ORIGINAL ARTICLE

One Year Review of Cases of Ovarian Malignancy at Fatima Memorial Hospital

RUBINA IQBAL, AFSHAN R. K. HUSSAIN, AYESHA INTSAR

ABSTRACT

Aim: To analyze records of patients seen with malignant ovarian cancer at a tertiary care hospital of Pakistan and obtain information on factors as age at presentation, CA-125 levels, stage of the disease, assess menopausal status of the patients, surgical management and further referral for chemotherapy and the histopathological diagnosis.
Methods: We analyzed 30 cases of malignant ovarian epithelial tumors presenting at Fatima Memorial Hospital Lahore from January 2012 to December 2012.
Results: Mean age at presentation: 49.2 years (SD 13, range 4-82 years); commonest histological sub-type: serous cystadenocarcinoma (43.3%); most frequently seen stage: 3 (46.6%), followed by stage 4(23.3%); post-menopausal: 66.6% of the women and Cancer Antigen-125 (CA-125) level elevated in 73.3% of the females.
Conclusion: Stage at presentation in majority of the cases was advanced as compared to that seen in the west. With only minor variations, our findings seem consistent with those reported in other local studies. However, it is imperative to conduct an extensive population-based study to understand the impact of, and develop strategies for the management of ovarian cancer in Pakistan.
Keywords: Tertiary care hospital, ovarian cancer, Pakistan.

INTRODUCTION

Ovarian cancer is the most frequent cause of death from gynaecological cancers and the fourth most frequent cause of death from cancer in women in Europe and the United States[1]. Cancer data reported by an institutional study conducted in Pakistan, show that female breast cancer was the most common cancer accounting for 38.5% of female malignancies followed by ovarian cancer 13.6%[2]. In women with no family history of ovarian cancer, the lifetime risk is 1.6%, whereas a woman with one affected first degree relative has a 5% lifetime risk[3]. With two or more affected first-degree relatives, the risk is 7%[4].

Most ovarian cancers occur after menopause when the ovaries have no physiological role and consequently abnormal ovarian function causes no symptoms. As a result of this factor, combined with the anatomical location of the ovaries deep in the pelvis, ovarian cancers typically cause few symptoms until they reach a large size or have disseminated. As a result, ovarian cancer is usually diagnosed at an advanced stage when despite advances in surgical and chemotherapeutic management during the last decade, survival rates are poor. Almost 90% of patients are diagnosed when the disease has already spread to the pelvis or abdomen and for these patients, 5-year survival rates are less than 30%. In contrast, a small proportion of patients diagnosed with stage I ovarian cancer confined to the ovaries have a 5-year survival rate in excess of 90%.

Serum CA-125, a tumor marker for ovarian cancer, has been observed to be elevated in 80% of women with epithelial ovarian cancer overall but in only 50% of women with early disease[4].

Information from developing countries regarding incidence of even some of the common cancers such as ovarian cancer is lacking[5]. In one study conducted in Pakistan, surface epithelial-stromal tumors comprised 63.5% of all tumors. Benign cystic teratoma was the commonest benign tumor (35.2% of all benign tumors) and serous cystadenocarcinoma was the commonest malignant tumor (33.3% of all malignant tumors)[3].

Epithelial ovarian cancer is the most common type of ovarian cancer. It is the leading cause of death from gynaecological cancers in the United States[6]. Although there has been a statistically significant improvement in the 5-year survival, in 2005, more than 16,000 women were expected to die of this disease[6]. Ninety per cent of ovarian cancers are derived from the ovarian surface epithelium and these neoplasms are classified into serous, mucinous, endometroid, clear-cell, and transitional-cell types[7].

