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Use of Oral Contraceptive Pills in the Treatment of the Endometrial Polyps Smaller than 1.5 cm

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ABSTRACT

The study aimed at the evaluation of the impacts of oral contraceptive pills on the treatment of the endometrial polyps smaller than 1.5 cm. In this study, fifty women childbearing ages between 20-40 years referred to the gynecological and midwifery section of the hospital, who had the asymptomatic endometrial polyps smaller than 1.5 cm. They were randomly divided into two groups "control" and "case" individually 25 members. The group case, were treated for three months with oral contraceptive pills. Women were examined in sonography before and after taking pills in order to measure the polyp size. Almost 24% of the group case responded to treatment, 32% size reduction and 44% remained with no change in size. While, in the control group there was 28% size reduction, 37% neutral and 35% encountered increase in size was unchanged. The average size of endometrial polyps in the group control did not take statistical significance difference before and later than treatment (9.5 vs. 8.6 mm, $p = 0.297$). However, the size of the polyp in the group case had significant statistical difference before and after the treatment (9.5 vs. 6.3 mm, $p < 0.05$). Use of oral contraceptive pills in the treatment of endometrial polyps is low cost and non-invasive compared with such surgical procedures as curettage and hysteroscopy. Therefore, in this regard, further studies are recommended.

Key words: Oral contraceptives, endometrial polyps, transvaginal sonography

INTRODUCTION

Abnormal vaginal bleeding is the reason of patients' reference for about 20% (Ben-Yehuda *et al.*, 1998). Endometrial polyps are one of the most common pathologic findings in vaginal bleedings found in transvaginal sonography or hysteroscopy. The pathogenesis of endometrial polyps is not much well known (Maia *et al.*, 1996). However, it is thought that a focal hyperplasia is of the baseline which is converted to excessive localized growth extending upward into the uterus.

The histological pattern of endometrial polyps including irregular amplified glands along with fibrotic stroma consists of the blood vessels with thick walls (Maia *et al.*, 1996). Hormonal factors may be effective in pathogenesis of endometrial polyps (Barati *et al.*, 2010). Estrogen and progesterone as modulators of proliferation and endometrial differentiation have been identified by the receptors. The relationship between the expression of estrogen receptors and proliferation in the normal and malignant endometrial has been already proven (Maia *et al.*, 1998). which is observed in the patients exposed to tamoxifen (Gardner *et al.*, 2009) although tamoxifen

is an estrogen antagonist but it has agonist effect on the endometrial (Reslova *et al.*, 1999). On the other hand, a relationship between the growth of benign endometrial polyps and treatment with tamoxifen has been reported (Silberstein *et al.*, 2006).

Sonography through saline infusion has demonstrated an almost 10% outbreak of endometrial polyps in asymptomatic women aged over thirty years. The incidence of endometrial polyps has expressed about 10% (Clevenger-Hoeft *et al.*, 1999). The outbreak of endometrial polyps in studies has been reported between 6-32% which increases by increasing age of patients (Dreisler *et al.*, 2009).

Treatment of endometrial polyps by oral progesterone or progestin IUD is severely recommended compared to hysterectomy for women who tend to pregnancy before menopausal, as well as menopause women not appropriate candidate for surgery (Macmillan *et al.*, 2003). Oral contraceptives pills are more advisable rather than the other forms of contraception due to its easy consumption, effectiveness and recoverable state (Brown, 2010). The most common types of oral contraceptive pills include estrogen and progesterone which is naturally secreted from the ovaries and affects on endometrial.

Regarding to the high price and risk of surgery and hospitalization, we examined the impacts of oral contraceptive pills within treatment of the endometrial polyps smaller than 1.5 cm for the women 20-40 years.

MATERIALS AND METHODS

In this study, 50 women of childbearing between the ages of 20-40 years having the asymptomatic endometrial polyps smaller than 1.5 cm referred to the educational Obstetrics and Gynecology Hospital of Ahvaz from February 2010 to 2011 were randomly divided into two groups of 25 women as Control and Case. The protocol of study between the patients and the committee of hospital medical ethics was prepaid by writing an agreement.

The patients with a history of infertility, pelvic pain, liver disease, thromboembolic disease, diabetes, hypertension, uterine fibroids, adenomyosis, uterine abnormality and sensitivity to the effects of pills such as dizziness, blurred vision, obesity and suspicion to malignancy were excluded from the research.

The birth-control pills of LD type were combination of 0.15 mg levonorgestrel and 0.03 mg ethinyl estradiol. It was done for the group case (twenty one pills, one pill each night and start from the fifth day of the menstrual period). In three-month period, the control group did not use any hormonal method and the barrier method was utilized as to contraception.

At the beginning of three months career and after it, both groups were examined under transvaginal sonography to measure the size of the polyps.

Statistical analysis: Data were analyzed using SPSS 17.0. The descriptive statistics were observed and matched in both groups. The mean sizes of EPs before and after intervention were compared using paired t-test. The p-value less than 0.05 considered as significant.

