

# 6<sup>th</sup> Annual Conference on GYNECOLOGIC ONCOLOGY, REPRODUCTIVE DISORDERS, MATERNAL-FETAL MEDICINE & OBSTETRICS

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## POLYCYSTIC OVARIAN SYNDROME- Diagnosis & Management in Fertility

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**Background:** Polycystic ovary syndrome (PCOS) is one of the commonest endocrine disorders affecting women in their reproductive age. It is characterized by a spectrum of symptoms ranging from menstrual abnormalities, subfertility and hyperandrogenism. It is also commonly associated with Insulin resistance and obesity, leading to metabolic and cardiovascular complications. Women with PCOS are also at high risk of developing Pregnancy Induced Hypertension, Gestational Diabetes and Pre-eclampsia during their pregnancies.

**Methodology:** It is often difficult to determine definitively the underlying cause but the pathophysiology usually involves excess ovarian androgen production. It is also generally noted that obesity increases menstrual disorders and hyperandrogenism, while weight reduction somehow reduces the clinical symptoms. Reducing insulin sensitivity has been shown to be an important factor in managing both obese and underweight women with PCOS, as nearly 50-70 % of women with PCOS exhibit some degree of insulin resistance.

**Results:** Therefore, it is important to inform these women of the long-term consequences of PCOS, such as Diabetes Mellitus, Hypercholesterinemia, Hypertension and Sleep Apnea. They are also predisposed to Endometrial Hyperplasia. Lifestyle management, reduced daily caloric intake and regular exercise, is the 1st line of management for women with PCOS. Realistic weight loss is of 5-10% of body weight. Studies have shown that even a modest weight reduction in obese women resulted in improved reproductive outcome. In women with BMI>35, if these measures show no improvement, Bariatric Surgery is recommended before any fertility treatments. Clomiphene Citrate has been used as first line for many years for anovulation therapy in PCOS women. Clomiphene will induce ovulation in about 70-80% of selected women with PCOS.

**Conclusion:** Letrozole (Aromatase Inhibitors), is now recommended as first line therapy for ovulation induction. It is however not licensed in UK. Metformin is also currently being used to induce ovulation, either as monotherapy or in combination with Clomiphene. Metformin also reduces insulin resistance, reduces progression to diabetes and may prevent weight gain. However, its use as first line is controversial. Gonadotrophins ovulation therapy are second line treatment for women with PCOS. Multiple pregnancies have been reported in these women due to the risk of ovarian hyper stimulation. Laparoscopic Ovarian Drilling has been shown to have similar effect as Gonadotrophins in Clomiphene resistant PCO women. IVF is not necessary for all anovulatory infertility and is not the 1st line in PCO women. IVF outcome in PCO women is associated with more follicles, more eggs, higher risk of OHSS but lower fertilization rates. IVM has been suggested for young PCO women.