CLINICOPATHOLOGICAL STUDY OF OVARIAN TUMOURSVedavathy Nayak¹, Sreelatha S², Vani B. R³, Shobarani⁴**HOW TO CITE THIS ARTICLE:**

Vedavathy Nayak, Sreelatha S, Vani B. R, Shobarani. "Clinicopathological Study of Ovarian Tumours". Journal of Evolution of Medical and Dental Sciences 2014; Vol. 3, Issue 53, October 16; Page: 12230-12233, DOI: 10.14260/jemds/2014/3616

ABSTRACT: Ovarian tumours are a common finding in gynecology mainly due to the increasing use of routine ultrasound technology. They are important because of their varied clinical and histopathological presentations. This study was done to assess their age incidence, modes of presentation and histopathological appearance. **METHODS:** This retrospective study was conducted between January 2012 and December 2012 in the Department of Gynaecology, ESICMC & PGIMSR, Bangalore. 95 cases of ovarian tumours were studied and the age of occurrence, clinical presentation and histopathological appearance were studied. **RESULTS:** Among 95 cases, majority were in the reproductive age group and majority were benign tumours, commonest being serous cystadenoma. Pain abdomen was the major presentation. **CONCLUSION:** Ovarian tumours can present variously both clinically and histopathologically and histopathological appearance is important not only for diagnosis but also for prognosis.

KEYWORDS: Ovarian tumours, epithelial tumors, cystadenoma, teratoma.

INTRODUCTION: Ovarian masses are a common finding in general gynecology. Of these, neoplasms constitute a significant number, and most are benign. Varied histopathologic patterns are seen in ovarian tumours reflecting their diverse cell origins. The incidence of ovarian tumours varies only slightly according to region and ranges from 5 – 15%. Benign ovarian tumours may occur at any age but are most common in the reproductive age group and constitute 90% of ovarian tumours. Ovarian cancer ranks among the top ten diagnosed cancers and top five deadliest cancers in most countries. ⁽¹⁾

The average age at diagnosis of ovarian cancer is 60 years.

It is important to determine the histopathological pattern of ovarian tumours from a diagnostic as well as prognostic point of view. In this study, we studied the age incidence, clinical manifestations and histopathological pattern of ovarian tumours prevalent in our population.

MATERIALS AND METHODS: In our retrospective study, 95 cases of ovarian tumours were studied over a period of one year from January 2012 to December 2012 in the Department of Gynaecology, ESICMC & PGIMSR, Bangalore. Brief patient's clinical data was retrieved and the age incidence and various clinical presentations were documented. The frequency of various histopathological patterns was determined.

RESULTS: A total number of 95 cases of ovarian tumours were studied. Among these 93 were benign, 1 was borderline and 1 malignant tumor. Among the benign tumours 42 (44.2%) were seen in patients between 31 and 40 years of age followed by 26 (27.4%) which were seen in the 21 to 30 age group. The youngest patient in our study was 13 years old while the oldest was 70 years old. Therefore the 20 -40 year age group comprised 71.6% of all patients with ovarian tumours in our study.

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The commonest clinical presentation was pain abdomen 63(66.52%), followed by abdominal distension 14(17.13%), mass per abdomen 8 (8.68%), menstrual disturbance 6 (6.01%) and GI symptoms 2 (1.66%). Pregnancy was associated in 2 cases while torsion was found in 6 cases. Infertility with one of the above symptoms was seen in 4 cases.

Symptoms	Cases	Percentage
Pain abdomen	63	66.52
Abdominal Distension	14	17.13
Mass per abdomen	8	8.68
Menstrual disturbance	6	6.01
Gastrointestinal symptoms	2	1.66
Table 1: Clinical Presentation of the Cases (n=93)		

The frequency of different histopathologic types of benign ovarian tumors was serous cystadenoma 38 (40.86%) followed by mucinous cystadenoma 20 (21.50%), mature cystic teratoma 13 (13.97%), simple non-neoplastic cysts (functional cysts) 8 (8.60%) and endometriomas 7 (7.52%).

