



THE INVESTIGATION OF COMPLEX ENDOMETRIAL HYPERPLASIA PREVALENCE BY DIAGNOSTIC CURETTAGE AND SOME OF RISKFACTORS AFFILIATED TO IT IN AHVAZ-RAZI HOSPITAL

Ali Ghomeishi¹ and Mahin Najafian^{2*}

¹Department of Anesthesiology and Pain Research Center, Ahvaz, Jundishapur University of Medical Sciences, Ahvaz, Iran.

²Department of Obstetrics & Gynecology, School of Medicine, Ahvaz, Jundishapur University of Medical Sciences, Ahvaz 61357-15794, Iran.

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Abstract: The endometrial hyperplasia indicates the wide spectrum of limit variation of endometrial hyperplasia which has changed from intensification of physiological status to carcinoma. The endometrial hyperplasia is the introduction of the endometrial cancer, which is the most common female genital tract malignancy. Studies suggest that abnormal uterine bleeding is the most common indication of the endometrial hyperplasia that is performed for diagnosis of diagnostic curettage. With regard to the mentioned issue of this study, in order to identify factors associated with endometrial hyperplasia have been performed. This cross-sectional study has been performed on one thousand diagnostic curettage specimen's from 1390 to 1393 (During the last three years) in RaziAhvaz hospital. The specimens based on the presence or absence of endometrial hyperplasia were divided into two groups. Then factors such as age, menstrual pattern, diabetes, hypertension, history of infertility, age over 45years, obesity, use of oral contraceptives were studied and compared. In this study of a thousand cases of diagnostic curettage, because of abnormal uterine bleeding in 160 patients(16%) complex hyperplasia, with factors such as oligomenorrhea 38% vs. 8/5 % ($P<0/0001$) and diabetes (28%) versus ($P<0/001$), hypertension 32% versus 12% ($P<0/001$), history of infertility, 19% vs. 5/5% ($P<0/001$), age over 45years, 32% versus 19% ($P<0/001$), obesity BMI> 30 46% versus 18% ($P<0/001$), nulliparity 9% versus 1% ($P<0/001$) had significant relationship with endometrial hyperplasia. But there was no significant relationship with use of oral contraceptive. According to this study, women who were obese and have history of hypertension, diabetes, infertility, menstrual disorders as oligomenorrhea are at high risk for developing endometrial hyperplasia which at last leads to endometrial cancer.

Key words: Endometrial Hyperplasia, Risk Factors, abnormal uterine bleeding, Diagnostic Curettage

INTRODUCTION

The assessment, diagnosis and appropriate treatment of endometrial pre-cancerous lesions over a long time is considered a problem among gynecological professionals and pathologists (1). Endometrial hyperplasia is an incident of illness and it is constituent of the spectrum of histological changes of resonance of the normal replication situation in one side of the spectrum and in the other side the indistinguishable changes of carcinoma can be observed (2-4). Endometrial hyperplasia is clinically very important, as it leads to abnormal bleeding and maybe associated with tumor or due to hormonal therapy and, at the same time, with endometrial cancer (5). The latest classification method by Kurman and colleagues in 1985 has been accepted by World Health Organization (WHO) also emphasized two characteristic as follow: the complexity of Endocrinology and abnormal kernel (core) (6). Four major diagnostic categories are as follow: simple hyperplasia, complex hyperplasia, a typical simple hyperplasia and a typical complex hyperplasia (3, 6).

The endometrial cancer is the most common female genital tract malignancy and almost "half of all cancers in the United States are related to women and the endometrial cancer is the fourth most common

cancer after breast, lung, and colon cancer and is considered as the eighth main cause of death due to malignant cancer in women (7, 8). The wastage of pre cancer includes endometrial hyperplasia with prevalence of 10-2 percent in pre-menopausal age and up to 20percent of post-menopause and it is predicted that in ages of post-menopause, 10 percent of women have no specific signs of endometrial hyperplasia (9). The importance of hyperplasia is in its transformation into endometrial carcinoma. The progression of hyperplasia to carcinoma depends on the presence and severity of cytologicatypia (10). The endometrial atypical complex hyperplasia is also a compressor of endometrial carcinoma adenoma (the most common histologic type of endometrial cancer) and the probability of it developing to cancer is about 25% (17 of 11). In other studies it has also been shown that the progression to carcinoma in one percentage of patients with simple hyperplasia, 3% of patients with complex hyperplasia and 8% of patients with a typical simple hyperplasia and 29% of patients will experience a typical complex hyperplasia (18).

