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Research Article

**DETERMINATION OF DEMOGRAPHIC CONDITION AND
ASSOCIATED RISK FACTORS OF ENDOMETRIUM
CANCER AMONG FEMALES SUFFERING FROM
ENDOMETRIAL CANCER****Dr Zubaida, Dr Waleed Ahmed, Nida**¹KGN Teaching Hospital Bannu Township Bannu²Rawalpindi Medical College Rawalpindi³Assistant Professor Physiology, Fatima Memorial College of Medicine and Dentistry Lahore**Article Received:** January 2020 **Accepted:** February 2020 **Published:** March 2020**Abstract:**

Objective: The aim of this research work is to find out the condition of demography and associated risk factors in females suffering from endometrial cancer.

Methodology: This research work carried out on fifty-three patients suffering from EC (Endometrial Cancer) and three hundred and three patients present with other endometrial complications who came for treatment in KGN Teaching Hospital Bannu Township Bannu.

from 2017 to 2019. We evaluated the data of demography of patients present in both groups.

Results: We found a strong association between post-menopausal status (OR: 13.37), Hypertension, Diabetes Mellitus, and infertility with Endometrial Cancer. We found no association between familial past histories of urogenital cancer with the presence of Endometrial Cancer. We also found no association between the profession and less income with the occurrence of Endometrial Cancer.

Conclusion: The findings of this research work conclude that patient's age, obesity, Hypertension, Diabetes Mellitus, post-menopausal status and infertility have correlation with the increased risk of Endometrial Cancer. Diabetic mellitus is an important markers of risk for Endometrial Cancer particularly in the females with Hypertension. There is also association of low education with the endometrial cancer.

KEY WORD: Obesity, Hypotension, Endometrial Cancer, Diabetes Mellitus, Menopause, Demography, Infertility.

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INTRODUCTION:

The cancer of uterus is one of the most frequent occurring cancer of reproductive system in females and about more than three thousand patients are being reported every year in our country. Endometrial Cancer is 4th most common cancer after the cancer of lung, breast and intestines cancers and it is the 8th most common cause for the death among females suffering from this disease [1, 2]. There is much increase in the occurrence of this disease in recent years. Although in past few years, the incidence of this disease was very high in only developed nations, there is change in the epidemiologic trends because of the rise in risk factors as hypertension, obesity, DM, in the countries which are under development, Endometrial Cancer is the cancer of the period of menopause but there is observance of its presentation in 25% and 5% before the age of forty years [1, 3]. There are very few research works available in our country on this topic. This research work aimed to determine the social and economic condition and risk factors among females present with the Endometrial Cancer.

METHODOLOGY:

This transverse research work carried out on the patients suffering from Endometrial Cancer in KGN Teaching Hospital Bannu Township Bannu from 2017 to 2019. In this duration, we selected and evaluated the patients present with history of cancer. We also selected 303 females from Gynecology Department of the hospital who were present with some endometrial diseases. We placed them in group of controls. We performed the endometrial biopsy by pipelle out patiently under General Anesthesia. We collected the needed socio-personal information including patient's age, patient's weight, age at the time of marriage, total amount of term deliveries, age at the time of 1st delivery, age at the time of last delivery, age at the time of menopause, menarche age, total time period between the emergence of Endometrial Cancer and last delivery, education level, profession and status of income.

We study the following risk factors in this research work as obesity, delayed menopause after 52 years of age, past history of other complications, null parity, infertility, cancer history in the family and estrogen administration without progesterone. We used the SPSS V.20 for the statistical analysis of the collected information. We used the Chi square method for the comparison of both groups. We presented the categorical data in averages and standard deviations. P value of less than 0.05 was significant. We took the written consent from every

patient after describing them the purpose of this research work. The ethical committee gave the permission to conduct this research work.

RESULTS:

Among patients 92.45% (n: 49) patients were present with no income and 7.50% (n: 4) patients had income level of higher than 300000 every month. In the group of controls, 291 patients were without income and 12 patients were present with monthly income of greater than 300000 every month. Chi-square test findings discovered no important difference between the patients of both about their income ($\chi^2 = 30.1$, $df = 2$, $p = 0.202$). In case-group, 69.8% (n: 37) patients were present with greater than fifty year of age and in the control-group, 22.11% (n: 67) patients were present with more than fifty year of age. Greater than 50 year of age enhances the danger of acquiring Endometrial Cancer 20 times. Null parity also enhances the danger of Endometrial Cancer 7 times ($OR = 57.7$, $CI 95\% = 72.16$, $p < 0.001$). Overall in 49.05% (n: 26) patients present with Endometrial Cancer, the amount of pregnancies lasting for greater than 5 months was none or one. In 50.9% (n: 27) patients, the amount of pregnancies lasting for greater than 5 months was 3 or more. In control-group, in 34.9% (n: 106) patients, the amount of pregnancies lasting for greater than 5 months was none or one. In 65.01% (n: 197) patients, the amount of the pregnancies lasting for greater than 5 months was 3 or more ($CI 95\% = 1-31$, $OR = 559$, $\chi^2 = 29.38$, $df = 1$, $p = 0.037$). Depending upon these results, we can conclude that the amount of pregnancies lasting for more than 5 months less than 3 times enhances the risk of Endometrial Cancer by 50%.

