

## Ovulation Induction Protocols in Patients with Poly Cystic Ovaries

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### Abstract

As declared by the Centre for Research Excellence in Polycystic Ovary Syndrome (CREPCOS) in partnership with the European Society of Human Reproduction, ESHRE and American Society of Reproductive Medicine (ASRM) in 2018, the diagnosis of PCOS is made when two out of three of the following criteria are met. First, is clinical and/or biochemical evidence of androgen excess after the exclusion of other related disorders. Second, is Oligoovulation or anovulation evidence and the third is the ultrasound appearance of the ovaries. The latter 2003 criteria mandated the presence of >12 follicles in each ovary measuring 2–9 mm and/or increased ovarian volume (>10 ml); in 2018 the cut-off for follicle number was raised to 20 or more in either ovary, to meet the improvement in ultrasound technology. Polycystic ovary syndrome represents 80% of anovulatory infertility cases. The pathophysiology of PCOS includes excess ovarian androgen production with insulin-resistance as a common aggravating factor. Hyperinsulinaemia augments luteinizing hormone (LH) -stimulated androgen production. The precise mechanism of follicular arrest and anovulation is uncertain but an elevated level of Anti-Müllerian Hormone (AMH) was reported to play a restrictive role in follicular development. The PCOS-preconception guidelines are lifestyle changes (weight loss), folic acid therapy to prevent the risk of fetal neural tube defects and halting the consumption of tobacco and alcohol. The first-line pharmacological intervention inducing ovulation includes a clomiphene citrate (CC) treatment with timed intercourse. The second-line comes the administration of exogenous gonadotropins with follicular growth monitoring.

semen abnormalities that impair the occurrence of natural pregnancy. The routine use of metformin in infertility treatment of anovulatory women with PCOS isn't yet pharmacological evidenced. Tamoxifen and aromatase inhibitors (anastrozole and letrozole) were reported to give promising outcomes but longer term studies are necessary to prove their safety. Concrete recommendations for safe dosage of gonadotropins, individualized protocols and preventive methods to avoid ovarian hyper stimulation syndrome (OHSS) are lacking. The challenge is to identify those patients who are at risk and offer the chance to use selectively more safe alternatives.

### Biography:

Dr. Eman Ibrahim Anwar has received Doctorate in Clinical Pharmacology. Current affiliation is Lecturer of Clinical Pharmacology in Alexandria University. Research interests are ovarian hyper stimulation, PCOS and many more.

### Speaker Publications:

1. "Anti-Diabetic Drugs & Cancer Risk Challenge"
2. "ECG signals for human identification based on fiducial and non-fiducial approaches"

[3<sup>rd</sup> World Congress on Polycystic Ovarian Syndrome and Fertility](#), Webinar, November 26-27, 2020

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Ovulation induction is effective with cumulative live birth rates of approximately 70%. Finally, an assisted reproduction technique (in-vitro maturation / fertilization (IVM/IVF) or intracytoplasmic sperm injection (ICSI) are the third-line treatment and is recommended when the previous interventions fail, it is the first choice in cases of bilateral tubal occlusion or