eggs and 46 embryos remain in storage.

Conclusion: Our data demonstrates that OTG is a viable option for women wanting fertility preservation. This opportunity for future fertility should be available and offered for those patients at significant risk of infertility and sterility.