

Study of ovarian tumours in Nepal Medical College Teaching Hospital

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ABSTRACT

This was a retrospective study of all the cases of ovarian tumours operated in Nepal Medical College Teaching Hospital from January 2006 to July 2008. All the cases of ovarian tumour were included, irrespective of whether diagnosed preoperatively or found incidentally during operation. The nature of tumour whether benign or malignant, their presenting symptoms, age, parity age of menarche, type of operation and histopathological finding was recorded. The incidence of ovarian tumour was 16.7% among total gynaecological admissions, out of which malignant ovarian tumour was 9.5%. The age range was 18 to 70 years. Benign tumour occurred in all age group 86 (90.5%) while maximum of malignant tumour occurred after 40 years (66.7%). Eleven point six percent were unmarried, 20.0% nulliparous, 7.4% were pregnant and 38.9% were of one to two parity. 10.0% were asymptomatic and commonest symptom was pain in lower abdomen (84.0%). Seventy two point six percent were surface epithelium tumour which is common in older women. Twenty seven percent were germ cell tumour which is common in younger age group. Commonest surface epithelial tumour was serous cyst adenoma (40.0%) and commonest germ cell tumour was Dermoid (25.3%). Commonest complication of ovarian cyst was torsion (12.6%).

Keywords: ovarian tumour, benign, malignant, NMCTH.

INTRODUCTION

Ovarian neoplasm is the most fascinating tumour of the women in terms of its histogenesis, clinical behaviour and malignant potentiality. It has been mentioned that ovarian tumors account for 15.0% to 25.0% of all primary malignancy in female genital organ.¹ It is labelled as the common cause of death from gynaecological malignancies. Ovarian neoplasm can occur in all age groups and no age is exempted. In young women, the most common benign ovarian neoplasm is germ cell tumour and among the older women epithelial cell tumour is common. The percentage of benign ovarian neoplasm change with the age of the women.²

As ovary is an intra abdominal organ, diagnosis of ovarian malignancy is often late. Unlike cervical cancer, identification of high risk population for ovarian malignancy and ideal screening method is not available. Hence, an attempt to study aetiopathological factors of ovarian neoplasm is done in this study to identify the high risk population, so that subsequent screening procedures may be undertaken periodically which would help to diagnose the neoplasm at its earliest stage for better prognosis.

MATERIALS AND METHODS

It was a retrospective study of all the cases of ovarian tumours operated in Nepal Medical College Teaching Hospital from 1st January 2006 to 31st July 2008 (two

years and seven months). All the cases of ovarian tumours were included, whether diagnosed preoperatively or found incidentally during operation. Information about age of menarche, type of operation and nature of the tumour whether benign or malignant were recorded. Histopathology report of each tumour was recorded from pathology department. World Health Organisation classification of ovarian tumour was used for classifying the tumours.³ Then analysis was done to find out the correlation between type of tumour and patient characteristics.

RESULTS

There were total 568 gynaecological patient admitted during the period January 2006 to July 2008 (two years and seven months). There were 95 patients with ovarian tumours. Thus the incidence of ovarian tumour came out to be 16.7%. Among those cases, 86 (90.5%) of ovarian tumors were benign and 9 (9.5%) were malignant. The age range of the cases was 18 to 70 years. Frequency of ovarian tumors in different age group is given (Table - 1). Three (3.2%) patient were of adolescence group. The ovarian tumour is common in all age group but malignant tumour is common after 40 years (Fig.1). There were 11 (11.6%) unmarried women, 19 (20.0%) nulliparous, 7 (7.4%) were pregnant. Thirty seven patient (38.9%) were of parity one to two, 22 (23.2%) were of parity three to four and 17 (17.9%) patient of parity five or more. Considering the age of menarche, maximum 87 (91.6%)

