Sonographic assessment of ovarian and endometrial changes during long-term Norplant use and their correlation with hormonal levels.

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Abstract:

Abstract OBJECTIVE: To study the probability of ovulation and subclinical abortion during long-term use of Norplant and to assess the concomitant endometrial development. DESIGN: This was a prospective nonrandomized comparative study. The ovaries and endometrium were assessed daily by ultrasonography during 59 menstrual cycles in 50 women who were using Norplant for > 1 year. Serum concentrations of E2, P, FSH, LH, pregnancy specific beta 1 glycoprotein (Sp1), and hCG were also daily measured. The findings were compared with those in 35 ovulatory cycles in normal fertile women not using contraception. SETTING: Clients of the Family Planning Clinic of Assiut University Hospital (Norplant users) and the hospital women staff (controls). RESULTS: Sonographic and hormonal evidence of ovulation were observed in one third of Norplant users; two of them resulted in conception. However, the majority of these ovulatory cycles showed low midcycle peaks of E2, FSH, and LH and evidence of luteal phase defect (LPD). Excessive follicular enlargement was observed in 46% of the cycles. Norplant users had significantly thinner endometrium that did not exhibit the normal phasic changes in sonographic texture. Apart from conception cycles, no rise in Sp1 or hCG was observed. CONCLUSIONS: Norplant acts mainly by inhibiting ovulation, but when this occurs, it is associated with LPD and subnormal endometrial development. Subclinical abortion does not contribute to the contraceptive effect.

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