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Study of Co-Relation of USG Diagnosis with Clinical Diagnosis of Ovarian Masses at Tertiary Health Care Center

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Abstract

Introduction: The advent of ultrasonography has revolutionized the screening and diagnostic realm., Specially in the field of gynecology for early reporting. Gynecological ultrasound is one of the most accurate imaging techniques in clinical practice. *Aims and Objectives:* To Study co-relation of USG diagnosis with clinical diagnosis of ovarian masses at tertiary health care center. *Methodology:* After approval from Institutional ethical committee, this prospective study was conducted at department of Obstetrics and Gynecology during the period of September 2013 to September 2015 on 100 women who were randomly selected among the women attending the hospital's Obstetrics & Gynecology OPD. .A detailed history of presenting complaints & associated symptoms was noted along with menstrual history. Patients were diagnosed clinically then by Ultrasonographically. *Result:* In the present study, out of the 100 women; maximum (36%) were within the age group of up to 25 years, 27% in 36 to45 years, 25% in 26 to 35 years, 6.0% in 46 to 55 years & 5% >55 years each Out of 100 women, 38% were para two, 30% were primipara 23% were nulliparous & 9% were para three. All benign ovarian cysts, benign ovarian tumors, dermoid cysst, malignant ovarian tumors on USG were diagnosed as adnexal mass clinically. Of 9 patients with functional cyst 6 were diagnosed as adnexal mass and 3 as no mass palpable, all with haemorrhagic cyst had no palpable mass, of 30 PCOS patients 11 were diagnosed clinically while 19 had no mass palpable diagnosis on clinical examination. Of 3 patients with chocolate cyst 2 had adnexal mass and 1 as no mass palpable on clinical diagnosis. *Conclusion:* The adnexal masses are detected clinically but the details of it only visible by sonography so all clinically suspected adnexal masses should be examined by ultrasonography.

Keywords: Benign Ovarian Cyst; Benign Ovarian Tumor; Dermoid Cyst; Malignant Ovarian Tumor; PCOS.

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Introduction

The advent of ultrasonography has revolutionized the screening and diagnostic realm, especially in the field of gynecology for early reporting. Gynecological ultrasound is one of the most accurate imaging techniques in clinical practice. It is characterized by easily availability, minimal invasiveness, fast execution, repeatability, tolerability, and low cost. The most important feature being it is free of ionizing radiation. Thanks to these characteristics ultrasonography is an important tool in the diagnostic approach to gynecological pathology. Ultrasound has completely changed the methodological approach to diagnosis of adnexal pathology, in particular those one from ovary. As ovarian pathology is often asymptomatic along with semilogic signs are poorly precise, It is the gold standard to study the ovary [1].

In the assessment of tumor extent in the pelvic and abdominal cavity and in the

evaluation of treatment effects as well as follow up after treatment, USG is useful. Observant sonologist will describe adnexal anatomy in great detail. Such a report can answer questions pertaining the consistency, content, extent, invasion of disease to add to it color flow Doppler gives a clue about the possibility of malignancy [2,3]. The targeted biopsy of suspicious masses and metastatic lesions has enabled fast and minimally invasive establishment of the tumor histology.

Clinical Examination

Physical examination findings can give information regarding the characterization of a pelvic mass. The gynaecological examination includes general physical examination of abdomen, pelvis & breast.On inspection, contour of the abdomen may be obliterated in gynaecological tumors, ascitis, acute abdomen etc. Palpatory findings can reveal Magnus amount of information regarding the tumor. Local temperature, tenderness, position, size, shape, surface consistency, movement of the lump & the relationship of tumor to other organs can be found. Soufflé may be heard over large tumour [4]. Pelvic examination includes examination of external genitalia, introitus, vagina & cervix, bimanual palpation & rectal examination. There is a growing body of evidence to suggest that many aspects of pelvic examination lack the sensitivity and reliability necessary to confidently rule out or rule in pelvic [5].

Aims and Objectives

To Study co-relation of USG diagnosis with clinical diagnosis of ovarian masses at tertiary health care center.

Methodology

After approval from Institutional ethical committee, this prospective study was conducted at department of Obstetrics and Gynecology during the period of September 2013 to September 2015 on 100 women who were randomly selected among the women attending the hospital's Obstetrics & Gynecology OPD with: Menstrual irregularities, Pelvic inflammatory disease, Chronic pelvic pain, Mass per abdomen underwent transvaginal transabdominal ultrasound. Those patients with palpable adnexal mass had ultrasonography to confirm ovarian mass. Patients with abnormal uterine bleeding, pain in abdomen in peri/post-menopausal age group were also subjected to transvaginal transabdominal ultrasound for ovarian imaging in addition to endometrial thickness. Post hysterectomy patients with mass per abdomenwere also

subjected to rule out ovarian malignancy. Pregnant patients,patients with tubal mass (hydrosalphnix, pyosalphnix, ectopic pregnancy etc.), patient with known history of ovarian disease were excluded from the study. Written informed consent obtained from each patient. A detailed history of presenting complaints & associated symptoms was noted along with menstrual history. Patients were diagnosed clinically, then by Ultrasongraphically.

