

# Evaluating the clinical characteristics of patients with abnormal Clomiphene Citrate Challenge Test

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## Abstract

**Introduction:** Infertility affects about 10-15% of couples in their reproductive age. Disorders of ovulation account for about 30-40% of all cases of female infertility. Ovarian reserve decreases in older women, causing decreased ovulation and lower quality of oocytes, resulting in infertility. Clomiphene Citrate Challenge Test (CCCT) is a screening test for the detection of ovarian reserve depletion and its abnormal results predict poor pregnancy rates following the use of assisted reproductive technologies. This study was undertaken to identify the clinical characteristics of infertile patients associated with CCCT results.

**Materials and Methods:** The medical records of 75 women were reviewed in IVF and Infertility Center of Montaserieh Hospital in Mashad. The subjects had a CCCT as a part of their infertility work up. The patients' height, weight, age at work up, infertility type and duration, length of menstrual bleeding, cycle intervals, onset age of menarche, hirsutism and a history of their mother's menopausal onset age were recorded. The data were analyzed by t, Chi-square and Fisher's exact tests. 5% was considered as the significance level of the study ( $p < 0.05$ ).

**Results:** 46.7% of the patients had abnormal and the rest of the participants normal CCCTs. Women with abnormal CCCTs were significantly older ( $p = 0.003$ ). 43% of the women with abnormal CCCTs were over the age of 35, versus 17.5% of similar age groups in the normal test group. Women with abnormal CCCTs had lower BMIs than the ones with normal CCCTs but no significant differences were seen between the two groups concerning the age of menarche ( $p = 0.192$ ), cycle intervals, duration of menstrual bleeding, infertility type and duration, and finally hirsutism ( $p > 0.1$ ). The percentage of women in whom their mothers had experienced menopause before 50 and with abnormal CCCTs, was significantly higher than women with normal tests ( $p = 0.013$ ).

**Conclusion:** Infertile women who were older, had idiopathic infertility and their mothers had undergone menopause before the age of 50, had a higher prevalence of abnormal CCCTs. Abnormal CCCTs predict diminished ovarian reserves well and offer valuable information on the chances of pregnancy rates to whether choose higher doses of medications for ovulation stimulation or resort to zygote donation.

**Key Words:** Ovarian Reserve, Clomiphene Citrate Challenge Test, Infertility Age, Ovulation Stimulation, Assisted Reproduction Technologies.

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