

ULTRASONIC STUDY VERSUS CLINICAL EXAMINATION IN PALPABLE LOWER ABDOMINAL MASSES IN FEMALES

P. CHADHA ● R. GUPTA ● M. PURI

SUMMARY

This is a prospective study on 50 female patients with lower abdominal masses. The accuracy of clinical examination versus ultrasonography was evaluated. On comparison, no statistically significant difference ($p > 0.05$) was found. However both were found complimentary to each other.

INTRODUCTION

Space occupying lesions in the female pelvis are very common. Often a careful and thorough bimanual examination by an experienced clinician would suffice for reaching an accurate diagnosis. However some cases pose a diagnostic problem and hence unnecessary delay in management of the same. With the availability of ultrasonography, a noninvasive diagnostic modality as an accepted part of modern gynaecologic practice, this study was conducted to evaluate the accuracy of ultra-sonography in conjunction with clinical evaluation in the diagnosis of gynaecological pathology as compared to the accuracy of clinical evaluation alone.

MATERIALS AND METHODS

*Dept. of Obst. & Gynec. M.A.M.C. New Delhi
Accepted for Publication on 27/8/91*

A prospective study was conducted on fifty patients of lower abdominal masses excluding normal pregnancy in the Department of Obstetrics and Gynaecology of MAMC and Associated LNJP Hospital, Delhi. A detailed history taking and clinical examination of each patient was conducted and a provisional diagnosis was made. The patient was then subjected to an ultrasonographic examination on a real time scanner ADR 4000SL employing both linear and sector scanners. Finally all the patients were subjected to diagnostic laparoscopy and/or exploratory laparotomy. A comparison was then made between the provisional clinical diagnosis and the impression formed on sonography with the findings on laparotomy / laparoscopy.

Diagnosis were divided into correct, false positive, false negative and mistaken. False positive clinical or sonographic diagnosis associated

TABLE I
Operative findings in study patients
n = 50

Normal pelvis	1
Uterine abnormality	21
Ovarian abnormality	21
Tubal abnormality	0
Tubal + ovarian	3
Uterine + Tubal	1
Uterine + ovarian	1
Others	2

with normal operative findings. False negative meaning cases in which a part or whole of the lesion had been missed and mistaken meaning positive clinical or sonographic diagnosis associated with discordant diagnosable operative findings.

RESULTS :

The details of the pre-operative diagnosis of the 50 patients included in the study confirmed on laparoscopy and/or laparotomy are listed in Table I depending on the site of origin of the mass.

TABLE 2
Comparison of clinical and sonographic diagnosis

	Clinical		Sonographic	
	n = 50	%	n = 50	%
Correct	36	72	40	80
Incorrect				
False negative	4	8	1	2
False positive	1	2	1	2
Mistaken	9	18	8	16
Total incorrect	14	25	10	20

TABLE 3
Errors in the diagnosis in patients with pelvic abnormality

Lesion	Total	Clinical		Sonographic	
		Not detected	Incorrect	Not detected	Incorrect
Benign uterine	19	1	2	0	1
Malignant uterine	3	0	1	0	2
Benign ovarian	18	3	2	1	2
Malignant ovarian	7	0	3	0	3
* Miscellaneous	3	0	3	0	3

- i) Small bowel lesion
- ii) Tubercular Retroperitoneal mass
- iii) Normal pelvis

The comparison of the clinical and sonographic diagnosis with the peroperative findings is as given in Table 2. Clinical diagnosis were correct in 72% of patients as compared to 80% correct diagnoses on ultrasonography. False negative rate of 8% was higher with clinical examination compared to 2% with sonographic examination.

Errors in clinical or sonographic diagnosis in patients with abnormal operative findings are shown in Table 3.

DISCUSSION

The accuracy of clinical examination in the diagnosis of pelvic masses is 72% compared to 80% by ultrasonography. The differences however is statistically insignificant ($p > 0.05$). Of the four false negative cases on clinical examination, three were picked up on ultrasonography. They were pyosalpinx, B/L hydrosalpinx and a fibroid associated with malignant ovary. One case of a leiomyomatous polyp accompanying a benign ovarian cyst was missed by both. The only false positive case, normal adnexa was over

interpreted as benign ovarian cyst both by clinical examination and ultrasonography.

The diagnostic accuracy of 80% by ultrasonography is comparable to that of 79% reported by Morley & Barnett (1970) and Walsh et al (1979). Accuracy of site of origin of mass on USG was estimated to be 86% in this study as compared to 80% reported by Levi and Delval (1976). The accuracy of detecting nature of mass (benign/malignant) of 90%, confirms with 91% reported by Miere et al (1978). The accuracy of assessing size of mass, for suspected uterine masses was 92% (± 2 cm being taken as accurate) and 80% (± 2 cm) for ovarian masses. It was statistically significant for assessing size of uterine masses ($p < 0.05$) but insignificant for ovarian masses. Lesions of less than 4 cm size were not picked up in this study.

REFERENCES :

1. Levi S, Dalval R: *Acta Obstet. Gynec. Scand* 55:261, 1976.
2. Morley P, Barnett E.: *Brit. J. Radio.* 43: 602, 1970.
3. Miere HB, Farrent P, Guha T : *Brit. Obstet. Gynec.* 55:893, 1978.
4. Walsh JW, Taylor KJW, Wasson JFM, Schwartz PE, Rosenfield AT : *Radiology* 130:391, 1979.