EFFECT OF ENDOMETRIAL COMPACTION IN FROZEN EMBRYO TRANSFER

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Introduction

Endometrial receptivity involves distinct modifications in the epithelium's surface, the underlying vascular network, & the surface glycoproteins expression, receptors, integrins, & chemokines, which collectively establish a conducive environment for embryo implantation. The utilization of trans-vaginal ultrasonography for endometrial evaluation was fundamental in fertility treatment & endometrial evaluation.

Aim of the Work

The aim of this study was to assess the effect of endometrial compaction in frozen embryo transfer.

Patients and Methods

PATIENTS:
This study is a prospective cross-sectional study that was settled in a privet IVF lab done on (120) women who underwent frozen embryo transfer were assessed for endometrial compaction.

Inclusion criteria:
- Age between 18 and 35 years.
- Having 1 or 2 cryopreserved blastocysts available for transfer after ICSI treatment
- Medicated by E2 and P
- First frozen-thawed transfer cycle.

Exclusion criteria:
- Patients' refusal to participate.
- Natural cycle.
- Malignancy.
- Hysterectomy.
- History of endometriosis AFS ≥ 2.
- Adenomyosis.
- Congenital uterine anomalies, cavitary lesions as polyps or submucus fibroids.
- Hydrosalpinx.
- Duration of estradiol exposure ≥ 17 days and endometrium < 6mm.
- Spontaneous ovulation in HRT artificial cycle.
- Asherman syndrome.

METHODS: As all patients were subjected to the following:
- Complete history taking
-Physical and general examinations, and Gynecological examination abnormalities (Note to any cervical mucus or discharge)
- Bimanual examination
- Transvaginal ultrasound

Procedures:
- All the patients in the study were subjected to controlled ovarian stimulation by antagonist protocol.
- All the patients in the study had FET of a single or tow blastocyst.
- Hormone replacement for endometrial preparation for FET involved administration of oral micronized estradiol on cycle day 2 after suppression with oral contraceptive pills with or without GnRH agonist.
- Oral estradiol 8 mg per day was administered.
- Transvaginal ultrasound was performed to assess the endometrium after 12–14 days of estradiol. Once the endometrial lining was ≥ 7 mm, a combination of progesterone in oil (50 mg IM QD) and vaginal progesterone (100 mg PV TID) were started the following morning.
- The day of progesterone initiation was designated P+0. Patients returned the day prior to embryo transfer, on the fifth day of progesterone administration or (P+4) for reassessment of the endometrial lining using transvaginal ultrasound.
- The FET was performed under trans-abdominal ultrasound guidance with the images of the endometrium recorded. For measurement of endometrial thickness on the day of FET, ultrasound images were retrieved using imaging software, and the best image showing a longitudinal section of the endometrium including the cervical canal was measured.

Results

Table 1: pregnancy outcome among study women undergone embryo transfer (n=120)

Pregnancy outcome	No	%
Clinical pregnancy		
Positive	82	68.3%
Negative	38	31.7%
Ongoing pregnancy (n=82)		
Positive	67	81.7%
negative	15	18.3%

Table 2: Effect of endometrial compaction infrozenem bryotarans feramong study infertile woman

Outcome	Endometrial compaction				p-value	OR (95%CI)
	Compaction (> 5%)		No compaction			
	No	%	No	%		
Clinical pregnacy					.001*	
Positive	67	82.7%	15	38.5%		7.6(3.2-18.2)*
Negative	14	17.3%	24	61.5%		
Ongoing pregnancy					.001*^	
Positive	67	100%	0	15.4%		10.9(6.1-15.8)*
Negative	0	0.0%	15	100%		

Conclusion

Females with no alteration or elevation in endometrial thickness experienced suboptimal rates of pregnancy. Evaluating the endometrium on the initiation of progesterone as well as the day of embryo transfer is crucial. If endometrial compaction hasn't transpired or if endometrial vascularity is inadequate, the cycle may be deemed eligible for cancellation.