There is a dearth of information regarding the epidemiological aspects of ovarian cancer in Pakistan. We aim to analyze the basic data on

---

Department of Obstetrics and Gynaecology Fatima Memorial Hospital, Lahore
Correspondence to Prof. Rubina Iqbal Email: rubina_t94@hotmail.com & ayeshaintsar@hotmail.com

ovarian cancer, specifically the epithelial cancer of the ovary, at Fatima Memorial Hospital Lahore

SUBJECTS AND METHODS

We analyzed 30 cases of malignant ovarian cancer presenting to Fatima memorial hospital Lahore from January 2012 to December 2012. Cases with ovarian metastasis from any other malignancy were excluded. Patients were admitted via OPD or Emergency. Detailed evaluation was done including history (abdominal distension, abdominal pain , cachexia, weight loss etc), examination (GPE, Systemic exam, Abdominal exam, vaginal exam) and investigations (baseline labs, CA 125 levels, USG, CT/MRI etc) .Multidisciplinary team was involved in management of these patients including Gynaecologist, Anaesthesist, Surgeon and Oncologist. Preoperative anaesthesia evaluation and fitness was done. Staging laprotomy was done in all cases for assesment of stage of disease. All patients underwent Total Abdominal Hysterectomy with bilateral salpingo-opherectomy. In few advanced cases maximum cytoreductive surgery was done with later on referral for chemotherapy. Specimens were sent for histopathology and patients were kept on followup. Histopathology report was followed and accordingly after assesment of disease patients were referred for chemotherapy if required. All demographic data was recorded to evaluate results including age at presentation, CA-125 levels, stage of the disease, menopausal status of the patients, surgical management and further referral for chemotherapy and histopathological diagnosis.

RESULTS

The mean age of presentation of the 30 cases was 49.2 years (SD 13, range 4-82 years) with 93.33% patients over 40 years of age and 6.66% of patients below 40 years (Table 1)

Table 1: Age at Presentation

Age	=n	%age
>40 Years	28	93.33
<40 Years	2	6.66

Common histological subtype was serous cystadenocarcinoma accounting for 43.3% of the cases followed by mucinous cystadenocarcinoma which were 26.6% of the cases (Table 2).

Most patients presented with an advanced disease. Nearly 14(46.6%) of the patients presented in stage 3 and 7(23.3%) in stage 4 of the disease, as depicted in Table 3.

66.6% of the patients were post-menopausal while 33.3% of the patients were pre-menopausal (Table 4). 73.3% of the patients had raised serum CA-125 level above 35iu/l while 26.6% had serum CA-125 levels below 35iu/l(Table 5).

Table 2: Histopathological Subtype

Histological Subtype	=n	%age
Serous cystadenocarcinoma	13	43.3
Mucinous cystadenocarcinoma	8	26.6
Endometroid adenocarcinoma	4	13.3
Clear cell cystadenocarcinoma	2	6.66
Undifferentiated adenocarcinoma	2	6.66
Papillary adenocarcinoma	1	3.33

Table 3: Stage of presentation

Stage	=n	%age
Stage I	3	10
Stage II	6	20
Stage III	14	46.6
Stage IV	7	23.3

Table 4: Menopausal Status

Menopausal Status	=n	%age
Post-menopausal	20	66.6
Pre-menopausal	10	33.3

Table 5: CA-125 Levels

CA-125 Levels	=n	%age
>35iu/l	22	73.3%
<35iu/l	8	26.6%

DISCUSSION

Ovarian cancer ranks among the ten commonest cancers in Pakistani women[3]. Their ranking varied from second to fifth in various Pakistani studies[3,8,9]. The number of cases reported in different series ranged from 61 to 855[3]. The present series reports 30 ovarian tumors which were of epithelial origin and have been further analyzed.

Mean age (49.2years) at diagnosis of Pakistani patients with ovarian cancer is similar to the women in South Asian countries[3,10.11]. This finding contrasts with the western data, which report that the majority of malignant ovarian tumors occur in the 5th to 7th decade range of life[10,12]. Reason remains un-established, however, genetic as well as environmental factors may be operative[3,6].

Epithelial ovarian tumours are the most frequent subtype of the ovarian tumours.Though there is no population-based information available on the prevalence of ovarian cancers in Pakistan, there are a few hospital-based cancer registries that have been published. Prevalence of epithelial tumors is reported to be around 90% in the western literature[13]. At another hospital in Pakistan, Ahmed and colleagues have reported the hospital prevalence of epithelial ovarian tumors to be 64%[3]. Similarly, the hospital

cancer registries in India have reported 66% to 70% prevalence of ovarian epithelial tumors[14,15].

