

A RETROSPECTIVE OBSERVATIONAL STUDY OF INTRALIPID IMMUNOTHERAPY FOR WOMEN WITH REPRODUCTIVE FAILURE

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Background: Intralipid has been hypothesised to be an effective and safe immunotherapy in reproductive failure, though very few studies evaluating its benefit exist. This therapy was introduced on an empirical basis at IVFAustralia in 2014. Women were given a slow intravenous infusion of 20% Intralipid prior to embryo transfer, and again following a positive pregnancy test.

Methods: From the IVFAustralia database, 64 women were identified as having received Intralipid therapy. Their clinical histories, as well as pregnancy outcomes and any adverse effects following Intralipid therapy were retrospectively analysed using data collected from clinical case notes.

Results: The median duration of infertility was 4.4 years, with a mean of two prior miscarriages, five egg collections and eight embryos transferred prior to Intralipid therapy. The most common indication for Intralipid therapy was elevated uterine or peripheral blood natural killer cells (n=54). The median age at the time of infusion was 38 years. Of the 64 women who received Intralipid therapy, 94% underwent an embryo transfer (n=60). A total of 71 embryo transfers occurred, with a maximum of three embryo transfers with Intralipid per woman. Thirty women had a positive pregnancy test, while 31 positive pregnancy tests were recorded; one woman had two pregnancies from two Intralipid cycles. This corresponds with a pregnancy rate of 50% per woman undergoing embryo transfer and 44% per embryo transfer. Six pregnancies led to a live birth, 11 resulted in early miscarriage, while 14 are ongoing pregnancies. This translates to a livebirth/ongoing pregnancy rate of 33% per woman and 28% per embryo transfer. One patient had a flushing, pre-seizure sensation during Intralipid infusion, and another patient reported foetal complication with asymmetrical intrauterine growth restriction. No other adverse effects were recorded.

Conclusion: These results were better than expected, given the relatively poor prognosis for the treated women. Intralipid appears to be safe and may be beneficial in increasing the pregnancy rate and livebirth rate in women with recurrent miscarriage. Additional prospective, large scale studies are required.