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Bacterial colonization of the endocervix probably affects pregnancy outcome in IVF/ICSI treatment

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INTRODUCTION: To evaluate whether or not the bacterial colonization of the endocervical canal as evaluated by endocervical culture at the time of embryo transfer will affect pregnancy outcome in IVF/ICSI treatment.

METHODS: During the year 2001, all the IVF/ICSI cases in our program received endocervical culture at time of embryo transfer when ET was performed on Monday to Thursday. Total 49 cases were enrolled initially. 6 cases were then excluded from statistics due to only one to two embryos with poor grading were replaced. The culture results and the pregnancy outcome were followed and compared statistically. A p value of < 0.05 was considered statistically significant.

RESULTS: The total clinical pregnancy rate in this group of patient was 58.1%. However the on-going pregnancy rate was 32.6%. The positive endocervical culture rate was 30.7% but became 37.2% if lactobacillus was included. The positive culture rates (excluding lactobacillus) in viable pregnancy group (14/43), non-viable pregnancy group (11/43) and non-pregnant group (18/43) were 14.3%, 36.4% and 38.9% respectively. In patients with positive culture (13/43), positive culture including lactobacillus (16/43), positive culture for lactobacillus (3/43) and negative culture (27/43), the clinical pregnancy rates were 46.2%, 56.3%, 100% and 59.3% respectively. The ongoing pregnancy rates were 15.4%, 18.8%, 33.3% and 40.7% respectively. Although there was an obvious trend that viable pregnancy revealed lower positive culture and negative culture patients acquired higher ongoing pregnancy. All the statistics were non-significant.

CONCLUSION: This preliminary evaluation reveals that there might be some correlation in between positive bacterial colonization at the endocervix and the final pregnancy outcome by IVF/ICSI treatment. More extensive studies are needed for further validation of this initial observation.