To date, there is no reliable method to screen for ovarian cancer; therefore, the majority of cases are diagnosed at a late stage in the natural history of the disease[6]. This situation is compounded in developing countries where there is limited access to health care resulting in advanced, complicated disease at presentation. The disease stage at presentation in our study is similar to the data from the South Asian countries and Pakistan[3,10,11]. However, due to late presentation and lack of awareness in Pakistan, the stage of presentation is higher compared to that seen in the west[3,10,6].

The ratio of the disease in post-menopausal to pre-menopausal was high and was similar to what has been reported in other studies[16,6]. Whether population-based findings will be similar to ours, as compared to the western data[1,6], is yet to be sought as our subjects may not be entirely representative of all patients diagnosed with epithelial ovarian cancer in Pakistan.

In conclusion, since ovarian cancer has been reported to be the leading cause of death from gynecologic cancers and there is insufficient information about the epidemiology of epithelial ovarian cancer in the country, there is a need to conduct a large, population based study in Pakistan in order to lay the foundation for prevention, and control of cancer of the ovary in the region.

REFERENCES

1. Jacobs IJ, Menon U (2004). Progress and challenges in screening for early detection of ovarian cancer. Mol Cell Proteomics, 3,355-66.
2. Aziz Z, Sana S, Saeed S, Akram M (2003). Institution based tumor registry from Punjab: five year data based analysis. J Pak Med Assoc, 53, 350-3.
3. Ahmad Z, Kayani N, Hasan SH, Muzaffar S, Gill MS (2000). Histological pattern of ovarian neoplasma. J Pak Med Assoc,50, 416-9.
4. Kauff ND, Satagopan JM, Robson ME, Offit K (2002). Risk-reducing salpingo-oophorectomy in women with a BRCA1 or BRCA2 mutation. N Engl J Med, 346, 1609-15.
5. Malik IA (2002). A prospective study of clinico-pathological features of epithelial ovarian cancer in Pakistan. J Pak Med Assoc, 52, 155-8.
6. Bhoola S, Hoskins WJ (2006). Diagnosis and management of epithelial ovarian cancer. Obstet Gynecol, 107, 1399-410.
7. Christie M, Oehler MK (2006). Molecular pathology of epithelial ovarian cancer. J Br Menopause Soc, 12, 57-63.
8. Alam I, Waqar F, Khan A, Begum N (2001). Prevalence and management of ovarian tumors in Women and Children Hospital, Abbottabad. J Ayub Med Coll Abbottabad, 13, 19-21.
9. Liede A, Malik IA, Aziz Z, et al (2002). Contribution of BRCA1 and BRCA2 mutations to breast and ovarian cancer in Pakistan.Am J Hum Genetics, 71, 595-606.
10. Arai M, Utsunomiya J, Miki Y (2004). Familial breast and ovarian cancers. Int J Clin Oncol, 9, 270-82.
11. Yamashita Y, Sagawa T, Fujimoto T, et al (1999). BRCA1 mutation testing for Japanese patients with ovarian cancer in breast cancer screening. Breast Cancer Res Treat, 58, 11-7.
12. Jones MB (2006). Borderline ovarian tumors: current concepts for prognostic factors and clinical management. Clin Obstet Gynecol, 49, 517-25.
13. Guppy AE, Nathan PD, Rustin GJ (2005). Epithelial ovarian cancer:a review of current management. Clin Oncol (R Coll Radiol), 17, 399-411.
14. Gatphoh ED, Darnal HK (1990). Pattern of ovarian neoplasm in Manipur. J Indian Med Assoc, 88, 338-9.
15. Tyagi SP, Maheswari V, Tyagi N, et al (1993). Solid tumors of the ovary. J Indian Med Assoc, 91, 227-30.
16. Christie M, Oehler MK (2006). Molecular pathology of epithelial ovarian cancer. J Br Menopause Soc, 12, 57-63.