ABSTRACT

Patients presenting with Mayer-Rokitansky-Kuster-Hauser syndrome (MRKH-S) are characterized by congenital aplasia of the uterus and the upper part (2/3) of the vagina. In addition, patients with a history of total abdominal hysterectomy (TAH) may have their ovaries displaced to the lower pelvic level. Therefore, an alternative to vaginal oocyte retrieval is required in both instances.

Raelid et al. described ultrasound-guided percutaneous transabdominal ultrasound for 3.5 MHz. Transabdominal puncture probe for oocyte retrieval in one patient with Rokitansky syndrome (Fortit Mers, 2006;68:1760-3). The objective of our study was to evaluate the efficacy of transabdominal transvaginal puncture aspiration using high frequency transvaginal probe in cases where the ovaries were not accessible per vaginum.

METHODS

Our study included 4 patients with infertility participating in the gestational carrier program. The indication for in vitro fertilization and surrogacy was Rokitansky Syndrome (MRKH-S) in three patients and Radical Abdominal Hysterectomy (TAH) in the fourth patient. On the day of retrieval, conscious sedation and local anesthesia infiltration (1% Xylocaine without Epinephrine) at the site of abdominal puncture were initially introduced, but were not widely accepted or applied.

RESULTS

All patients: 1. Had no vaginal access for oocyte aspiration. 2. Had male partners with normal semen analysis (WHO, 1999).

CONCLUSIONS

The transabdominal application of high frequency transvaginal ultrasound probe proved to be an efficacious and safe alternative for oocyte retrieval in patients where transvaginal aspiration was not feasible.

INTRODUCTION

Since the advent of in vitro fertilization (IVF), numerous methods of oocyte retrieval have been employed. Laparoscopy with direct visualization of the ovaries and ultrasound guided puncture aspiration were initially introduced, but were not widely accepted or applied.

Currently, high frequency transvaginal ultrasound guided oocyte aspiration is the method of choice for IVF procedures with the exception of patients presenting with certain acquired or developmental genital conditions. Preventing vaginal access.

Ultrasound Images of Transabdominal Oocyte Retrieval using High Frequency Transvaginal Probe

<table>
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<th>Age (Yr)</th>
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RESULTS

- No additional sedation was required for any of the patients.
- No complications were noted.
- All patients underwent a day 3 embryo transfer.
- A summary of the ICSI statistics for the 4 cases and 5 cycles included in our study is shown in the table below.

Case 1:
- A 35 year old female patient with MRKH-S was referred to our clinic for infertility management and enrollment in the surrogacy program. A total of 15 eggs were retrieved, 8 fertilized, 3 embryos transferred and none froze.
- Gestational carrier achieved pregnancy (singleton).

Case 2:
- A 35 year old female patient with MRKH-S was referred to our clinic for infertility management and enrollment in the surrogacy program. A total of 14 eggs were retrieved, 6 fertilized, 2 embryos transferred and 3 frozen.
- Gestational carrier achieved pregnancy (singleton). Frozen embryos were used for a subsequent frozen embryo cycle, which resulted in a second pregnancy but ended in miscarriage.

Case 3:
- A 30 year old female patient with MRKH-S was referred to our clinic for infertility management and enrollment in the surrogacy program. A total of 29 eggs were retrieved, 13 fertilized, 2 embryos transferred and 11 frozen. Gestational carrier achieved pregnancy (singleton). Frozen embryos were used for a subsequent frozen embryo cycle, which resulted in a second pregnancy but ended in miscarriage.

Case 4:
- A 30 year old female patient who underwent radical TAH in 1996 due to cervical cancer was referred to our clinic for infertility management and enrollment in the surrogacy program. A total of 7 eggs were retrieved, 3 fertilized, 2 embryos transferred and 3 frozen. Gestational carrier achieved pregnancy (singleton). Frozen embryos were used for a subsequent frozen embryo cycle, which resulted in a second pregnancy but ended in miscarriage.

CONCLUSIONS

- The transabdominal application of high frequency transvaginal ultrasound probe proved to be an efficacious and safe alternative for oocyte retrieval in patients with no vaginal access.
- Fertilization rates in the transabdominal puncture study group were lower than the control group but resulted in comparable pregnancy rates. Further studies are needed to investigate the reason for this discrepancy in fertilization rates.

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