OBJECTIVE: To evaluate the effect of bovine serum albumin (BSA) and fetal calf serum (FCS) on in vitro development of bovine preantral follicles.

DESIGN: Bovine preantral follicles were studied individually during encapsulated three-dimensional culture.

MATERIALS AND METHODS: Bovine preantral follicles (150 to 250 μm in diameter) were mechanically isolated from ovaries obtained in local slaughterhouse, encapsulated into alginate (0.25% w/v), and cultured for 21 days at 20% O2 in TCM199 supplemented with BSA (n = 26) or FCS (n = 27) at concentration of 3mg/mL. Follicle development was evaluated on the basis of survival, antral cavity formation, oocyte diameter increase and the presence of healthy cumulus-oocyte complexes. Data were analyzed using Student's t-tests.

RESULTS: A greater percentage of viable follicles was observed in BSA than FCS (39, and 7%, respectively, $P < 0.05$). The rate of antrum formation was higher in BSA than in the FCS (19 and 11%, respectively, $P < 0.05$). No difference in oocyte diameter (90 to 110 μm) was detected, however the percentages of retrieved healthy cumulus-oocyte complexes were higher in BSA than FCS (38.5, and 18.5%, respectively, $P < 0.05$).

CONCLUSION: The data present herein suggest that BSA offers a better protein source than FCS for the in vitro development of alginate-encapsulated bovine preantral follicles.

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DIRECT INJECTION OF METHOTREXATE PRESERVES FERTILITY IN PATIENTS WITH ECTOPIC PREGNANCY IN LOWER UTERINE SEGMENT. T. Honda, R. Honda, M. Yamaguchi, K. Uchino, T. Ohba, H. Katabuchi. Obstetrics and Gynecology, Faculty of Life Sciences, Kumamoto University, Kumamoto, Japan.

OBJECTIVE: Ectopic pregnancy in lower uterine segment is rare, caused by a cesarean scar or uterine cervix implantation. Recently, management has been shifted from a surgical approach to a more conservative treatment for these patients. The objective of this study was to evaluate the fertility outcome after direct injection of methotrexate (MTX) to the ectopic pregnancy in lower uterine segment.

DESIGN: Retrospective analysis.

MATERIALS AND METHODS: We performed a retrospective analysis of pregnancy by collecting records of patients with lower uterine segment pregnancy (7with cesarean scar pregnancy and 9 with cervical pregnancy) managed at Kumamoto University Hospital, Kumamoto, Japan, between April 2005 and March 2012. All patients were treated with direct injection of MTX under transvaginal ultrasound guidance promptly after diagnosis. The serum hCG level was followed until it was decreased to the non-pregnant range with periodic observation by transvaginal ultrasound.

RESULTS: The mean age of the 7 patients with cesarean scar pregnancy was 32.3±4.4 years old (range 25-38 years old), and for the 9 patients with cervical pregnancy, it was 32.3±3.7 years old (range 26-37 years old). In the methotrexate treatment group, no patients had serious postoperative hemorrhage to be required hysterectomy or transarterial embolization. In the case of cesarean scar pregnancy, 6 of 7 patients desired subsequent pregnancy. Among them, pregnancy was achieved in 5 patients (7 cycles), 1 had a repeated cesarean scar pregnancy, 1 had a miscarriage, and 5 resulted in term delivery. Meanwhile, 6 of 9 patients with cervical pregnancy wished subsequent pregnancy; finally, 1 had a miscarriage and 3 resulted in term pregnancy.

CONCLUSION: MTX local injection therapy is an effective management option for preserving the fertility of women with lower uterine ectopic pregnancy.

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FERTILITY PRESERVATION BY CONTROLLED OVARIAN HYPERSTIMULATION (COH) WITHOUT LETROZOLE IN YOUNG BREAST CANCER PATIENTS BEFORE ADJUVANT CHEMOTHERAPY: PRELIMINARY RESULTS. C. Decanter,[a] C. Delesalle,[a] B. Leroy-Martin,[c] L. Keller,[c] D. Dewailly,[a] A. Mailliez.[b] [a]Reproductive Medicine, Lille University Hospital, Jeanne de Flandre IVF Center, Lille, France; [b]Breast Cancer Unit, Oncologic Center of Oscar Lambret, Lille, France; [c]Reproductive Biology, Lille University Hospital, Lille, France.

OBJECTIVE: Few studies have addressed the issue of COH for fertility preservation in breast cancer patients. Letrozole is currently required in order to limit the estrogen levels increase. In France, the use of letrozole in this specific area is not allowed. The aim of this study is to evaluate the benefit/risk of the ovarian stimulation without letrozole for oocyte freezing in young breast cancer patients undergoing adjuvant chemotherapy.

