SUCCESSFUL PREGNANCY CONFIRMS THE ROLE OF HETEROTOPIC OVARIAN GRAFTING

G. Rozen\textsuperscript{1,2}, F. Agresta\textsuperscript{1,2}, L. Hale\textsuperscript{1,2}, D. Gook\textsuperscript{1,2}, A. Sampson\textsuperscript{3}, C. Stern\textsuperscript{1,2}

\textsuperscript{1}Reproductive Biology, Melbourne IVF, Australia
\textsuperscript{2}Reproductive Services Unit, Royal Women’s Hospital, Australia
\textsuperscript{3}Obstetrics and Gynaecology Ultrasound Department, Royal Women’s Hospital, Australia

Aim: Despite significant advantages of using heterotopic sites for ovarian cortex autotransplantation, the clinical value of this approach has been widely questioned owing to the inferior pregnancy rates when compared to orthotopic transplantation. We report the largest series of heterotopic ovarian transplantations thus far in the literature, assessing reproductive outcomes in 9 patients who underwent heterotopic transfer of frozen-thawed ovarian tissue following premature ovarian failure (POF).

Methods: A case series is presented, in which 9 women with POF underwent heterotopic ovarian transplantation between 2006 and 2012. Ovarian tissue cryopreserved for 1-12 years was rapidly thawed and transplanted into heterotopic sites (abdominal port site, pelvic side wall peritoneum) as well as remaining ovary, if present. Endocrine function was assessed by monthly blood tests (FSH) and ultrasound commencing 2-4 weeks after transplantation.

Results: Endocrine function was restored on average after 5.3 months after transplantation. Four patients underwent a second transplantation 1-2 years after the first. The duration of endocrine function was between 24 and 60+ months, with function still ongoing in a number of patient’s. In total there were 26 stimulated cycles, 25 oocytes retrieved, 15 embryo transfers. The current term twin pregnancy is the first ever ongoing pregnancy from a heterotopic graft (unpublished data). There was also a biochemical pregnancy in a woman who underwent ovarian transplantation after being treated for NHL, as previously reported (Stern et al, 2011).

Conclusion: In this largest series of heterotopic transplantations, the reproductive outcomes are demonstrated and especially considering the current term pregnancy, this technique is highlighted as a valid option within the array of fertility preservation approaches.