RESULTS

In this study conducted between February 2010 and 2011, 50 women of asymptomatic endometrial polyps were randomly divided into two groups of 25 members as control and case. There was no significant division between the age of two groups (Case group 29 ± 3.94 and the control group 27.32 ± 4.18 years) there was no significant difference between body mass index of the case and control groups (Table 1, Fig. 1). At the end of three months period, we concluded that 24%

Table 1: Comparing the demographic data of Endometrial Polyps (EPs) between case and control groups

Variables	Case group	Control group	p-values
Age (year), Mean±SD	29.00±3.94	27.32±4.18	0.1550
BMI (kg m ⁻²), Mean±SD	26.20±2.93	26.32±2.34	0.1670
EPs size			
Before treatment	9.50±3.1	8.6±3.01	0.297
After treatment	6.3±4.5	8.3±1.23	0.000

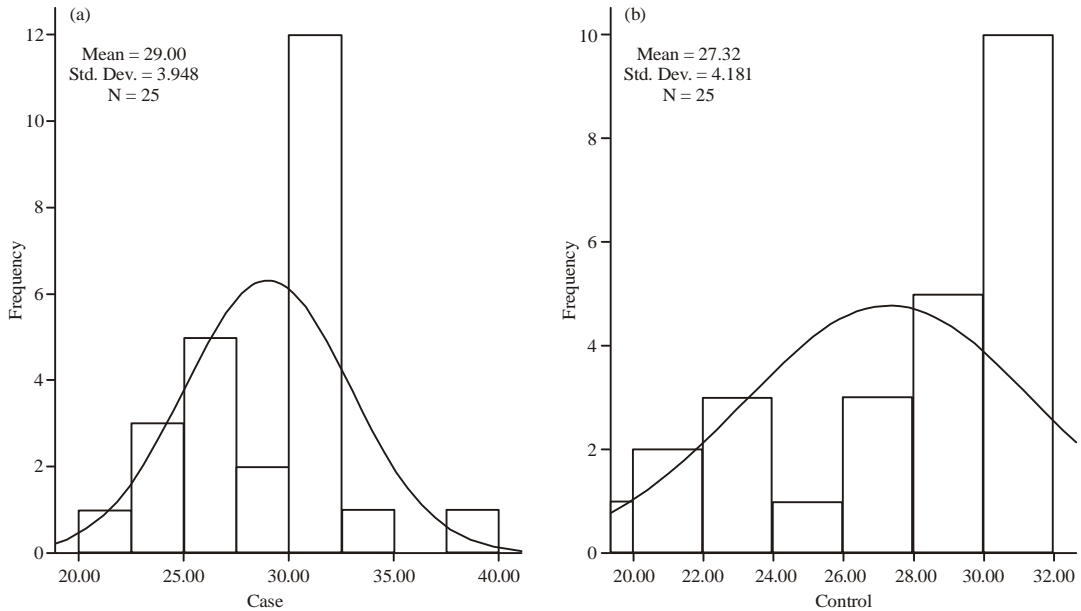


Fig. 1(a-b): Age distribution of (a) Case and (b) Control groups

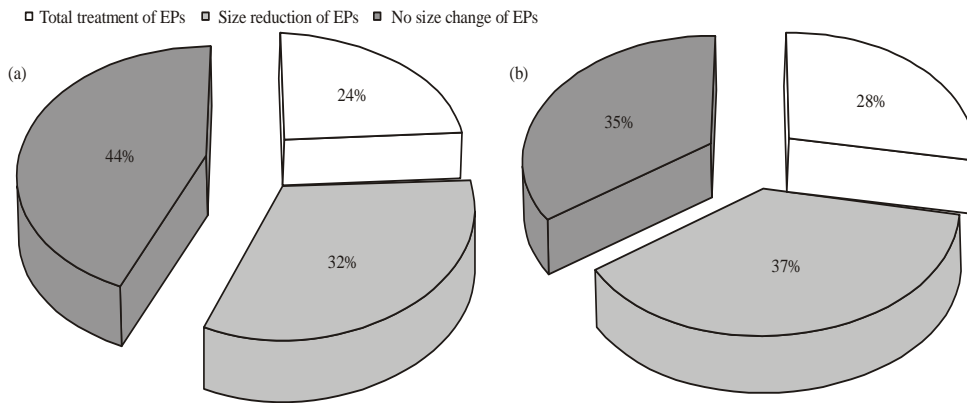


Fig. 2(a-b): Various degrees of improvements in Endometrial Polyps (EPs) size and condition, (a) Case and (b) Control

of the patients in the group case responded well to treatment, 32% reduction in size and 44% no change in polyps was observed. In the control group, 28% size reduction, 37% with no change in size and 35% increase in size was observed, respectively (Fig. 2). Size of polyps in the case group before and after treatment was significantly different (9.5 vs. 6.3 mm, $p < 0.05$). However, the size of polyps before and after the study in the control group was not significant (9.5 vs. 8.6 mm, $p = 0.297$).

DISCUSSION

In this study, we examined the impact of oral contraceptives pills on treatment of the endometrial polyps smaller than 1.5 cm for women of ages between 20-40 years. Wada-Hiraike *et al.* (2011) studied the impact of oral contraceptives pills on treatment of the endometrial polyps after three months. They found that there was a significant difference in the size reduction of the polyp with the base compared to the one with no base. Arnes *et al.* (2014) expressed that using Medroxy-progesterone 10 days a month and during six month, 25% of patients had endometrial without polyp. In our study at the group case, about 24% of the patients encountered perfect health (recovery), 32% size reduction and 44% showed no change in polyps' size. In the control group, 28% size reduction, 37% with no change in size and 35% increase in size was observed, respectively. Bifulco *et al.* (2012) evaluated the impact of birth control pills consisted of Estradiol valerate and dienogest for three months as to improve the circumstances before hysteroscopy to remove the endometrial polyp with size between 1.5 to 2.5 cm, 100% of samples were improved and reduced. Oguz *et al.* (2005) studied on the effects of different alternative protocols on the endometrial polyps at ages after menopause; concluded that the progesterone pills with anti-estrogen effect were more effective on treatment of endometrial polyps. According to the present study, use of oral contraceptives pills in treatment of endometrial polyps is low cost and non-invasive compared with such surgical methods, as curettage and hysteroscopy, although more research is required in this regard.

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