Validity of Clinical Signs and Symptoms in Diagnosis of Ovarian Mass

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Abstracts: Objective: The main aim for undertaking this study was to find out what was the appropriateness of clinical diagnosis of benign ovarian tumor and compare the results after Histopathological study. **Material And Methods:** Retrospective files study of 240 cases was carried out to analyze the clinical signs and symptoms and evaluation done of clinical findings, tumour marker study, ultrasonography, and the plan of treatment. **Results:** Laparotomy was done in 200 cases, clinically ovarian masses were diagnosed as benign in 75%, by Tumor marker i.e. CA125 in 80%, by sonography in 70% and by histopathology in 83%. The study was statistically analyzed. The values in diagnosis of ovarian mass clinically and comparing with other parameters was significant p value<0.05. **Conclusion**: Clinical signs and symptoms are still important predictors in reaching the diagnosis of benign Ovarian Mass. [Saluja J NJIRM 2014; 5(4) :67-71]

Key Words: Ovarian Tumours, validity of clinical findings in ovarian mass

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Introduction: Incidence of ovarian tumour in Gynecology Department admission is 1-3%, commonly found particularly in women between age 30 to 60 years. About 80% are benign and rest malignant1. There are no diagnostic means currently available that make it possible to assure with certainty whether an ovarian tumour is benign or malignant. Although some techniques such as Echo-Doppler, Transvaginal ultrasonography, and Magnetic Resonance Imaging (MRI) have greatly reduced diagnostic error. Clinical examination of tumor has importance, to differentiate benign from malignant1. All ovarian masses are not malignant, and need to have provisional diagnosis before Laparotomy. Benign ovarian tumours are unilateral, mobile, have smooth surface, defined margins, cystic on palpation, and hypoechoic on sonography. In contrast malignant tumours are hard, irregular and fixed, and on sonography, solid mostly bilateral tumors strongly indicate ovarian cancer2. At least one third of ovarian cancer patients present with ascites3, 4, Serum C.A. 125 even though not a specific marker is most commonly used in patient with ovarian cancer. Value of above 65 U/ml is suggestive of Epithelial Ovarian Cancer and falls after surgical resection. It is useful to monitor patient during chemotherapy and follow up.

Aims and Objectives: To compare the documented clinical impression of ovarian mass, with tumour marker and ultrasonography reports and the findings of histopathology.

Material and Methods: The retrospective analysis of 240 cases was carried out which were admitted for ovarian mass in Department of Obstetrics and Gynaecology C.R Gardi Medical College, Ujjain. Case files study was done with the following parameters: Age of patient, socio-economic and demographic data, history, general examination, detailed abdominal and bi-manual examination about nature of mass and provisional diagnosis made.

Routine investigations, special investigations viz, CA-125, Ultrasound, Ascitic fluid study in selected cases and after complete evaluation, treatment that was planned and carried out. Laparotomy was done in 200 cases, rest dropped due to various reasons.

Observations: The observations are given below.

Table 1: Socio-Demographic Data

Characteristics of subjects		n=240	Percentage
Age yrs.	>25	192	80
	<25	48	20
Socioeconomic status (income/annum)	<5000	168	70
	>5000	72	30
Address	Rural	168	70
	Urban	72	30

80% were above 25 yrs of age, 70% were of low socio-economic status and rural

Table 2: Morphological Features Of Tumor

Morphological features		n=240	Percentage
Uni / bilateral.	Unilateral	192	80
	Bilateral	48	20
Size	<10cm	168	70
	>10cm	72	30
Surface	Smooth	192	80
	Nodular	48	20
Margins	Well defined	168	70
	Undefined	72	30
Mobility	Mobile	192	80
	Immobile	48	20
Consistency	Cystic	192	80
	Firm	48	20
Ascitis	Absent	156	65
	Present	84	35

70% cases had tumor size less than 10cm and well defined margins, 80% of tumor were unilateral, smooth surface cystic and mobile., 65% had no ascitis. Clinically benign – 75% benign ovarian tumours are usually less than 10 cm size, unilateral, mobile, have smooth surface, defined margins, cystic on palpation, and no ascitis.

Table 3: Results Obtained Clinically, By CA125, Sonography and Histopathology

Parameters		NO	Percentage
Clinical Diagnosis (n=240)	Benign	180	75
	Malignant	60	25
USG Diagnosis (n=240)	Benign	168	70
	Malignant	72	30
CA-125 (n=240)	<65U/ml(Benign)	192	80
	>65U/ml(Malignant)	48	20
Histopathology (n=200)	Benign	166	83
	Malignant	34	17

Clinically 75% benign, Ultrasound reported 70% as benign, According to tumour marker (CA-125) 80% benign, and by Histopathology 83 % benign.

Table 4: Correlation of clinical benign tumors with other parameters

Cases - benign clinically, and Sonography ------ 70%
Cases - benign clinically, and CA125 ----------75%
Cases - benign clinically, and Histopathology-- 83%

A) Number of Cases Benign Diagnosed Both Clinically and Sonography Study, (N= 240)

Clinically	Sonography	%
168	168	70

B) Number of Cases Benign Diagnosed Both Clinically and Tumour Marker Study (N= 240)

Clinically	CA 125	%
180	180	75

C) Number of Cases Benign Diagnosed Both Clinically and HPE Report, (N= 200)

Clinically	HPE Report	Percentage
166	166	83

Mc-Nemar Chi Square Analysis:

Table 6: Statistical Analysis Clinically And Sonography

Sonographically	**Clinically**		
	Benign	Malignant	Total
Benign	168	00	168
Malignant	12	60	72
Total	180	60	240

Significant p value=0.00020

Table 7: Statistical Analysis Clinically And C.A.125

CA 125	Clinically		
	Benign	Malignant	Total
Benign	180	12	192
Malignant	00	48	48
Total	180	60	240

