Intrauterine insemination versus Fallopian tube sperm perfusion in non-tubal subfertility: a systematic review based on a Cochrane review*

A.E.P. Cantineau¹,⁴, M.J. Heineman², H. Al-Inany³ and B.J. Cohlen¹

¹Department of Obstetrics and Gynaecology, Isala Clinics, Location Sophia, Zwolle, ²Department of Obstetrics and Gynaecology, Academic Hospital Groningen, Groningen, The Netherlands and ³Department of Obstetrics and Gynaecology, Cairo, Egypt
⁴To whom correspondence should be addressed. E-mail: a.e.p.cantineau@og.azg.nl

BACKGROUND: The objective of this review was to compare the efficacy of Fallopian tube sperm perfusion (FSP) with intrauterine insemination (IUI) in the treatment of non-tubal subfertility. METHODS: The principles of the Cochrane Menstrual Disorders and Subfertility Group were employed. Only randomized controlled studies comparing FSP with IUI were included in this review. The main outcome measures included live birth rates and pregnancy rates per couple. RESULTS: Twenty-eight studies were found performing the comparison of interest. Overall six studies involving 474 couples were included in the meta-analysis. One study only assessed live birth rates, which resulted in no difference in outcome between FSP and IUI [odds ratio (OR) 1.17, 95% confidence interval (CI) 0.39–3.53]. The results in pregnancy rate per couple revealed no statistically significant difference between FSP and IUI (OR 1.76, 95% CI 0.77–4.05). Subgroup analysis revealed that couples suffering from unexplained subfertility clearly benefit from FSP over IUI (OR 2.88, 95% CI 1.73–4.78). Excluding studies which used the Foley catheter for tubal perfusion resulted in a significant difference favouring FSP for all indications (OR 2.42, 95% CI 1.54–3.80). CONCLUSIONS: There is firm evidence that FSP gives rise to higher pregnancy rates in couples with unexplained subfertility and should therefore be advised in these couples. For other indications FSP has not been proven more effective compared with IUI. Results showed that the Foley catheter might not be effective for FSP. Future research should focus on comparing different types of catheters.

Key words: Fallopian tube sperm perfusion/intrauterine insemination/non-tubal subfertility/systematic review