Result

In the present study, out of the 100 women; maximum (36%) were within the age group of up to 25 years, 28% in 36 to45 years, 25% in 26 to 35 years, 6.0% in 46 to 55 years & 5% >55 years each

Out of 100 women, 38% were para two, 30% were primipara 23% were nulliparous & 9% were para three

All benign ovarian cyst, benign ovarian tumor, dermoid cyst, malignant ovarian tumor on USG were diagnosed as adnexal mass clinically. Of 9 patients with functional cyst 6 were diagnosed as adnexal mass and 3 as no mass palpable, all with haemorrhagic cyst had no palpable mass, of 30 PCOS patients 11 were diagnosed clinically while 19 had no mass palpable diagnosis on clinical examination. Of 3 patients with chocolate cyst 2 had adnexal mass and 1 as no mass palpable on clinical diagnosis.

Table 1: Age wise distribution of the Patients

Age group (years)	Frequency	Percent
Up to 25	36	36.0
26 to 35	25	25.0
36 to 45	28	28.0
46 to 55	6	6.0
>55	5	5.0
Total	100	100.0

Table 2: Parity wise distribution

Parity	Frequency	Percent
Nullipara	23	23.0
Para 1	30	30.0
Para 2	38	38.0
Para 3	9	9.0
Total	100	100.0

Table 3: Relation of USG diagnosis with Clinical diagnosis

USG Diagnosis	Clinical diagnosis			Total
	Adnexal mass	PCOS	No palpable mass	
Benign Ovarian cyst	21			21
Benign ovarian tumor	17			17
Dermoid cyst	11			11
Functional cyst	6		3	9
Haemorrhagic cyst			7	7
Malignant Ovarian Tumour	2			2
PCOS		11	19	30
chocolate cyst	2		1	3
Total	59	11	30	100

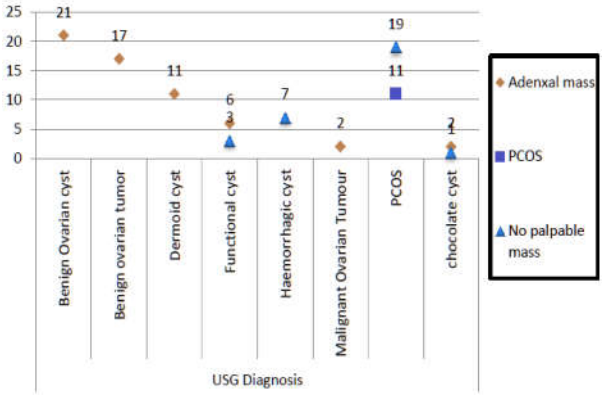

Fig. 1: Showing Relation of USG diagnosis with Clinical diagnosis

Discussion

Most benign tumours are cystic and finding of solid elements make malignancy more likely [6]. The most recent Surveillance, Epidemiology and End Results (SEER) calculations of lifetime risk for ovarian cancer are that 1 in 55 women will develop ovarian cancer over their lifetime [7]. Ovarian tumours are generally difficult to detect until they are advanced in stage or size, as the symptoms are vague and manifest over time. Ovaries are highly capable of producing both benign and malignant tumors throughout a woman's life. Due to the complex ovarian structure, histopathological (HP) findings of adnexal tumors can be quite different [8]. Although ovarian cancer is sixth in frequency among all malignant tumors, the mortality it takes has the leading place [9,10]. Numerous factors influence the development and growth of adnexal tumors such as heritage, hormones, alimentation, surrounding, etc. [11,12]. Ultrasound features of malignant ovarian masses are (Ameye et al., 2009 [6]): Cysts with thickened and irregular walls, internal septae (>3 mm), vegetation or papillary projections, cystic lesions greater than 10 cm diameter, presence of solid components or completely solid lesions. Other associated signs include ascites or peritoneal deposits. Based on these features (Sassone et al., 1991 [9]) derived a scale which focused on the features such as echo pattern of the lesion, presence or absence of papillary projection and septae, and wall thickness.

In our study we found thatout of the 100 women; maximum (36%) were within the age group of up to 25 years, 28% in 36 to45 years, 25% in 26 to 35 years, 6.0% in 46 to 55 years & 5% >55 years each. Out of 100 women, 38% were para two, 30% were primipara 23% were nulliparous & 9% were para three

Similar results were found by the study conducted by S.Pudasaini et al [15] where Ovarian cysts were more commonly seen in the age group 21-30years followed by the age group 31-40 years and then in females above 40 years which is significant. Considering the relation of the women's parity, most of the women in our study were parous. 23 % were nulliparous women and 77% were parous.

All benign ovarian cyst, benign ovarian tumor, dermoid cyst, malignant ovarian tumor on USG were diagnosed as adnexal mass clinically. Of 9 patients with functional cyst 6 were diagnosed as adnexal mass and 3 as no mass palpable, all with haemorrhagic cyst had no palpable mass, of 30 PCOS patients 11 were diagnosed clinically while 19 had no mass palpable diagnosis on clinical examination. Of 3 patients with chocolate cyst 2 had adnexal mass and 1 as no mass palpable on clinical diagnosis.

Conclusion

The adnexal masses are detected clinically but the details of it only visible by sonography so all clinically suspected adnexal masses should be examined by ultrasonography.

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