Significant p value = 0.00048

Table 8: Statistical Analysis Clinically and Histopathology

Histopathologically	Clinically		
	Benign	Malignant	Total
Benign	156	00	156
Malignant	10	34	44
Total	166	34	200

Significant p value= 0.00019

Results: In above series Observations 80% were above 25yrs, 70% were of low socio economic status, and rural 70% size 10cm or less and well defined margins and 80% had smooth surface,

Mobile, unilateral, and cystic..65% had no ascitis Results Benign ovarian masses were diagnosed 75% clinically, 70% sonographically, 80% by Tumor marker CA125 and 83% Histopathologically after laparotomy. Mc-Nemar, chi-square test was used to test the results obtained for diagnosis was ovarian mass clinically, CA 125 study, sonography and histopathology study which showed the p values < 0.05 , There was not much significant differences found between diagnosis of clinical finding of ovarian mass and other investigating parameters as CA125and sonography. Histopathology reports confirmed the clinical findings. It shows that clinical signs and symptoms are important predictors in diagnosis of ovarian mass. They have definitely appropriateness in diagnosis of ovarian mass.

Discussion: Age, clinical and ultrasound features of the tumor and the serum level of CA 125 were important in evaluating the nature of the neoplasm but were not significant to firmly establish the diagnosis. It is useful in postmenopausal patients with an ultrasonagraphically suspicious pelvic mass. Results of work up are important in determining management. Premenopausal patients with an asymptomatic cystic mass smaller than 10cm can be followed, because 70% of these masses resolve 5 Several studies have shown that Monophasic OC are associated with suppression of functional cysts.5-7.But in Grimes and Jones study reported that the oral contraceptive pill is not recommended,as its use has not been shown to promote the resolution of functional ovarian cysts 8.

Currently only 30% of ovarian malignancy patients are diagnosed in these early stages. [9] No effective screening test exist [10]so the main prospect for earlier diagnosis is improved identification of symptomatic cancer[10]. An International multi centred study[11] found that post menopausal patients with an asymptomatic simple ovarian cyst less than 3-5cm in diameter and a normal serum CA-125 level had a 0% risk of malignancy Several conditions where level of CA-125 raised, as in normal woman1%, carcinoma of endometrium, breast, lung, colon, and, endometriosis, pelvic inflammatory diseases, peritonitis, TB ,The CA125 which is elevated in more than half of of early and two thirds of advanced epithelial ovarian malignancy[12.] Abdominal tuberculosis at times is mistaken for ovarian cancer especially elevated CA125 in peritoneal tuberculosis, which is traditionally considered a marker for ovarian cancer, makes it even more difficult to differentiate the two[13] it can be increased in peritoneal TB [13-14.] Level lower than 65U/ml definitely indicates presence of benign mass. Value greater than 65U/ml has been shown to have positive predictive value of 97percent [15] It is best to obtain both transvaginal and abdominal sonograms to evaluate a pelvic mass. Transvaginal ultrasonography has several advantages in that it provides improved resolution of pelvic structures with less artifacts and doesn't require a distended bladder for visualization.[16] Women with small (less than 50 mm diameter) simple ovarian cysts generally do not require follow-up, as these cysts are very likely to be physiological and almost always resolve within three menstrual cycles. [17]Women with simple ovarian cysts of 50-70 mm in diameter should have yearly ultrasound follow-up and those with larger simple cysts should be considered for either further imaging (MRI) or surgical intervention[18] In a postmenopausal patient, a persistent simple cyst smaller than 5 cm in dimension in the presence of a normal CA-125 value may be monitored with serial ultrasonography examinations. However, ovarian cysts that persist or increase in size are unlikely to be functional and may need surgical management. Magnetic resonance imaging appears to be promising in the diagnosis of malignant ovarian tumors, including borderline tumors [19] So also CA 125 has not been useful in the diagnosis of borderline tumours.[19] Findings of the Surveillance, Epidemiology and End Results (SEER) Program of the National Cancer Institute. . According to the data, the mortality rates for ovarian cancer have not improved in forty years since the "War on Cancer" was declared. However, other cancers have shown marked reduction in mortality, due to the availability of early detection tests and improved treatments. Unfortunately, this is not the case with ovarian cancer, which is still the deadliest of all gynecologic cancers Ovarian cancer accounts for approximately three percent of cancers .in women and it is fifth leading cause of cancer-related death among women, and is the deadliest

of gynecologic cancers A woman's lifetime risk of developing invasive ovarian cancer is 1 in 72. And lifetime risk of dying from invasive ovarian cancer is 1 in 95. Ovarian malignancy is a silent killer, especially affecting women above 50 year. Until recently, it was considered to have few symptoms, it is not silent, and rather its sound is going unheard. . Most ovarian neoplasms have typical highly predictive sonographic appearance. A small percentage of benign and malignant masses have similar sonographic findings so that a reasonably confident diagnosis by ultrasound may be difficult. However, the expertise of the ultrasonographer is a factor in arriving at a likely histological diagnosis [20] . The presentation of such symptoms is usually to primary care[21] Several recent studies have shown that symptoms are common, though they often go unrecognised by women and doctors[21] Symptoms require more traditional primary care skills: history taking, examination.

Conclusion: Detailed clinical examination forms integral part for diagnosis of ovarian mass. The varied clinical presentation is peculiar to ovarian tumors. Although presentation is often vague and non specific, symptoms are definitely present. Differentiation between benign and malignant ovarian tumours can be made by clinical examination, final diagnosis and staging by laparatomy and HPE. The place of clinical diagnosis is fairly valid in reaching appropriateness of diagnosis of ovarian neoplasm before doing laparotomy.

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