TRANS-ABDOMINAL OOCYTE COLLECTION UNDER SEDATION: AN EFFECTIVE ALTERNATIVE

PREAUBERT L. [1-2], PHILLIPS S.[1-2], HEMMINGS R. [1-2-3]

[1] CLINIQUE OVO (OVO FERTILITY), MONTREAL, QC, CANADA. [2] DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY, UNIVERSITY OF MONTREAL, QC, CANADA. [3] MCGILL UROLOGY RESEARCH DEPARTMENT, MCGILL UNIVERSITY, MONTREAL, QC, CANADA.

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ABSTRACT

Introduction: Trans-abdominal oocyte collection is necessary in some patients when trans-vaginal oocyte collection is not possible. There is limited literature on the technique used and the effectiveness of trans-abdominal oocyte collection in IVF patients. Barton et al (2011)[1] reported that trans-abdominal oocyte collection was the modality of choice when the ovaries were not available trans-vaginally. Barton reported the procedure performed under spinal or general anesthesia and carried out using a trans-abdominal probe with introduction of the needle through the skin in order to aspirate follicles.

Methods: We evaluated our experience of trans-abdominal oocyte collection performed under local anesthesia and sedation using trans-vaginal probe applied on the abdominal skin between 2011 and 2016 (12 cycles). A control group matched by date of procedure, age, and cause of infertility was selected with two control cycles for each test cycle (24 cycles).

Results: There was no difference between the 2 groups in term of FSH (7.1 IU/L vs.7.6 IU/L for cases and controls, respectively) AMH (1.9 ng/ml vs. 1.29 ng/ml), or the average attempt number (1.75 vs. 2). Neither was there a difference in the number of follicles over 14mm at trigger (7.7 vs. 6.7) or the number of oocytes retrieved (8.9 vs. 6.7). There was however a significant difference in the ethnicity between the two groups with an increased chance of patients of African origin requiring trans-abdominal egg retrieval (OR 205, p=0.008).

Conclusion: The technical benefit of using a trans-vaginal probe for trans-abdominal oocyte retrieval is the ability to use the needle guide to increase precision. Our data suggest that this method provides comparative rates of oocyte retrieval to trans-vaginal collection. Furthermore this data suggests that the risk of requiring trans-abdominal oocyte retrieval is increased in the African origin population, possibly associated with the known increased presence of uterine fibroids in these patients. [2]

OBJECTIVE

The aim of the study was to evaluate our experience of trans-abdominal oocyte collection using trans-vaginal probe.

METHODS

Single center retrospective study between 2011 and 2016

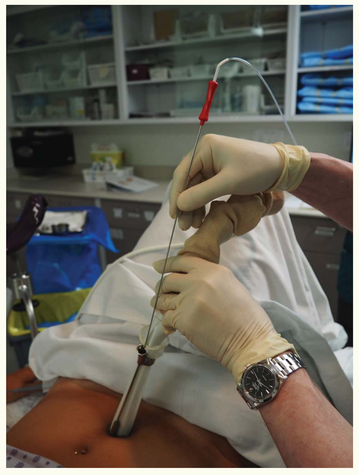
- cases: trans-abdominal oocyte collections
- controls: matched by date of procedure, age, and cause of infertility
- 1 case: 2 controls

RESULTS

	Trans-abdominal retrieval (n=12)	Trans-vaginal retrieval (n=24)	*p*
Mean age	38 (31-42)	38 (31-42)	NS
Mean attempt number	1.75 (1-5)	2 (1-4)	NS
Ethnicity African origin Caucasian Other	 10 2 0	 0 21 3	0.008
Day 3 FSH (IU/L) (mean ±SD)	7.1 ± 3.3	7.6 ± 3.2	NS
AMH (ng/ml) (mean ±SD)	1.7 ± 2.2	1.29 ±0.7	NS
Number of follicles ≥ 14mm at trigger	8.9 (2-42) ± 10.9	6.75 (2-13) ± 3.4	NS
Number of oocytes retrieved	7.7 (3-19) ± 4.9	6.75 (2-16) ± 3.9	NS

CONCLUSIONS

Using a trans-vaginal probe for trans-abdominal oocyte retrieval is a safe and effective alternative. We have not encountered any complications linked to the abdominal retrieval.



Technique:

Under local anesthesia

Trans-vaginal probe is applied on the abdominal wall

Use of the needle guide to increase precision.

REFERENCES

1 **Barton SE**, Politch JA, Benson CB, Ginsburg ES, Gargiulo AR. Transabdominal follicular aspiration for oocyte retrieval in patients with ovaries inaccessible by transvaginal ultrasound. Fertil Steril 2011; 95(5): 1773-76.

2 **Marshall LM**, Spiegelman D, Barbieri RL, Goldman MB, Manson JE, Colditz GA, Willett WC, Hunter DJ. Variation in the incidence of uterine leiomyoma among premenopausal women by age and race. Obstet Gynecol. 1997; 90(6):967-73.