ASSESSMENT OF ENDOMETRIAL CANCER RISK FACTORS IN A PILOT STUDY AT VALI-E-ASR UNIT, IMAM KHOMEINI HOSPITAL

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Abstract - This study was performed to identify endometrial Cancer risk factors. In a case series study on 1989-1996, we assessed endometrial cancer in 52 patients whose age range was 32-80 years, with 73% over fifty years. Obesity was seen in 68% at time of cancer detection, and 69% were in the postmenopausal age, with a history of late menopause in 21% . As a matter of parity 13% were nulliparous, and 52% were grandmultiparous. There was a history of hypertension in 37% and ovarian tumors and polycystic ovaian disease in 2% . The most common symptom in our patients was vaginal bleeding and the most frequent histology was endometrioid adenocarcinoma. Endometrial cancer was most common in the sixth decade of age. The two most common risk factors in this population were obesity and hypertension. The next important risk factor was late menopause.

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Key Words: Endometrial cancer, risk factors, reproduction, diabetes, hypertension, late menopause, smoking, oral contraceptive pill, tamoxifen

INTRODUCTION

Endometrial cancer is the most common pelvic gynecologic cancer (1,2,3) and the fourth most frequent cancer in women (4). It is the most commonly cured gynecologic cancer with best prognosis (2,4). This cancer occurs primarily in postmenopausal women. Seventy-five percent of women with endometrial cancer are postmenopausal (4). Approximately 50 percent of endometrial carcinoma occurs in women with special risk factors for the disease (4,5). Obesity, nulliparity and late menopause are all variants of normal anatomy or physiology associated with endometrial carcinoma (1,5,6,7). Diabetes mellitus is often considered a risk factor and hypertension is likely to be another one (1,5,6,8).

Other risk factors are exposure to external or internal carcinogens such as hormone replacement therapy without progestin, for instance, tamoxifen and estrogen exposure due to polycystic ovarian disease (PCOD) and ovarian functioning tumor (5,6). Yet, combination of oral contraceptive and cigarette smoking are found to decrease the risk of developing endometrial cancer (9,10).

This study aims at investigating endometrial risk factors in Iranian women and is the first of its kind.

MATERIALS AND METHODS

This study was conducted in two departments of Obstetrics and Gynecology (Imam Khomeini center and Mirza Kochak Khan hospital) affiliated to Tehran university of medical sciences.

In this case series, we reviewed the medical files of 52 patients admitted at Imam Khomeini (1986-1995) and Mirza-Kochak Khan (1986-1996) hospitals with the diagnosis of endometrial cancer confirmed by histological examination.

Information regarding their age and risk factors included obesity, late menopause, diabetes mellitus, hypertension, parity, history of PCOD or ovarian tumors. Other factors reviewed included of the use of oral contraceptive pills and cigarette smoking. At the same time, the chief complaints of patients on admission and the histopathological patterns of endometrial cancer were recorded.

RESULTS

The patients' age ranged between 32-80 years with

a mean of 56. For easy assessment the patients were grouped into their decades of life. Endometrial cancer was found to be most frequent in 7th and next in 6th decades of life.

73% of patients were above fifty years of age (Fig.1) and 35 patients were over-weight (> 27 kg). Thus, obesity was found in 68% of our patients. The majority of patients were at menopausal age (36 patients, 69%). In postmenopausal patients, natural menopause occurred after 52 years in 7 patients (19%). Late menopause was seen in 11 patients (12%). Four of the perimenopausal patients were above 52 years.

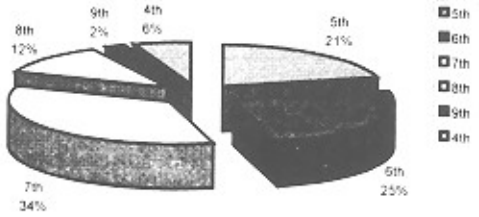

Fig. 1. Distribution of endometrial cancer in different decades of life

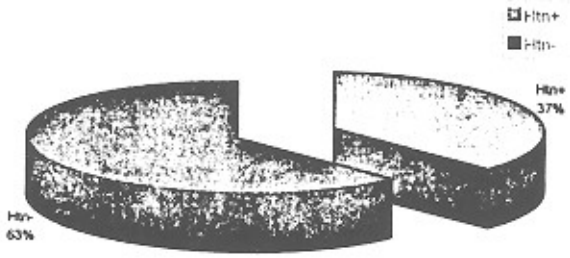

Fig. 2. Frequency of diabetes and hypertension

While the history of nulliparity was found only in 7 patients (13%) with endometrial cancer, endometrial cancer was most frequent in grand multiparous patients, over 6 parity. A history of hypertension was seen in 19 patients (37%) and that of diabetes mellitus in 6 patients (12%) (Fig. 2). In 52 patients with endometrial cancer, one patient (2%) had a history of PCOD while concurrent endometrial cancer with ovarian tumor was found in 3 patients (6%). None of the patients had a history of exogenous use of estrogen such as tamoxifen. 30 patients (58%) had not used oral contraceptive pill during the reproductive age.