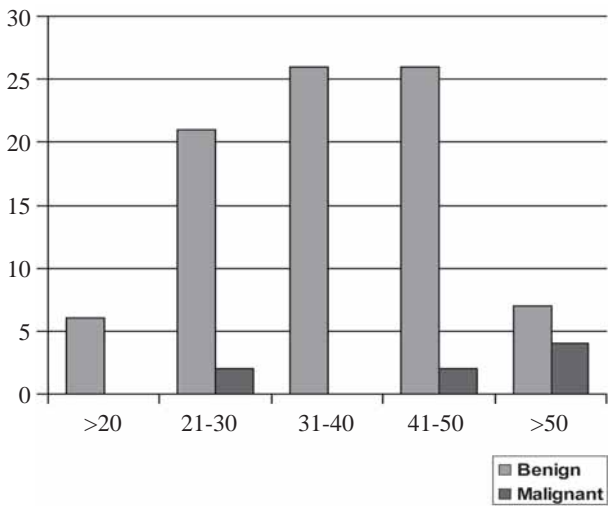


Fig. 1. Frequency in percentage of benign and malignant ovarian tumours in different age groups

of patient had menarche at the age of between 13 to 16 years. There were 10 (10.5%) without symptoms. Seventy seven (84.0%) patient presented with pain in lower abdomen, 10 patient (10.5%) patient with distension of abdomen, 8 (8.4%) patient with mass in abdomen, 12 (12.6%) patient with menstrual abnormalities and 3 (3.2%) with urinary complications, 1 (1.1%) patient with backache and 1 (1.1%) patient with postmenopausal bleeding. Many patient had more than one symptoms. Thirty seven (38.9%) patient underwent total abdominal hysterectomy (TAH) with bilateral salpingo-oophorectomy (BSO), 10 (10.5%) had TAH with unilateral salpingo-oophorectomy (SO), 28 (29.0%) with SO, 10 (10.5%) had enucleation of the cyst, 8 (8.4%) had cystectomy and 2 (2.1%) patient underwent debulking operation. There were 69 (72.6%) surface epithelium ovarian tumour and 26 (27.4%) germ cell tumour. Among the surface epithelial tumour, maximum were serous cyst adenoma 38 (40.0%), 26 (27.4%) were mucinous cyst adenoma, 3 (3.2%) were Brenner and 2 (2.1%) were Fibroma. As for germ cell tumour, 24 (25.3%) Mature teratoma, 1 (1.1%) Dsgerminoma. Surface epithelial tumour is common in older women and germ cell tumour is common under 40 years (Table -1). Commonest complications of the tumour were torsion 12 (12.6%), 11 (11.6%) infection of the cyst, 9 (9.5%) had malignancy and 3 (3.2%) had intracystic haemorrhage.

DISCUSSION

In our study, out of 95 patient with ovarian tumour 90.0% were benign and 10.0% were malignant. This finding is similar to study done by Jha and Karki⁴ where 16.0% of the tumour were malignant. In the studies done in Western countries, 20.0% to 25.0%² of ovarian tumour were malignant which is higher than in Asian countries.

Ovarian tumour is common in all age group. No age is exempted. In our study, the range of age is 18 to 70 years. Three percent of patient were in adolescence group. This is comparable to study done by Deshpande and Badjatiya⁵ where the incidence of ovarian tumour in adolescent group is 4.2%. In our study, 50.0% patient were under 40 years. Maximum of the patient with malignancy were over 40 years (66.7%) which is comparable to study done by Chakrabortti and Lee.⁶ Other study also shows that most ovarian tumour occurs in women of reproductive age group. Peak incidence of ovarian tumour is between 21 to 40 year.⁷ Benign ovarian tumour occur in all age group where as malignant ovarian tumours are more common in elderly.⁸ Fifty eight point nine percent tumors occurred in nulliparous and low parity (1 to 2) women in this study which shows that nulliparity and low parity is significant risk factor. Ovarian tumour is associated with early menarche according to Hildreth *et al*⁹ but contrast to this statement 91.7% of our patient had their menarche after 13 years of age.