About 25 to 45 percent of patients are diagnosed with atypical hyperplasia in curettage, so endometrial carcinoma during their hysterectomy will

*Corresponding Author:

Mahin Najafian,
Department of Obstetrics & Gynecology,
School of Medicine,
Ahvaz Jundishapur University of Medical Sciences,
Ahvaz 61357-15794, Iran.



be well-differentiated (19). The cancer risk factors and endometrial hyperplasia include diabetes, hypertension, obesity, menstrual disorders, exposure to hormones, certain eating habits, hormonal imbalance, ovarian aging disease, null parity (20, 21). In studies it has been reported that endometrial cancer usually occurs after menopause, whereas in women aged 40 years and above it is seen in only 3-5% of the cases (22, 23). The most common clinical sign of endometrial hyperplasia is abnormal uterine bleeding, hence for many of the women with this symptom, diagnostic measures such as sampling and curettage are performed, since there is no suitable categorizing test for patients with endometrial carcinoma. (24, 25). Consequently, a decision was made based on risk factors such as age increase, infertility, obesity, oligomenorrhea, hypertension, diabetes, and diagnostic patterns were created to identify high-risk women together.

MATERIALS AND METHODS

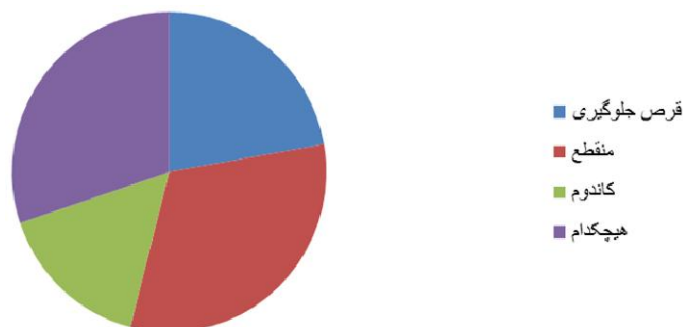
This cross sectional study has been performed on one thousand women who, because of abnormal uterine bleeding underwent diagnostic curettage surgery from 1390 to 1393. It should be noted that the case study number was 1250 people of which 1,000 of them answered to pathological and other characteristics. Then the variables such as age, menstrual pattern, high blood pressure, diabetes, history of infertility, use of contraceptive pills, nulliparity weight were extracted and registered from patients' records. The pathological response according to the patient's name and date of filing of curettage and pathological laboratory were obtained at the city level. The case-study patients based on pathology response were divided into two groups of hyperplasia and non-endometrial hyperplasia and the mentioned variables were examined and compared. And Data were analyzed using Chi-square test and Fisher precise test and $p < 0.05$ was considered significant.

Findings

The results show that the age of the case-study women was (one thousand persons) from 24 to 75 years, and the number of childbirth was parity ranging from zero to eleven. The mean of the childbirth times in women's productivity was 4.5 ± 3.1 , respectively. In this study, 160 women from a total of one thousand patients had abnormal bleeding with complex hyperplasia with or without a typia, respectively. In this study 38% of the cases (with hyperplasia) had oligomenorrhea and 13% had abnormal menstrual patterns among oligomenorrhea.

In terms of contraceptive method, 14% of women used contraceptive pill and 20% used staccato

method, 10% used condoms and 19% did not use any contraceptive method (Figure 1).



In the experimental group, the percentage of the frequency of diabetes was 28%, hypertension 32%, history of infertility (19%), obesity (46%), age over 45 years (32%), nulliparity (9%), whereas in the control group, the frequency of oligomenorrhea was 8.5%, diabetes 9%, hypertension 13%, infertility 6.5%, obesity 16%, use of oral contraception 13% and nulliparity 1%, respectively, which is shown in table (1). The significant relationship between endometrial complex hyperplasia with oligomenorrhea cycles ($P < 0.0001$), diabetes ($P < 0.001$), blood pressure ($P < 0.001$), history of infertility ($P < 0.001$), age over 45 years ($P < 0.001$), obesity ($P < 0.001$) and nulliparity was observed in experimental group rather than the control group. But the significant relationship between contraceptive method and use of oral contraceptives was not found (Table 1).

