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Demographic and Clinical Characteristics of Endometrial Cancer in Northwestern Iran, Urmia: A Ten-Year Cross-Sectional Study

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Abstracts:

Background: endometrial cancer is the most frequent genital cancer in women in the developing nation. The purpose of this study was to investigate on the demographic and clinical aspects of endometrial cancer, or to explain its epidemiology in patients admitted to Urmia's Kosar Hospital.

Methods: From 2006 to 2016, the medical records of 179 hospitalized women with an initial diagnosis of endometrial cancer were analyzed in this cross-sectional research. The patients' clinical and demographic information, including age, menstrual age, first visit reason, number of deliveries, menstrual pattern, history of previous disease in patients and their relatives, disease stage, clinical parameters (including WBC, Hb, and MCV), pathology type, and the presence or absence of metastasis was extracted from their medical records and analyzed.

Results: The patients in our research had a mean age of more than 50 years. Nearly 80% of the patients were menopausal, and approximately 90% of the patients presented with bleeding complaints. Patients with endometrioid type adenocarcinoma had the highest frequency of pathology.

Conclusion: Our findings show a high proportion of bleeding complaints among the patients evaluated, which might reflect the importance of this finding and help to guide the disease's diagnosis and therapy. However, further research is needed to establish the epidemiology of this condition in the country.

Keywords: Endometrial hyperplasia, risk factors, abnormal uterine bleeding, endometrial cancer

Introduction:

Endometrial cancer is the sixth most prevalent cancer in women and the most common cancer of the female genital region in developing nations(1). Adenocarcinoma is the most prevalent kind of this malignancy. Endometrial cancer is not uniformly spread over the world, with Northern Europe,

Eastern Europe, and North America having the highest rates, while Africa and West Asia have the lowest(1, 2). However, having a better knowledge about the clinical symptoms, risk factors, and demographic features, or in other words, the epidemiology of the illness in the target areas can

help improving the disease's diagnosis and treatment.

Endometrial cancer most commonly arises between the ages of 50 and 65 during the premenopausal period (during and after menopause); 75% of endometrial cancers occur after menopause (3, 4).

Despite the fact that we have instances under the age of 40, they make up only 5% of all endometrial malignancies(5). As a result, knowing the actual age of a disease incidence in a community may pave the way for effective treatment and screening efforts.

In terms of clinical symptoms, because roughly 75% of the women with endometrial cancer are menopausal, postmenopausal vaginal bleeding is the most prevalent symptom.

The development and intensity of symptoms varies depending on the stage of the disease, in which diseases that are in a higher progression stage and exhibit severe signs and symptoms can also be detectable by physical examination (6, 7).

Investigating the pattern of clinical symptoms in communities, on the other hand, might be beneficial in helping clinicians to diagnose and manage the condition.

Moreover, obesity, diabetes, breast cancer, a history of tamoxifen usage, no history of pregnancy, late menopause, high estrogen levels, aging, smoking, and the number of children are all known as endometrial cancer risk factors(8). As a result, identifying the pattern of etiological elements might assist clinical professionals in illness management.

Therefore, we aimed to study the demographic and clinical features of endometrial cancer in patients admitted to Kosar Hospital in Urmia from 2006 to 2016 because of the high frequency of this cancer among women in one direction and the variations in various communities. It is hoped that the present study, with a detailed explanation of the epidemiology of this disease, will pave the way for effective planning in the field of diagnosis and treatment of this disease.

Methods:

The medical records of all women hospitalized at Urmia University of Medical Sciences' Kosar Hospital with a diagnosis of endometrial cancer between 2006 and 2016 were analyzed in this cross-sectional research. A researcher-designed checklist was then used to collect patient information. Age,

menstrual age, first visit reason, number of deliveries, menstrual pattern, history of previous disease in patients and relatives, disease stage, clinical parameters (including WBC, Hb, and MCV), type of pathology, and presence or absence of metastasis were extracted from patients' records of each case. It should be emphasized that cases with insufficient information were not included in the research. For the qualitative variables the frequency and percentage were utilized in statistical analysis, whereas mean and standard deviation were used for the quantitative data.

Results:

The records of all of the patients with endometrial cancer referred to Urmia's Kowsar Hospital were analyzed in this 10-year cross-sectional research. The study comprised 197 patients with full information.

Age and menopause

The mean and standard deviation of age was 57.2 ± 10.6 years, with a range of 27 to 83 years. The patients' mean age at menopause was 50.27 ± 2.8 years. Furthermore, 52 cases (26.3 %) of our patients were hospitalized before menopause, and 145 cases (73.6 %) were admitted after menopause with endometrial cancer. The patients' mean weight was 81.97 ± 13.1 kg.

