

The Associations of The Microbial Presence in Follicular Fluid of Infertile Women with IVF Outcomes: a Systematic Review and Meta-analysis

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February 22, 2024

Abstract

Background Although studies have shown that the microbial presence of follicular fluid (FF) can lead to poor IVF outcomes, there is still a lack of consensus. **Objective** The aim of the study was to synthesize these disparate studies to comprehensively investigate the potential impact of the microbial presence in the FF of infertile women on IVF outcomes. **Search strategy** Following preliminary searches to find Medical Subject Heading (MeSH) terms plus free terms, a systematic search was performed in PubMed in July 2022. **Selection criteria** The population was infertile women undergoing IVF treatment. The exposure was the microbiota of FF. The positivity of FF was defined according to the original studies. **Primary outcomes** included the clinical pregnancy rate and fertilization rate. **Data Collection and Analysis** Data collected for each study were analyzed using RevMan 5.4 software available on the Cochrane website. **Main results** The FFs of 285 women were detected positively by nonspecific flora detection and specific flora detection. The clinical pregnancy rate of the FF-positive group was significantly lower than that of the FF-negative group in the microbial culture and identification group (OR:0.61, 95% CI:0.21-1.71) and in the ELISA test group (OR:0.41, 95% CI:0.21-0.80). In the IPA test group, which included only one study, the pregnancy rate in the FF-positive group was higher than that in the FF-negative group, but the results were low quality. **Conclusions** Currently, there is still a lack of evidence for the associations of the presence of microorganisms in FF with IVF outcomes.

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