DESIGN: Prospective observational study.

MATERIALS AND METHODS: A total of 45 young breast cancer patients were prospectively included before adjuvant chemotherapy. The inclusion criteria for being eligible to COH were: age under 40, complete surgery, absence of metastases. Lymph node status, presence of hormonal receptors, BRCA 1/2 were not exclusion criteria. COH protocol consisted in the association of r-FSH and antagonist with a GnRh agonist triggering. r-FSH starting dose varied from 150 to 450 IU. Patients were then enrolled in a systematic oncologic and reproductive follow-up for 3 consecutive years.

RESULTS: 13 patients declined the proposal of fertility preservation and 4 were not eligible because of suspect uptakes during positron emission tomography. 28 patients underwent COH. Mean age was 30.3 +/-3.4. Mean r-FSH dose was 271 +/- 92 IU. The average number of days of supra-physiologic E2 levels (i-e triggering day - day 6) was 5 +/-1. Peak E2 levels ranged from 149 to 5314 pg/ml with a mean of 1793 +/- 1173 pg/ml. An average of 10 oocytes +/- 5.6 was retrieved. The mean number of vitrified oocytes was respectively 7 +/-4.9. Time between surgery and chemotherapy was 46.6 days (18-69). Mean duration of follow-up after the end of chemotherapy was 10 months +/- 11. No recurrences were observed during the study period. There was one case of moderate OHSS and 3 cycle cancellations for insufficient response.

CONCLUSION: To date, no oncologic adverse effects were noted. These preliminary results have to be confirmed in a larger population through a much long-term follow-up.

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SIMPLIFIED CYCLE MANAGEMENT FOR BREAST CANCER PATIENTS UNDERGOING FERTILITY PRESERVATION WITH THE LETROZOLE-FSH STIMULATION PROTOCOL. G. Bedoschi,[a,b] V. Turan,[a,b] F. Moy,[a] K. Oktay.[a,b] [a]Obstetrics and Gynecology, New York Medical College, Valhalla, NY; [b]Innovation Institute for Fertility Preservation and In Vitro Fertilization, New York, NY.

OBJECTIVE: Ovarian stimulation can be time consuming, costly, and emotionally stressful for women who are recently diagnosed with cancer. Our objective was to determine if a simplified approach to Letrozole-FSH protocol could be developed.

DESIGN: Secondary analysis of a prospectively collected database.

MATERIALS AND METHODS: Fifty consecutive women diagnosed with breast cancer stage ≤ 3 with normal ovarian reserve underwent ovarian stimulation with letrozole (5mg/day) starting on cycle day (CD) 2 and rFSH 150-450 IU on CD 4. Patients were divided into two groups according to whether there were changes in recombinant FSH dose during the cycle. GnRH antagonist (GnRHa, 250 μg/d) was administered daily when the lead follicle size reached 14-mm in mean diameter and was continued until the trigger with a GnRH agonist (Leuprolide acetate, 1 mg).

RESULTS: The mean age was 37.6 $\pm$ 2.8 years with 10.6 $\pm$ 0.6 days of ovarian stimulation. A GnRHa was initiated on the 6.6 $\pm$ 0.6 th day of ovarian stimulation. rFSH dose remained constant in 64% of patients. Only in 14.4% of the cycles FSH dose was altered prior to antagonist administration. The mean stimulation length in patients who required a change in the rFSH dose was similar to those with constant dose (11.0 $\pm$ 1.1 vs. 10.4 $\pm$ 1.1 days, p= 0.131). A similar % of patients in the former group had a decrease or increase in their FSHr doses (45.5% vs. 55.5%) and this change was by $\leq$ 75 units. None experienced moderate/severe OHSS.

CONCLUSION: The Letrozole-FSH cycles require no or minimal dose manipulation, since the risk of OHSS is negligible due to lack of pregnancy attempt and GnRH agonist trigger. Accordingly, we propose the following practical stimulation protocol: baseline US and blood work on D-2, repeat on SD 6 to evaluate if dose change is needed and start antagonist, and return SD 10 for trigger decision.

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CAN WE PRESERVE FERTILITY IN A FEMALE TO MALE TRANGENDER AFTER A LONG TERM TESTOSTERONE TREATMENT-CASE REPORT. Y. S. Gidoni, A. Raziel, D. Strassburger, E. Kasterstein, I. Ben-Ami, R. Ron-El. IVF and Infertility Unit, Assaf Harofeh Medical Center, Rishon Lezion, Beer Yaacov, Israel.