

ORIGINAL ARTICLE

Sonography in chronic distension of the abdomen and apparent pregnancy

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Abstract

Objective: To find out the causes of chronic distension of the abdomen in women who thought they were pregnant; and the role of sonography in their management.

Method: A retrospective study

Results: There were 394 patients in the study. The mean age was 36.2 ± 1.7 . Uterine fibroids (42%) and ovarian benign tumours (11%) were the main findings. Cancer of the cervix (10%) cancer of endometrium 3.3%; cancer of ovary (3.6%) and medical conditions – obesity (6.3%), cirrhosis of liver 3.8% were also important findings. The sensitivity for using sonography in diagnosing fibroids, ovarian cancers and benign ovarian tumours was 90.4%; 66%; and 86% respectively.

Conclusion: Sonography can exclude pregnancy and it is reliable in diagnosing many causes of chronic abdominal distension. Histopathology is mandatory in ovarian tumours.

Key words: Sonography, abdominal distension, apparent pregnancy

Introduction

The differential diagnoses of chronic distension of the abdomen include abdominal tumours, obesity, Cushing's syndrome and pseudo pregnancy. Each of these can be diagnosed with certainty in modern medical practice. However, due to ignorance, some women do not seek for early treatment because they think that they are rather carrying pregnancy. Finally when they present at the health facilities because they have failed to deliver the babies, a lot of time would have been wasted in the management of serious disease such as ovarian malignancies.

Sonography has been a useful aid in diagnosing the causes of chronic distension of the abdomen. It aids in the follow-up of some of the cases after surgery. Exclusion of pregnancy is important in instances of pseudocyesis. In Ghana, efforts are in place to train medical officers in all our district hospitals in sonography in order to enhance their work.¹ The objective of this study was to find out the causes of chronic distension in women who otherwise thought they were pregnant and the role of sonography in the management of the diseases.

Patients and Methods

The study was done in the ultrasound (US) unit of the department of obstetrics and gynaecology at the Korle Bu Teaching Hospital in Accra, Ghana from January 1997 to

December 2001. The department performs about 6,000 ultrasonographic examinations every year. Sonographic examination was carried out on the patients as requested by the referring doctors or midwives who wanted a pregnancy ruled out in addition to confirming their provisional clinical diagnoses.

Data were collected from the Sonographic request forms; the Sonographic findings, the operative notes and the histopathologic findings. The age, parity, indication for sonography and the main findings and histopathologic findings for each patient were noted.

The inclusion criteria were patients who had abdominal distension and felt pregnant, were in the reproductive age 15 – 45 years. Excluded were patients who had their final treatment outside the Korle Bu Teaching Hospital or had incomplete records. The data were entered into the EPI INFO 2000 soft-ware for analysis.

Results

There were 486 patients who presented at the US unit for examination; 394 (81%) met the criteria for the study and 92(19%) were excluded (Table 1). The ages of the study group ranged between 27 and 45 years with a mean age of 36.2 ± 3.3 (SD) years. Their parity ranged from nil to 8, with a mean of 4.2 ± 1.7 year (SD). 146 (37%) patients presented with amenorrhoea of more than 1 year; 94 (24%) presented with amenorrhoea of less than one year; 154 (39%) presented with regular menstruation.

The duration of abdominal distension was as

follows; 209 (53%) patients had distension for about 1 year; 106 (27%) patients had it for 1-2 year. 55(14%)

had it for 2-3 years and 24(6%) had it for more than 3 years.

Table 1: Main causes of abdominal distension

Diagnosis	Study population (%)	Excluded population (%)
Obesity only	25 (6.3)	9 (9.8)
Fibroids	167 (42.3)	50 (54.4)
Endometrial carcinoma	13(3.3)	-
Ovarian tumour (benign)	42 (10.70)	4 (4.3)
Ovarian carcinoma	14 (3.6)	9(9.8)
Cirrhosis of liver	15(3.8)	4(4.3)
Cancer of cervix with ascites	39(9.9)	5(5.4)
Hepatomegaly ?cause	10(2.5)	-
Splenomegaly ?cause	16(4.1)	3(3.2)
Hepatosplenomegaly	11(2.8)	2(2.2)
Tuboovarian abscess	19(4.8)	-
Chronic renal failure	4(1.0)	-
Tuberculosis	1(0.03)	-
Cushing's syndrome	2(0.05)	-
Others	16(4.1)	6(6.5)
Total	394(100)	92(100)