The reason for patients' first visit

The most prevalent symptom reported by patients was bleeding, which was reported by 171 patients (86%) when they were referred. Among the rest of the patients, 13 (6.6%) reported abdominal pain, 5 (2.5%) had abnormal vaginal discharge, 4 (2%) had abdominal edema, and 3 (1.5%) had oligomenorrhea. In one patient (0.5%), cancer was diagnosed accidentally during ultrasound.

Previous medical history

Regarding the disease's prior history, 32 patients (16.24 %) had diabetes, 5 cases (2.5 %) had breast cancer and tamoxifen usage, and two cases (1 percent) had colon cancer. In terms of family history of the disease, one patient reported a history of ovarian cancer in his sister; Two patients reported a history of breast cancer in their sister and a history of endometrial cancer in their mother, respectively.

Laboratory parameters

In terms of laboratory parameters, hemoglobin had a mean and standard deviation of 11.86 ± 2.18 g/dl. MCV and WBC mean and standard deviation were 72.3 ± 12.73 and 7888.36 ± 2677.68 , respectively.

Natural history, pathology and metastasis

Similarly, 176 cases of endometrioid type adenocarcinoma made up 89.3 % of malignant pathology in the patients. In addition, 9 of the cases (4.6 percent) were serous papillary, 5 cases (2.5 %) were cleaecell, 3 cases (1.5 %) were carcinosarcoma, and 1 case was un-differentiated carcinoma (2 %). In 30 cases (97.75 %) of individuals with a history of diabetes, the pathology was endometrioid. In terms of disease progression, in our analysis, 140 patients (71%) were in stage 1, 24 cases (12.1%) were in stage 2, 26 cases (13.1%) were in stage 3, and 7 cases (3.6%) were in stage 4. At the time of diagnosis, there was one occurrence of bladder metastasis and three cases of peritoneal metastasis.

Discussion:

In this study, we attempted to describe the epidemiology of endometrial cancer in Urmia more precisely than clinical and demographic characteristics. In this regard, the research's findings revealed that about 90% of the patients included in the study were referred for diagnosis with an initial complaint of bleeding. Endometrioid adenocarcinoma was the most prevalent pathological form among the individuals. These findings can assist clinicians to have a more accurate diagnosis and disease management, hence any condition with atypical bleeding after menopause is immediately suspected of being endometrial cancer.

The mean age of patients in our research at the time of diagnosis was 57.26 ± 10.6 . in a study done by Zhang et al.(9) it was found that the average age of diagnosis was 63.06 ± 10.6 . In another study, Wang et al.(10) Found that the average age of diagnosis was 60.55 ± 9.18 years. The average age reported in both studies was greater than the average age reported in our study; however, the difference was not substantial.

Dastjerdi et al.(11) Found a mean menopausal age of 53.84 years, which was higher than the mean age of 50 years observed in our study. however it was

higher than the findings of Ghanbari et al. (12), who stated that the average age of menopause was 48.26 years. Several genetic and environmental variables determine menopausal age. The interaction of environmental and social variables, such as smoking, alcohol usage, and economic position, all can play a role in this. As a result, the observed discrepancies may be attributed to these variables. In our analysis, about 86 % were referred due to bleeding, which is comparable with the findings of Giancella et al (13). According to Rezaei et al.(14), women with abnormal bleeding had 2.8 % endometrial cancer and only 13.9 % had no particular pathology.

Generally, irregular vaginal bleeding is one of the most prevalent disorders among menopausal women, and its severity ranges from spotting to severe bleeding. Aberrant uterine bleeding is one of the most prevalent signs of both benign and malignant women's illnesses, and it is highly common in postmenopausal women with abnormal findings in at least 60% of the cases (11, 14). Obese women were 3.4 times more likely to get cancer in a research conducted by Rezaei et al. (14), moreover, only 15.8 % had normal weight, indicating the possibility of obesity and cancer risk. In this regard, 53.71 % of the individuals in Wang et al. (10) research were obese and had a BMI more than 30 kg. Our patients' average weight was about 81 kg, which might support the involvement of obesity in the development of this form of cancer.

In terms of other characteristics, 13.7 % of the patients in our study had a history of infertility or had no children, whilst in Zhang's study (9), this proportion was 9%, which was lower than our study. Endometrioid pathology with 89% frequency was the most prevalent type of pathology in our study, which was 62% more than the results reported in the study of Zhang(9) et al. Furthermore, 71% of our patients were diagnosed with stage 1 illness, which was identical with the 74 % of the cases reported in the Zhang et al. research (9).

One of the study's limitations is that the patients' BMI was not assessed. Unfortunately, due to the study's retrospective design (examination of available data), the access to patients' height information was not feasible, and occasionally patients' information was not fully documented.

Conclusion:

In summary, the observed comparisons, differences, and similarities might point to the inherent differences of the examined populations and the need of more studies using a prospective strategy for a better understanding of endometrial cancer epidemiology.

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Conflict of interest

Authors have no conflicts of interest.

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