

CERVICAL STITCH FOR DIFFICULT EMBRYO TRANSFERS DOES NOT AFFECT PREGNANCY RATE

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Background

Difficult embryo transfers (ET) are defined as needing additional maneuvers beyond the standard technique, such as the use of a tenaculum on the cervix, catheter with a stylet, or cervical dilation. These maneuvers have a significant negative impact on pregnancy rates. Our clinic implemented a technique utilizing a cervical stitch placed days prior to ET to provide counter-traction and aid in straightening the uterine-cervical angle during difficult transfers.

Objective

The aim of this study is to report pregnancy and live birth rates of patients with and without cervical stitch placement prior to their ET.

Materials and Methods

This was a retrospective cohort study of patients undergoing in vitro fertilization in an academic fertility center between 2008 and 2019. Patients were included if they received a cervical stitch on the anterior lip of the cervix (at the time of egg retrieval or 3-5 days prior to cryothaw ET) based on a prior difficult mock or ET. Controls were identified and matched based on cycle type (fresh, frozen, donor, autologous), patient age, BMI, day 3 FSH, oocyte yield and diagnoses. The primary outcome studied was live birth rate. The primary outcome and other categorical variables were compared with chi-squared tests (or Fisher's exact test where appropriate) and continuous variables were compared with Student's t-tests. P-values less than 0.05 were considered statistically significant.

Results

A total of 71 patients received a stitch and 71 patients were matched as controls. Live birth rate was found to be similar with 36.6% in the stitch group and 29.6% in the controls ($p=0.37$). Similarly, no statistically significant difference was found when analyzing spontaneous abortion (7% vs 7% $p=1.00$), implantation rate (25.9% vs 23.6% $p=0.40$), and clinical pregnancy rate (43.7% vs 36.6% $p=0.39$).

Cervical Stitch	YES (N=71)	NO (N=71)	p-value
Age (yr) ± SD	34.8 ± 4.31	34.8 ± 3.94	-
BMI (Kg/m²) ± SD	23.7 ± 3.75	23.7 ± 3.67	-
Mean number of embryos transferred ± SD	2.01 ± 0.75	2.01 ± 0.91	0.61
Fresh ET	85.9% (61)	85.9% (61)	-
Frozen ET	14.1% (10)	14.1% (10)	-
ET Stage			0.06
Cleavage stage	47.9% (34)	32.4% (23)	
Blastocyst stage	52.1% (37)	67.6% (48)	
Positive HCG	60.6% (43)	46.5% (33)	0.09
Biochemical Pregnancy rate	15.5% (11)	9.9% (7)	0.31
Spontaneous Abortion rate	7% (5)	7% (5)	1.00
Implantation Rate (# Sacs/# Embryos)	25.9%	23.6%	0.40
Clinical Pregnancy rate	43.7% (31)	36.6% (26)	0.39
Live Birth Rate	36.6% (26)	29.6% (21)	0.37

SD: Standard Deviation

Conclusions

There was no difference in implantation, clinical pregnancy, or live birth rate between women who underwent placement of a cervical stitch prior to known difficult ET when compared to matched controls without a difficult ET. The use of the cervical stitch in the correct setting may increase success of ETs in women with suspected or known difficult ETs.

Financial Support: None

References

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