Does the Endometrial Scratch Improve Implantation Rates?

Abstract:

Sir

Implantation is one of the most crucial steps in the process of reproduction. Implantation failure is often due to impaired uterine receptivity. Assisted Reproduction techniques are used in order to overcome fertility problems. The endometrial scratch (ES) is a relatively new technique that is said to improve the probability of a successful pregnancy in some women. Although the exact mechanism of this process is still unknown, the use of a catheter to cause local injury to the endometrial lining is suggested to initiate a healing process, thereby attracting immune markers and potentially improving implantation rates. The aim of this study is to assess whether the ES offered randomly to patients attending for ART results in a higher implantation rate in patients that avail of it compared to patients that do not have an endometrial scratch (non-ES).

A total of 60 ES patients and 627 non-ES patients in fresh cycles were analysed from the HARI unit database over a 2-year period. A positive biochemical pregnancy was the outcome measured and a p<0.05 was considered significant. To ensure patient groups were comparable, a Mann-Whitney U (MWU) test was carried out. The MWU results for AMH (p=0.225) and FSH levels (p=0.594) showed no statistical significance between the two patient groups with regards to these two parameters; however p<0.001 for age therefore indicating statistical significance. Twenty-two (36.67%) ES patients and 238 (37.96%) non-ES patients had a positive pregnancy. A chi squared test result (p=0.836) indicated no statistical significance when comparing the two groups. Seven (46.67%) ES group patients had a blastocyst transfer and 160 (48.05%) blastocyst transfers in the non-ES group resulted in a positive pregnancy (p=0.97), suggesting no statistical significance. Within age subgroups, <35 years (p=0.580), 35-39 years (p=0.429) and >40 years (p=0.237), there was also no statistical significance between the two groups. Results showed that there is no association between ES and pregnancy outcome at any age or in blastocyst only transfers patients. The small sample size of 60 in the ES group and retrospective nature of the study on prospectively collected data were limitations in this study. A statistically significant difference between the mean ages of patients within the two groups was seen, as indicated by the MWU test. This difference probably occurred as the ES was offered to more people who may have requested it in view of their age or a previously failed cycle. Also other variables e.g. BMI were not taken into consideration.

An inability to conceive naturally causes IVF/ICSI patients to be a fairly anxious patient group. Many new techniques are available to patients, to overcome fertility problems. Clinicians have a responsibility to provide treatments based on clinical evidence. The ES is a novel technique that is of no major value in improving implantation rates of women in routine clinical practice or at a specific age however it may be useful in a targeted population of recurrent implantation failure patients. Further studies are required to identify its role within that group of patients.

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References


Comments:

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