Table 1: The results related to risk factors in patients with endometrial complex hyperplasia

p	Experimental group(160)	Individuals group(160)	Risk factors
$P < 0.0001$	8/5%	38%	Oligomenorrhea
$P < 0.001$	13%	32%	Blood pressure
$P < 0.001$	9%	28%	Diabetes
$P < 0.001$	6/5%	19%	Sterility
$P < 0.001$	19%	32%	Age over 45 years
$P < 0.001$	16%	46%	Obesity
$P < 0.001$	1%	9%	Nulliparity
NS	13%	14%	Use of contraceptives pills

DISCUSSION AND CONCLUSION

In our study, from a total of one thousand patients, about 160 women had complex hyperplasia (16 percent). In a study of Anastasiadis *et al.*, this ratio was 20% compared with Wasson *et al.*, study 5% and in Farquhar *et al.*'s study 4.5% has been reported (28-26). In the Anastasiadis *et al.*, study, the prevalence of simple hyperplasia (20%) and type of complex (14%) and in the Wasson *et al.*, study, the prevalence of complex hyperplasia (5%) has been reported (26, 27).

Farquhar *et al.*, reported 4.5%, which was most likely due to the low statistics, the least volume of the sample in his study (28). On the other hand, the difference in past results may be related to the manner of regimentation and the total number of individuals, the most common findings are as follow respectively: Obesity(46%), oligomenorrhea (38%), age over 45 years (32%), blood pressure (32%) diabetes (28%), sterility (19%) and nulliparity (9%).

Faraji *et al.*, reported 12 percent of the patients who had abnormal bleeding and underwent curettage surgery had hyperplasia, 35% had oligomenorrhea, 24% diabetes, 9/27 percent had blood pressure; also, in age over 45 years, nulliparity, use of oral contraception and history of infertility there is no meaningful relationship that this theory had difference with the present study. (29). In the Farquhar *et al.*, study, age over 45 years statistical difference was observed with the hyperplasia group. (26, 27). In our study, strong correlation was seen between oligomenorrhea and endometrial hyperplasia which is similar to some other studies like that of Faraji *et al.*, and Wasson *et al.*, ($P < 0/0001$) (26, 27, 29). Rayan *et al.*, have introduced oligomenorrhea as the important risk factor of endometrial hyperplasia (30).

In a study done by Balen and Hardiman, it has been reported that the performance of endometrial in women with ovary who have the oligomenorrhea cycle, are different with normal individuals and hyperplasia and endometrial cancer have been observed in these women (31, 32). In a study by Chang *et al.*, it has been reported that following endometrial cancer endometrial hyperplasia is often created and, in fact, 7/35 percent of the patients with Poly Cystic Ovarian Syndrome suffered from endometrial hyperplasia (33). Villa Vicencio *et al.*, study reported that the Epidemiologic data to benefit the increase of endometrial cancer in people is not related to Poly Cystic Ovarian Syndrome, but the evidence shows high prevalence of endometrial hyperplasia and cancer in women who suffered from Poly Cystic Ovarian, due to the continuous impact of Estrogen on the endometrial fibers without the competitive impact of Poor estrogen. (34).

In this study in addition to the effect of oligomenorrhea on endometrial hyperplasia, a strong significant correlation was observed between the presence of hyperplasia and high blood pressure which have also been considered in some other studies (25, 28). In study of Weber, a strong significant correlation between diabetes and endometrial hyperplasia was reported that is compatible with Faraji *et al.*, and with the study of Wasson (12, 27, and 29).

In our study, the strong significant correlation between the endometrial hyperplasia and nulliparity was observed, which is opposite the Weber and Faraji studies (18, 27) but is in agreement with Farquhar. It seems that some of the lack of similarity input for risk factors in different studies is related to differences between various ethnic and environmental regions. In Faraji *et al.*, study, the significant correlation between the use of oral contraception and endometrial hyperplasia was not observed, which is similar to our study (29).

In our study, the significant correlation between the endometrial hyperplasia and history of infertility was observed, which is opposite the Faraji *et al.*, study, but similar to Farquhar *et al.*, and Wasson *et al.*, results (27, 28). Considering the fact that about 15 to 20 percent of women have oviparous disorder and oligomenorrhea in our study the oligomenorrhea is considered as an important risk factor for some kinds of endometrial hyperplasia and endometrial cancer, so this relationship probably exists (35).

CONCLUSION

According to the findings of this study and other studies of oligomenorrhea- obesity-history of sterility-high blood pressure-diabetes-age over 45 years, have a relationship with endometrial hyperplasia and this correlation can be our guide in further following up of high-risk patients in terms of endometrial cancer, therefore it is better to identify them with the proper diagnosis methods including diagnostic curettage and, as soon as possible be treated. Also, it is recommended that future studies be done on the possible variables in endometrial hyperplasia, especially in a typical type and better and more valid results be obtained.

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