Type	Number	Percentage
Surface Epithelial Tumor	58	62.36
Serous cystadenoma	38	40.86
Mucinous cystadenoma	20	21.50
Germ Cell Tumor	13	
Mature cystic teratoma	13	13.97
Sexcord Stromal Tumor	5	
Granulosa cell tumor	2	5.37
Sertoli cell tumor	1	
Fibroma	2	
Simple non-neoplastic cysts	8	8.60
Endometrioma	7	7.52
Ovarian leiomyoma	2	2.15
Table 2: Distribution of benign ovarian tumours according to histological type (n=93)		

DISCUSSION: The incidence, clinical presentation and histopathological appearance of different types of ovarian tumors is extremely variable. It is generally impossible to diagnose the nature of the ovarian tumor just by clinical examination. Routine use of ultrasound in gynecological examinations has led to the frequent detection of ovarian cysts. Large cysts, those with multiloculation, solid component, septa, papillae and increased blood flow should be suspected of neoplasia. Symptomatic cysts need to be evaluated promptly and surgical intervention becomes necessary in the presence of pain or suspicion of torsion.

In our study, the 20 – 40 age group comprised 71.6% of all patients with ovarian tumours. A similar age incidence is reported by Swamy GG et al⁽²⁾ and by Bhattacharya MM et al.⁽³⁾

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The commonest presenting symptom in our study was pain abdomen followed by abdominal distension and mass per abdomen. The results comply well with a study by Yasmin et al ⁽⁴⁾ and Rashid S ⁽⁵⁾. In contrast, in studies by Jamal et al ⁽⁶⁾ the commonest mode of presentation was bleeding per vaginum.

Among the histologic types, 93 were benign, 1 borderline and 1 malignant tumor. Epithelial tumours were predominant among the benign group followed by germ cell tumours. Serous cystadenomas were found to be more common than mucinous cystadenomas in our study. This compares well with studies by Swamy GG ⁽²⁾ and Prabhakar et al.⁽⁷⁾

In a study by Yasmin et al mature cystic teratomas were the 2nd commonest after serous cystadenomas. In studies by Yasmin et al ⁽⁴⁾ and Swamy GG ⁽²⁾ et al the incidence of malignant tumours were 10% and 25% respectively. The low incidence of malignant (n=1) and borderline (n=1) tumours in our study may perhaps be attributed to referral of patients with increased levels of tumor markers, clinical and ultrasound suspicion of malignancy to a separate gynaecologic oncology unit for integrated management. In 6 cases, laparotomy was done for torsion of the cysts and their histopathological patterns were serous cystadenoma – 4 and simple nonneoplastic cyst – 2.

CONCLUSION: Benign ovarian tumours are most common in the reproductive age group. Epithelial ovarian tumours are the commonest followed by germ cell tumours. Despite continuous improvement in diagnostic methods, it is often impossible to clinically differentiate between benign and malignant conditions and histopathology remains the mainstay for not only diagnosis but also for prognosis of ovarian tumours.

REFERENCES:

1. Ferlay J, Shin H. R, Bray F, Forman D, Mathers C, Parkin KM. (2008) GLOBOCAN 2008 v1.2, Cancer incidence and Mortality Worldwide: IRTC Cancer Base No. 10 Internet. Lyon, France: International Agency for Research on Cancer: 2010.
2. Swamy GG, Satyanarayana N. Clinicopathological analysis of ovarian tumours – A study on five years samples. Nepal Med Coll J 2010; 12 (4): 221-23.
3. Bhattacharya MM, Shinde SD, Purandare VN. A clinicopathological analysis of 270 ovarian tumours. J Postgrad Med 1980; 26:103.
4. Yasmin S, Yasmin A, Mohammad Asif. Clinicohistological pattern of ovarian tumours in Peshawar region. J Ayub Med Coll Abbottabad 2008; 20 (4):11-13.
5. Rashid S, Sarwar G, Ali A. A clinicopathological study of ovarian cancer. J Pak med Assoc 1998; 36: 117-25.
6. Jamal S, Quddusi H, Mehmood A. A Clinico Histopathological analysis of 110 ovarian tumours. Pak J med Sci 1997; 14: 19-23.
7. Prabhakar BR, Maingi K. Ovarian tumours – Prevalence in Punjab. Indian J Pathol Microbiol 1989; 32: 276-81.

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Serous Cystadenoma

Mature Cystic Teratoma

Mucinous Cystadenoma

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Date of Submission: 25/09/2014.
Date of Peer Review: 26/09/2014.
Date of Acceptance: 09/10/2014.
Date of Publishing: 14/10/2014.