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# P100. Granulosa cell ovarian tumor and resistance to clomiphene citrate. A case report and review of the literature.

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Context: The role of elevated Inhibin B and anti-Mullerian hormone (AMH) due to granulosa cell tumors (GCT), affecting the mechanism of clomiphene resistance in women with PCOS. Objective: The aim of this case report is the presentation of a patient with amenorrhea, mild hirsutism, infertility, resistance to clomiphene citrate (CC) stimulation, mildly elevated testosterone, high anti-Mullerian hormone (AMH) and normal estrogen levels and discussion of the patient's clomiphene resistance which could be explained by a potential mechanism that implicates inhibin B and AMH due to presence of a Granulosa Cell Tumor (GCT). Methods: Medical history, clinical examination, laboratory hormonal tests, transvaginal sonographic evaluation, Magnetic imaging scan (MRI), laparoscopic evaluation and histopathological findings were collected. Patient: A thirty-two-years old white Caucasian woman presented with amenorrhea and infertility and was initially diagnosed with polycystic ovarian syndrome (PCOS). After four failed attempts of ovarian stimulation with CC, diagnosis of resistance to CC stimulation was made. Finally, the patient underwent laparoscopic evaluation due to a solid mass of the left ovary. Pathology report described a borderline adult type GCT and four weeks after the surgery the patient had a positive pregnancy test. Intervention: Clomiphene resistance due to presence of a GCT in the absence of classic hyperestrogonemia which was successfully treated with surgery. Main outcome measures: Serial measurements of serum inhibin B, AMH, estrogen and testosterone levels Result: The patient after having an elective cesarean section at 40 weeks of gestation she then underwent fertility preservation surgery with ipsilateral salpingo-oophorectomy and surgical staging consisted of peritoneal washings for cytology, multiple peritoneal biopsies and omentectomy. Twelve months after delivery the patient had no obvious symptoms of disease and her menstrual cycle was normal. Conclusions: We present a case of a patient with infertility, anovulation and clomiphene resistance due to the presence of a GCT in the absence of classic hyperestrogenemia which was successfully treated with surgery. Further studies are required to evaluate the role of AMH and Inhibin B into the mechanism of clomiphene citrate resistance in women with PCOS.

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