The histopathological findings in the study group were; leiomyoma 151 cases; adenomyosis 14 cases and Sarcoma 2 cases. Thirty six (85%) of the ovarian tumours were benign and the rest 6 (15%) malignant. However 12 (86%) of the sonographically diagnosed malignancies were confirmed on histology. The remaining 2 were benign lesions, giant mucinous cystadenoma. The sensitivity of using sonography to diagnose uterine fibroids was (151/167) 90.4%. For benign ovarian tumour, it was (38/44) 86% and ovarian malignancy (16/18) 66%.

The endometrial and cervical cancers were diagnosed histologically from dilatation and curettage and cervical biopsy. Sonography was performed to find the extent of the spread. The cases of cirrhosis of the liver, Cushing's syndrome, chronic renal failure and tuberculosis were referred to the physicians for treatment. Further investigations were needed for the causes of hepatomegaly and splenomegaly and these were referred to the haematologist for further management.

Tuboovarian abscesses had been diagnosed after a long period of treatment with antibiotics for pelvic inflammatory disease. Other masses causing distension included secondaries from the breast and the gastrointestinal tract after these patients had had their primary surgeries more than a year before presentation. Three of those who presented with obesity needed psychiatric attention for the treatment of pseudocycosis.

Discussion

This was a 5 year study of the causes of chronic distension of the abdomen in patients who thought they were been pregnant. They had sonographic

examination to help in their diagnoses. Definitive diagnoses demanded histopathologic studies or other elaborate laboratory examinations in many cases.

Generally the history of presentation and thorough physical examination would give out most of the diagnoses. However, sonography was useful in excluding pregnancy and studying the spread of the malignancies. Sonography was useful in diagnosing some medical conditions such as cirrhosis and chronic renal failure. It was however limited in the study of ovarian tumours which needed tissue histology for the definitive diagnosis.

The non-gynaecologic tumour from organs such as the liver pancreas, stomach and large bowel did not feature in his series as primary lesions because these were referred to the general surgeons. However, some secondaries from the breast presented at Kruckenberg's tumour and entered this series because the patients thought they were pregnant.

The commonest cause of distension in this study was uterine fibroids. These were easy to diagnose clinically. Sonography excluded pregnancies and enabled the site and size of the nodules and the nature of degeneration of the defined.^{2, 3} Also concurrent pathology such as hydronephrosis or ovarian cysts could be diagnosed. Sarcomatous changes and adenomyosis were diagnosed by histopathology.

The accuracy of sonography in studying ovarian tumours was less than that for uterine fibroids. Unfortunately, CT scan and MRI were not available or affordable in Ghana. Moreover, no imaging modality has been able to provide tissue specificity necessary to distinguish between benign and malignant lesions.^{4, 5} Hence the need for histology is paramount.

The mean parity of 4.2 ± 1.7 appears similar to the rest of the country.⁶

The changes in the menstrual pattern of the patients should have compelled some of the patients to seek earlier medical attention. That normally menstruating women with distension of the abdomen should think of pregnancy portrays ignorance of a strong desire to get pregnant and therefore education is the solution. Certainly the psychiatrist's attention would have been requested for many of these patients but only three referrals were made for pseudocyesis since this showed real delusion.^{7, 8, 9}

Those patients who presented with secondaries after their primary surgery depicted the general difficulty in their follow-up by their primary general surgeons, otherwise they would not have ended up with the midwife or gynaecologist.

The commonest causes of chronic distension were fibroids and ovarian tumours. Sonography was useful in excluding pregnancy in chronic distension of the abdomen. It aided in diagnosing many tumours and their spread. However, it could not substitute for histopathological studies in ovarian tumours in particular. This is a useful lesion to all clinicians and sonographers.

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