Ovarian Stimulation and Oocyte Cryopreservation in a Patient Receiving Depo Medroxyprogesterone Acetate for Contraception: A Case Report

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Introduction

- Depo medroxyprogesterone acetate (DMPA) is a commonly utilized long-acting reversible contraceptive for reproductive age women
- Elective oocyte cryopreservation utilization has increased in recent years
- Impact of DMPA on ovarian stimulation outcomes remains unclear
- We present a case of a patient who underwent controlled ovarian stimulation while on DMPA for contraception

Case

- Case of a 35-year-old gravida 1 para 0010
- Presented for elective oocyte cryopreservation.
- Over prior 22 months she had been receiving DMPA intramuscular injections every 3 months as contraception, and as a result had amenorrhea
- Most recent injection was 13 days prior to her consultation
- Patient underwent controlled ovarian stimulation less than 2 months after receiving her most recent DMPA IM injection

Results

- Random ovarian reserve testing: **FSH: 11 mIU/mL, LH: 5.2 mIU/mL, Estradiol: 27.8 pg/mL, Anti-Müllerian hormone: 2.49 ng/mL, Antrax follicle count: 26**
- Patient was placed on an antagonist protocol and stimulated with 225 IU Gonal-F and 150 IU Menopur
- She received 12 days of gonadotropin stimulation
- On the day of hCG trigger, her estradiol was 3755 pg/mL, with a total of 22 follicles measuring > 12 mm
- She was triggered with 10,000 IU hCG. She had a total of 25 oocytes retrieved, 22 of which were metaphase II and vitrified
- On post operative day 6, the patient presented with signs and symptoms of ovarian hyperstimulation syndrome at an outside urgent care, for which she was managed conservatively

Day	1	2	3	4	5	6	7	8	9	10	11	12
Gonal-F, IU	225PM	225PM	225PM	225PM	225PM	225PM	225PM	225PM	225PM	225PM	250PM	250PM
Menopur, IU	150PM	150PM	150PM	150PM	150PM	225PM	225PM	300PM	300PM	225PM	225PM	225PM
Cetrotide, mg						0.25AM	0.25AM	0.25AM	0.25AM	0.25AM	0.25AM	0.25AM
E2, pg/mL	30			225		427		695		2489	2737	3755
P4, ng/mL	<0.2					0.28		0.40		1.07	1.55	2.06
Lead follicle, mm				10.8		13.6		17.0		19.7	20.4	22.3
Follicles >10mm						3		8		15	19	22

Discussion

Our case demonstrates:

- Controlled ovarian stimulation and oocyte cryopreservation can be accomplished in patients actively using DMPA without an adverse effect on oocyte yield of maturity
- To our knowledge, this is the first case describing controlled ovarian stimulation using DMPA without waiting for the effects of their contraceptive to dissipate
- Further studies evaluating outcomes in fertility preservation patients utilizing DMPA will help guide future counseling and care