The number of term delivery equal or greater than 3 also has protective effect of 45% against Endometrial Cancer. We also assess the menopause in this research work. Results showed that menopause enhances the risk of Endometrial Cancer by 13.3%. 28.3% patients of case-group and 63.04% (n: 188) patients of control group were present with history of consumption of OCP and the consumption of OCP decreased the danger of Endometrial Cancer by 76%. Infertility is the cause of increase in the risk of Endometrial Cancer 5 times. Diabetes and hypertension linked with diabetes enhanced the risk of Endometrial Cancer 5 and 5.8 times correspondingly. In the final stage, significant factors on the pathogenicity of Endometrial Cancer were reevaluated with the utilization of logistic regression model and the findings are present in Table-1. The most significant risk factors of Endometrial Cancer after the age of 50 years are null parity and menopause.

Table-I: Determine Endometrial Cancer Risk Factors By Logistic Regression Model

Risk factors	P-Value
Menopause	<0.001
Null parity	<0.001
Age over than 50 years	0.004
Delivery age more than 40 years	0.438
Familial history of non-reproductive organs cancer	0.200
Hypertension	0.855
Diabetes	0.404
Diabetes and Hypertension	0.403
Infertility	0.882

DISCUSSION:

The average age of the patients suffering from Endometrial Cancer was 56 years which was much higher than the patients of control group. About 69.8% patients suffering from Endometrial Cancer were in age range of greater than 50 years which was consistent with our research work. In research work of Lapinska, average age of the patients present with Endometrial Cancer was 58.9 years [4]. In this research work, average weight of patients suffering from Endometrial Cancer was much high as compared to the patients of control group. Body mass index is an important risk factor in various cancers including Endometrial Cancer in many research work [4-6]. Hankinson and Shoff explained that rise in the level of estrogen in patients with obesity enhances the risk of Endometrial Cancer [4, 5]. Some research works questioned this association and suggested to perform other research works to consolidate this view [7, 8]. Some research works explained the association between Endometrial Cancer and obesity by the hormonal alterations. The obesity among adults has relation with the ovarian cycle and it can be elaborate [8, 9].

The age of 1st delivery was less than 30 years in our research work except for 2 patients in control-group which is not consistent with the findings of research work conducted by Hinkula [10]. In this research work, consumption of OCP reduces the danger of Endometrial Cancer by 76%. In the research work of Dossus, the consumption OCP also reduced the risk of Endometrial Cancer by 35% and consumption OCP for more than ten years reduced the risk by 42% [11]. In this research work, DM was an important risk factor in the increase of risk of Endometrial Cancer 5 times. hypertension induced by DM enhanced the risk of Endometrial Cancer 5.8 times.

Weiderpass also stated the high risk of Endometrial Cancer in the patients suffering from diabetes Type-1 as compared to the patients suffering from diabetes

Type-2 [8] whereas Kjerulff stated that there is high risk of Endometrial Cancer in the patients suffering from diabetes Type-2 [12, 13]. Krieger believed that no effectual measures can be taken for the prevention of the impact of socio-individual factors and these factors can be ignored in the presence of cancers [14,15,16]. In research work conducted by Kjerulff, females available with levels of income greater than moderate were present with low risk of acquiring Endometrial Cancer in comparison with the poor females. The severity of the disease was also lower among females with high level of income. This can be because of the early clinical intervention with high income resources [17]. Kjerulff and Pokras in their research work, stated that level of income of all patients suffering from Endometrial Cancer and hysterectomy was much below than normal income level [18, 19, 20].

CONCLUSION:

In accordance with the results of this research work, age of greater than fifty years, obesity, menopause condition, early menstruation, hypertension particularly related with diabetic mellitus and infertility are the important risk factors for the occurrence of Endometrial Cancer. The prevalence of Endometrial Cancer was much high among females present with low levels of education but we found no strong correlation between Endometrial Cancer and low level of income.

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