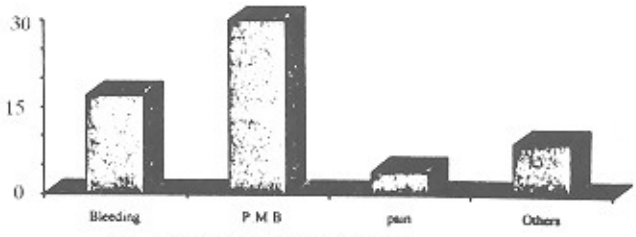

Fig. 3. Patients' chief complaints

The most common histologic pattern in 38 patients (73%) was endometrioid adenocarcinoma (Fig. 4).

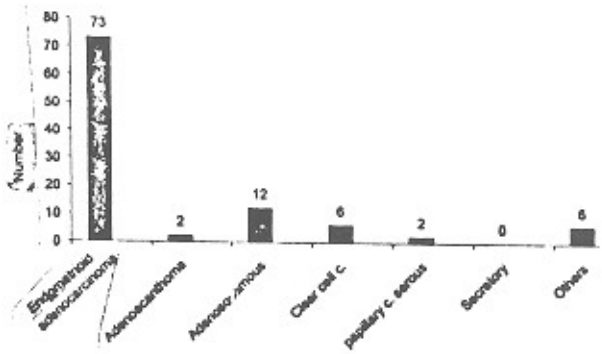

Fig. 4. Frequency of histopathological patterns

Table 1. Percentage of patients with risk and protective factors

	Factors	No.	(%)
Risk Factors	Hypertension	19	37
	Diabetes Mellitus	6	12
	Exogenous Estrogen	0	0
	Tamoxifen	0	0
	PCOD	1	2
	Ovarian tumor	3	6
Protective factors	OCP	4	8
	Cigarette smoking	2	4

Cigarette smoking was positive in 2 patients (4%) (Table 1) (1). Most frequent symptom in these patients was vaginal bleeding, which was found in 45 patients (95%), (Fig. 3).

DISCUSSION

In this study, 73% of our cases were above 50 years of age, a finding which is consistent with the figure of 75% reported in the literature (5,6).

Obesity as a risk factor was found to be present in 68% of endometrial cancer patients. However Peterson et al found that 81% of endometrial cancer patients were over 150 lbs and 63% were over 200 lbs. Windes and co-workers revealed a three fold increased risk of involvement by endometrial cancer in patients being more than 21 to 50 lbs over weight and a 9 fold increased risk in patients found to be 50 lbs overweight (11).

Nineteen cases out of 52 (37%) had arterial hypertension. In a similar study in 54 patients, 15 cases (27%) had hypertension (12). However reference books had correlated this finding to obesity and old age present in these cases (5).

Diabetes Mellitus was present in 12% of patients i.e. 6 out of 52. Clib and co-worker found this figure to be 7% in endometrial cancer patients (12). Dunn estimated a prevalence of 7.7% in the same age group (11). Therefore diabetes and hypertension's influence were not found significant and so was that of menopause (23%).

7 out of 52 patients were nulliparous (13%) in contrast to 2.4% incidence of nulliparity in normal population (13).

None of our cases had a history of estrogen or tamoxifen consumption accounting for the fact that this practice was not popular in Iran.

Cigarette smoking and oral contraceptive pill) (OCP) contraception as protective meassures were evaluated (5,6). 8% of patients used OCP.

Only 2 patients out of 52 smoked and in the others no history of smoking could be traced which can be due to the cultural factors in Iran.

Concurrent rates of endometrial cancer with polycystic ovaries and ovarian tumors were 2 and 6% respectively being congruent with other reports (6).

The abnormal bleeding as the chief complaint was found in 93% of the cases which is similar to other reports quoting 90% (5,6).

This study is a case series study. To consolidate the results of this descriptive pilot study, more patients are needed to arrive at more reliable figures.

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