VIDEO

Laparoscopic oocyte retrieval for fertility preservation in a patient with squamous cell carcinoma of the vagina

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Objective: To describe a feasible fertility preservation strategy in a woman with vaginal carcinoma.
Design: Video case report demonstrating the diagnostic work-up and laparoscopic oocyte retrieval performed under regional anesthesia.
Setting: University tertiary care hospital.
Patient(s): A 35-year-old nulliparous woman presented with vaginal bleeding and foul-smelling vaginal discharge. After a comprehensive diagnostic work-up, a final diagnosis of squamous cell carcinoma of the vagina stage II (Federation International Obstetrics and Gynecology classification) was made. As per the patient's desire, before undergoing chemoradiotherapy, the patient underwent oocyte cryopreservation. Transvaginal retrieval of oocytes was not feasible because of stenosis of the vaginal introitus and the potential risk of intracavitary tumor cell spillage. Transabdominal ultrasound–guided oocyte retrieval was not possible because of the body's habitus.
Intervention(s): The patient underwent ovarian stimulation for in vitro fertilization. To minimize estrogen levels, letrozole was used during controlled ovarian stimulation. Laparoscopic oocyte retrieval was performed under spinal anesthesia.
Main Outcome Measure(s): Successful laparoscopic egg retrieval and cryopreservation in a woman with squamous cell carcinoma of the vagina.
Result(s): A total follicular count of nine was estimated before the oocyte retrieval. Eight oocytes were retrieved at laparoscopy, and eight mature oocytes were successfully cryopreserved. No complications were encountered, and the patient was discharged on the same day of surgery.
Conclusion(s): To our knowledge, this is the first published case of fertility preservation using the laparoscopic approach in a patient with vaginal cancer. Letrozole is a valuable strategy to reduce high estrogen in patients with gynecological cancer undergoing controlled ovarian stimulation. Laparoscopy oocyte retrieval, performed under regional anesthesia, can be performed in an ambulatory setting and should be considered an effective fertility preservation strategy in patients with large vaginal tumors.
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Key Words: Ovulation induction, fertility preservation, oncofertility, spinal anesthesia, laparoscopy

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