

# Induction of ovulation with a single dose of metrodin in PCOS patients resistant to clomiphene citrate

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## Abstract

Polycystic Ovary Syndrome (PCOS) is a common cause of chronic anovulation and is frequently associated with different clinical symptoms. The main objective of this clinical trial was to evaluate the therapeutic effects of single dose of metrodin administration to induce follicular response in PCOS patients at Shariati hospital (2001-2002). PCOS was the main cause of the infertility in selected patients. All the patients were treated with maximal dose of clomiphene citrate (150mg/d) from the 3<sup>rd</sup> to the 7<sup>th</sup> days of their menstrual cycle while controlling with vaginal sonography for the follicular response. Sixty patients with follicular response were selected and studied we combined the previous strategy of clomiphene citrate administration with muscular injection of single dose (75 IU) of metrodin at the 3<sup>th</sup> day of cycle. The positive follicular response was the appearance of dominant follicle with 18 mm diameters in the 14<sup>th</sup> to 16<sup>th</sup> days. In the presence of positive follicular response, 10000 IU of HCG was injected at the same day. Intercourse was allowed that night and the 2 subsequent days. Progesterone level was measured in the 21<sup>th</sup> day of the cycle, with levels equal or above the 3 ng/ml suggesting "ovulation".  $\beta$ -HCG level was measured in the 32<sup>th</sup> and 34<sup>th</sup> days of the cycle, If the menstruation was delayed. The levels equal or more than 200IU/l or significant increase in  $\beta$ -HCG level suggested chemical pregnancy. To confirm a normal intrauterine pregnancy, vaginal sonography was performed in the 7<sup>th</sup> week; in which, visualization of the gestational sac, fetal pole, and monitoring of fetal heart rate were suggestive. Among total sixty patients, 31 (%51.7) had positive follicular response, 30 (%50) had ovulation and 15 had positive pregnancy tests. One patient had spontaneous abortion after positive pregnancy test and before sonography. Two patients had spontaneous abortion after positive sonography and two patients had preterm labor. Nine patients had term pregnancy. Complications were observed in four patients. The achieved data were analyzed, by fisher and  $\chi^2$  tests. Although there was no significant correlation between follicular response and variants such as age, BMI, infertility type or menstrual state, there was a statistically high correlation between pregnancy rate and progesterone level at 21<sup>th</sup> day of cycle ( $p < 0.0001$ ). The result of this study suggests that using a single dose metrodin administration, has a significant influence on follicular response, induction of ovulation and creating pregnancy.

**Key words:** Metrodin, Follicular response, Polycystic ovarian syndrome, Clomiphene citrate, and Infertility.

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