

## 4<sup>th</sup> World Congress on Polycystic Ovarian Syndrome

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## TRANSVAGINAL OVARIAN DRILLING (TVOD) FOR SEVERE POLYCYSTIC Ovary syndrome prior to in vitro fertilization dramatically Improved Embryo yield, implantation and pregnancy rates

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**Objective:** To evaluate the effect of transvaginal ovarian drilling (TVOD) on IVF outcomes in subjects with severe clomiphene resistant polycystic ovary syndrome (PCOS).

**Materials & Methods:** The study design was a prospective cohort study which was a university hospital based IVF program. Between 2008 and 2011, 19 patients with high anti-Müllerian hormone (AMH) and clomid resistant PCOS were offered TVOD prior to a possible second IVF cycle if the first IVF cycle were to fail. TVOD was performed prior to a second IVF cycle if the first cycle and any frozen cycles failed. Primary outcome measures were clinical pregnancy, ongoing pregnancy, and implantation and miscarriage rates. Secondary outcome measures were peak estradiol, gonadotropin dose, the number of oocytes and embryos and the number of days stimulated. **Results:** In 15 patients who completed two fresh IVF cycles, one before and one after TVOD, the second cycle resulted in a significantly higher number of oocytes retrieved (7.2 5.9 vs. 13.2 5.9, p=0.007), mature oocytes retrieved (4.6 3.4 vs. 9.2 5.2, p=0.002), embryos (3.8 2.7 vs. 8.5 4.5, p=0.0002), and blastocysts (0.73 1.33 vs. 2.77 2.7, p=0.037). Among all IVF cycles 19 patients underwent 23 fresh IVF cycles prior to TVOD and 21 fresh cycles within six months following TVOD ovarian drilling lead to higher implantation (0.10 vs. 0.37, p=0.001) clinical pregnancy (17.4% vs. 61.9%, p=0.002), and ongoing pregnancy rates (4.4% vs. 47.6%, p=0.014%).

**Conclusion:** In this prospective cohort study, TVOD appeared to markedly improve IVF outcomes in subjects with severe, clomiphene resistant PCOS after IVF failure.

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