

IMPACT OF ENDOMETRIAL MICROBIOME ON FERTILITY

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Introduction: Next-generation sequencing isolates culturable and unculturable bacteria from the female reproductive tract.

Objective to review the impact of endometrial microbiome on fertility

Methods: A literature search for English articles, related to impact of endometrial microbiome on fertility, including articles published in Pub Med and the Cochrane Library. Keywords included endometrial microbiome, infertility, IVF

Results: An abnormal endometrial microbiota has been associated with implantation failure, pregnancy loss and other gynecological and obstetrical conditions. Identification of endometrial dysbiosis as a new cause of infertility opens a new microbiological field in the evaluation of endometrial factor. Assessing the uterine microbiota in infertile patients to restore a favorable endometrial flora in those patients with altered uterine microbiota to improve and personalize the clinical care of infertile patients. Understanding the significance of microbiome in the endometrium may completely change the therapeutic approach in the treatment of this part of the reproductive tract. The findings of different studies are barely comparable and occasionally contradictory, mainly due to the varying and limited study designs.

Conclusion: Further studies with large patient cohorts are required to establish the sensitivity & specificity of microbial biomarkers for clinical application, clarify to what extent, and how, the microenvironment could be modified in endometrial microbial dysbiosis