Ovarian tumour can be asymptomatic, or can present with pain in abdomen, distension of abdomen, mass in abdomen, pressure effect or menstrual disturbance. In our study, 10.5% of the patient were asymptomatic. They were diagnosed incidentally by routine ultrasonogram or during operations done for some other conditions. The ovarian tumour is also known as silent killer. The danger of ovarian neoplasia is its silent feature, unless it is large enough to produce symptoms when it is too late for any scope of therapy. In a study done by transvaginal ultrasound, among healthy asymptomatic women 6.0% were found to have ovarian neoplasia.¹⁰ The presenting symptoms of ovarian neoplasia are not specific and are often accepted by women as normal changes associated with ageing, menopause and previous pregnancy.¹¹ In our study lower abdominal pain was the commonest symptom where as many studies done in western world

Table-1: Frequency of different type of ovarian tumours according to age groups

Type of ovarian tumour	Age group of the patient (yrs)				
	<20	21-30	31-40	41-50	>50
Surface epithelium	5 (5.3%)	5 (5.3%)	24 (25.3%)	24 (25.3%)	11 (11.6%)
Germ cell	1 (1.0%)	22 (23.2%)	2 (2.1%)	1 (1.0%)	0 (0.0%)

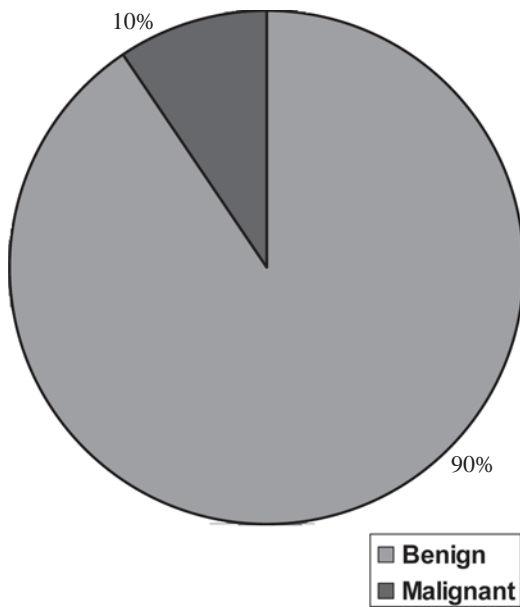


Fig. 2. Type of ovarian tumour

found that distention of abdomen (bloating) is commonly associated with ovarian tumour.¹²⁻¹⁵

There were 12 patient with bilateral tumors in this study. Out of 9 malignant tumours 6 had bilateral tumour indicating bilaterality is significant risk factor for malignancy . Surface epithelial tumour accounts for 72.6% cases which is comparable to study from neighbouring countries like India⁷and Pakistan¹⁶ where surface epithelial ovarian tumour comprised of 70.9% and 63.5% respectively. In this study, Serous tumour constituted commonest (40.0%) of all ovarian tumours. This incidence was 42.9%⁷ and 32.7%¹⁷ in other studies. Mucinous tumour here comprised 27.4% of ovarian tumours where as this figure was 25.5%⁷ and 25.0%¹⁷ in other studies. In the studies found that germ cell tumour comprised 27.4% where as Sah¹⁸ and Kooning² found germ cell tumour to comprise 43.4% and 44.0% of all ovarian tumour respectively.

Thus benign ovarian tumour is common in all age group whereas malignant ovarian tumour is common after 40 years. Nulliparity and low parity are significant risk factors for ovarian tumour. Bilaterality is another important risk factor. Commonest ovarian tumour is surface epithelial tumour in which serous type is most

common. As for Germ cell tumour, mature teratoma is commonest which occurs in younger women. Since the sample size is small, the result may not reflect the actual findings, we need to carry prospective study in larger number of patient.

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