Ultrasound-guided follicle aspiration at time of laparotomy in a patient with Mayer-Rokitansky-Küster-Hauser syndrome

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Objective: To demonstrate a unique case of direct ultrasound-guided follicle aspiration at time of a laparotomy in a patient with Mayer-Rokitansky-Küster-Hauser Syndrome.
Design: Video presentation.
Setting: Academic fertility center
Patient(s): A 32-year-old gravida 0 with Mayer-Rokitansky-Küster-Hauser Syndrome and bilateral ovarian masses presented as a fertility preservation consult from gynecologic oncology due to the possibility of bilateral oophorectomy. Due to the appearance and size of the left ovary oncology planned to perform an exploratory laparotomy and left oophorectomy, with possible right oophorectomy. The patient and her partner desired embryo cryopreservation with plans for future use in a gestational carrier. She had previously undergone vaginal dilator therapy, however her ovaries were inaccessible transvaginally due to their cephalad location and small caliber of the vaginal pouch. The plan was made to proceed with controlled ovarian stimulation and concurrent ultrasound-guided follicle aspiration of the right ovary at the time of laparotomy following left oophorectomy.
Intervention(s): Ultrasound-guided follicle aspiration in vivo at time of laparotomy.
Main Outcome Measure(s): Successful controlled ovarian stimulation, oocyte retrieval and embryo cryopreservation.
Result(s): The patient underwent a long agonist protocol and received a total of 2,525 units of gonadotropin with a peak estradiol of 3,264 pg/ml. She required a total of 9 days of stimulation. The normal right ovary responded as expected, and the left ovary remained unchanged. Following laparotomy and left oophorectomy, direct application of the transvaginal ultrasound probe was used to aspirate all visible follicles on the right side in vivo. Twenty-four oocytes were retrieved, 15 were mature and 5 blastocysts were cryopreserved. Final pathology of left ovary returned as serous cystadenoma. The right ovary was examined by gynecologic oncology prior to and following retrieval and was thought to be normal and remained in situ.
Conclusion(s): Although the approach described here is not feasible in most cases, this video demonstrates a unique and successful fertility preservation technique by direct ultrasound-guided follicle aspiration in vivo at the time of laparotomy in a Mayer-Rokitansky-Küster-Hauser Syndrome patient and to our knowledge, is the first description of its kind. This retrieval would have otherwise been limited by lack of access transvaginally and limited visualization transabdominally. This combined approach should be considered in future patients with müllerian anomalies and similar complicating factors necessitating laparotomy. (Fertil Steril® 2018;109:940. ©2018 by American Society for Reproductive Medicine.)

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