

The effect of bacterial flora of cervical canal on fertility outcome in patients referring to Isfahan fertility and infertility center

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Abstract

In spite of advances in the field of assisted reproductive techniques including in vitro fertilization (IVF) and intra-cytoplasmic sperm injection (ICSI), the pregnancy rate remained low. One of the major events in fertility is implantation process. Researchers believe that introduction of cervical bacteria into uterus during embryo transfer might have an inhibitory effect on implantation and thereby pregnancy rate. The reason for performing this study was the contradictory reports in this field and lack of regional information. In this cross-sectional study, endo-cervical samples from one hundred women who were undergoing intra-cytoplasmic sperm injection (ICSI) were prepared by using embryo transfer catheter tips. Catheters tips were transferred to selective culture media and after incubation in special conditions by using current bacteriological methods, bacteria in the samples were isolated and characterized. Implantation was confirmed by measurement of β -hCG in serum. Analysis of the results were carried out by chi-square. The overall implantation rate per transfer was 17%. Positive cultures in the successful and unsuccessful implantation groups were 29.4% and 49.4%, respectively. In other words, implantation rates in patients with and without cervical infection were 10.8% and 22.2%, respectively. Our study showed that, potentially pathogenic bacteria in endo-cervix of women with unsuccessful implantation is more prevalent than those with successful implantation ($p < 0.05$). Therefore, the results of this study imply the negative effects of cervical bacteria on the implantation process.

Key words: Infertility, ICSI, Implantation, Bacterial flora of the cervix, In vitro fertilization, and Embryo transfer.

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