Ovarian Cancer among Women of Lahore Metropolitan; a Survey

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Abstract

The symptoms, causes and different risk factors related to ovarian cancer (OC) in Lahore Metropolitan are studied. Information was collected from 52 patients (*having mean age 45±10 years*) referred to the Institute of Nuclear Medicine and Oncology Lahore (INMOL), Pakistan. The risk was found relevant in the patients having positive family history of any cancer other than OC and that's why 21.1% patients faced this dilemma. Marital status was not found a cause of OC as unmarried and married patients both were affected. Birth control pills were not a cause of OC as 96.6% patients in Lahore did not used them. High parity and Brest feeding were the cause of OC as 59.6% patients have high parity and 78.8% have breast fed their children for more than one year. Fallopian tube tide (94.2%), hysterectomy (86.5%) and smoking (98.1%) were not the cause of OC. Irregularity in menstrual cycle (30.8%), eating disorders (38.5%), abdominal pain or bloating (90.4%) and natural menopause (50%) were the symptoms of OC. Hormone replacement therapy (HRT) is not found a cause of OC in Lahore as all the selected patients under study never used HRT.

Key words: Ovarian Cancer; Birth Control Pills; Hormone Replacement Therapy (HRT); Hysterectomy; Parity

Introduction

Ovarian Cancer (OC) is a cancer of ovary; the female reproductive organ; and is one of the most lethal gynecologic cancers. In Pakistan, OC is the 4th most common sarcoma in women Malik, 2002[1]. The rate of OC in Karachi *(Sindh, Pakistan)* is 10.2 per 100,000 per year. It was the 4th widespread cancer in Lahore Khan & Sultana, 2010[2].

Different types of OC's are epithelial cells, stromal cells and germ cells tumors. Epithelial OC is the most common type. It arises either from epithelium or from inner surface of fallopian tube. Stromal cell tumer and germ cell tumors of ovary are uncommon Torpy et al., 2011[3]. Epithelial OC represents about 90% of all malignant ovarian tumors. The incidence of OC is very low under the age of 40 but increases quickly after the menopause Hanna & Adams, 2006[4]. Germ cell tumor accounts for about 8% of all OC's and is present in the egg-maturation of ovarian cells; occurs most often in teenagers and young women. About 90% of patients with germ cell malignancies can be cured, often preserving fertility Pectasides et al., 2008[5]. Stromal tumors, which account for about 6% of all OC's, develop from connective tissue cells that hold the ovary together and produces the female hormones; estrogen and progesterone. Stromal tumors do not usually spread, in which case the prognosis is good. If they spread, however, they can be more difficult to treat than the other types of ovarian tumors Jung, 2005[6].

The exact cause of OC is unknown. Ovarian tumors appear in a diverse way and usually cannot be detected until they attain a large size Shaikh et al., 2007[7]. Almost 10% of women who develop cancer of ovary show a strong family history of breast and OC Brain et al., 2012[8]. Long term use (more than 10 years) of hormone replacement therapy (HRT)

increases the risk of OC. Women who take estrogen-only as HRT, are at high risk of OC while those who used short-term estrogen progestin replacement therapy were not at increased risk Lacey et al., 2002[9]. Tubal ligation or hysterectomy reduces approximately 26-30% the risk of OC among women who had a tubal ligation or hysterectomy at earlier ages compared to women who never had a tubal ligation or hysterectomy Rice et al., 2012[10]. Age has also impact on OC. The majority of OC is diagnosed in post-menopausal women with an average age of 63 years. Ethnicity, null-parity, late menopause, early menarche, family history of breast or uterine cancer, personal history of breast or OC, high fat diet and exposure to talc or asbestos are some causative factors Holschneider & Berek, 2000[11]. Fertility drugs either act as direct carcinogens or by promoting or inducing tumors through interference with the endogenous hormone balance is not known Glud et al., 1998[12]. High parity is an established protective factor for OC. Whiteman et al., 2003[13]. A momentous decrease in OC is observed among women using the contraceptive pill for more than 8years Cameron et al., 2009[14]. Lifestyle factors are significant cause of OC and the risk can be reduced by eating a diet rich in vegetables and fruit, reduce stress, save sex, avoiding smoking, taking regular exercise, avoiding being overweight Rieck & Fiander, 2006[15].

Symptoms associated with epithelial OC are usually non specific, being shared with many other common gastrointestinal and gynecological conditions. Association of these symptoms with the cancer is often not known; therefore, more than two thirds of EOC patients are diagnosed when the disease has developed to late stages Heintz et al., 2006[16]. The most familiar symptoms of OC are urinary frequency or urgency, abdominal or pelvic pain, fatigue, loss of appetite, feel a lump in abdomen and increase in abdominal size Lim et al., 2012[17].

Materials and Methods

A questionnaire with variables related to OC was designed for the study in Lahore Metropolitan. The social, menstrual and reproductive, family history, symptoms and risk factors were included in the questionnaire. The present study is conducted at *Institute of Nuclear Medicine and Oncology (INMOL), Lahore, Punjab, Pakistan,* dealing with cancer related diseases. Fifty two (52) female patients were interviewed at INMOL in the presence of oncologists during a period of six (6) months (January to June, 2013). Information was compiled on the pre-designed questionnaire. Additional information was also obtained from the relatives of the patients if some clarification or confirmation was required. The information was recorded under the supervision of expert medical officers and with the assistance of the hospital staff. Then Statistical analysis was done by using SPSS 16.0.

Results and Discussion

In this study, different factors related to OC are analyzed statistically. Age of 61.5% patients, was above 40 years which depicts that in Lahore the attack of OC becomes significant above 40 years. The marital status of the patients was found to be another significant factor as 84.8% women carrying OC were married, although there was another alarming threat was noticed that 15.4% unmarried girls were also attacked by OC. 21.1% patients have positive family history for OC which shows that family history is an important factor for the risk of OC. Prevalence of cancer at younger age and higher frequency of positive family history are two unusual features of Pakistani patients. An alarming and anomalous result of this survey was that 59.6% patients have high parity and 78.8% patient have breast fed their children for more than one year yet they were carrying OC.

The effect of fallopian tube tide and hysterectomy is analyzed. 94.2% patients did not have fallopian tube tide and 86.5% did not have hysterectomy.

98.1% patients were non smokers and they still carrying OC which supports the unusual reality that smoking is not risk factor of OC in Lahore. Irregularity in menstrual cycle was found to be one of the causes of OC as 67.3% women had regular menstrual cycle and 30.8% of irregular cycle.

There were other routine life parameters found signifying the symptoms of OC such that eating disorders and abdominal pain as 38.5% patients having eating disorders while 90.4% having abdominal pain, however 9.6% patients having no pain or bloating. Patients with natural menopause were 50% and having surgical menopause was 38.5% which shows that OC occurs usually after menopause.

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