

Kuivasaari-Pirinen, Paula

The pathway from infertility to motherhood through ART

University of Eastern Finland, Faculty of Health Sciences

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ABSTRACT

Involuntary childlessness has been reported to touch one in five couples in Finland. Assisted reproductive technology (ART) is the most effective means to treat infertility.

The aim of this study was to provide data for patient counselling. The study population consisted of 987 women who were undergoing ART in Kuopio University Hospital 1996–2007. By using women with tubal factor infertility as controls (n=87 and n=106), cumulative live birth rates after ART were evaluated among women with endometriosis (n=98) and women with polycystic ovary syndrome (PCOS) (n=66) who had previously failed to conceive via ovulation induction treatments. In addition, the risk of adverse neonatal outcomes was investigated in singleton ART pregnancies (n=255) by comparing them to spontaneous pregnancies in the general population (n=26 870) and to women who had taken a long time to conceive (>2 years) (n=928). ART pregnancies were divided into six subgroups according to the etiology of infertility, in order to evaluate whether infertile women differed from each other in terms of their risk profiles. A questionnaire, including a Life Satisfaction scale, was sent to all 987 women with a response rate of 54.7%.

Although women with endometriosis had a significantly lower pregnancy rate than women in the tubal factor group, there was no significant difference between cumulative life birth rate between the groups. A total of 40% of women with moderate to severe endometriosis (stage III/IV) had a live birth after 1–4 ART cycles with subsequent frozen embryo transfer, when the corresponding figure among women with minimal to mild endometriosis (I/II) was 55%, among women with PCOS 49%, and among women with tubal factor infertility 44%. A total of 52% of women with stage III/IV endometriosis discontinued ART after 1–3 cycles without success and 33% of women with PCOS discontinued after 1–2 cycles. ART pregnancies were at an increased risk for preterm birth compared to the general obstetric population (aOR 2.1; 95% CI 1.4–3.1). Specifically, preterm birth was more common in women with endometriosis (aOR 3.3; 95% CI 1.5–7.1). Nevertheless, ART pregnancies displayed comparable risks as spontaneous pregnancies occurring after a long time to conceive. Successfully treated women had higher life satisfaction than those who failed to conceive but even this latter group still had higher life satisfaction than the general Finnish population. It seemed that the recovery of unsuccessful ART occurred 6–9 years after the last unsuccessful ART and the recovery was faster in unsuccessfully treated women who had a child by some other means. In conclusion, the etiology, as probably also the high drop out rate, appeared to have some impact on the ART success rate. The elevated risk of adverse neonatal outcome is related to infertility, not only to ART *per se*. Moreover, the etiology of infertility seems to have an impact on the elevated risks. Most childless women will adjust to infertility, usually around 6–9 years since the last unsuccessful treatment. However, further studies are needed of adjustment of those women who do not participate in ART and why so many women discontinued ART even after 1–2 ART cycles.

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