ULTRASONOGRAPHY IN EARLY PREGNANCY BLEEDING

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SUMMARY

Ninety patients presenting with vaginal bleeding before 20 weeks of pregnancy were submitted to ultrasonographic evaluation. The overall accuracy of clinical diagnosis was observed to be around 69% in relation to ultrasonographic diagnosis. Ultrasound could efficiently differentiate normal viable pregnancies (about 50%) from abnormal pregnancies (43%) and helped in early decision of termination of non-viable and abnormal pregnancies. In addition, it helped to exclude pregnancy in 7% patients and enabled the diagnosis of complete abortion in 4% patients who could be spared unnecesary hospitalization and surgical interventions.

INTRODUCTION

Vaginal bleeding in early pregnancy is one of the major obstetric problems needing an early and acurate diagnosis. It covers a spectrum of clinical conditions ranging from normal viable pregnancy capable of normal growth and development to nonviable and abnormal pregnancies (missed abortion and vesicular mole) needing termination. The problem is further complicated by a small group of patients who are not pregnant or have completely aborted needing no active treatment.

R. Rajan (1987), Damania and Purandare (1987), Sofat (1987) and Malhotra et al (1987) have evaluated the role of ultrasound in early pregnancy bleeding and have shown it to be a useful noninvasive diagnostic tool having an edge over clinical diagnosis by about 30-35%.

MATERIAL AND METHODS

Ninety patients presenting with bleeding before 20 weeks of pregnancy were included in the study. After arriving at a clinical diagnosis, they were submitted to ultrasonography (USG) by a mechanical sector transducer of 5 M Hz frequency. USG was done by full bladder technique within 24-48 hours of initial bleeding episode. A repeat sonography was performed 1-2 weeks later wherever possible for confirming the initial diagnosis in doubtful situations. Initial

clinical diagnosis was then corrrelated with ultrasonographic findings and the pregnancy was followed until it termination.

RESULTS

Fifty two patients (57%) had pregnancy duration under 12 weeks while 43% were between 13-20 weeks of pregnancy. Table I shows the distribution of patients according to clinical diagnosis.

on USG, only 68% showed evidence of viable pregnancy, 7% were not pregnant while the rest belonged to various categories of early pregnancy failure.

Table III shows the accuracy of clinical disgnosis in comparison to USG diagnosis. Out of 10 cases clinically diagnosed as misssed abortion, in 8 patients the diagnosis of nonviable pregnancy could be confirmed. One patient had a normal viable pregnancy which continued un-

TABLE I

DISTRIBUTION OF PATIENTS ACCORDING TO CLINICAL DIAGNOSIS

Clinical diagnosis	No. of cases	Percentage
Threatened abortion	63	70
Missed abortion	10	11
Incomplete abortion	3	3
Vesicular mole	9	10
Ectopic pregnancy	5	6
Total	90	100

Table II shows the correlation of clinically diagnosed cases of threatened abortion with USG diagnosis. Out of 63 cases of threatened abortion, eventfully while the other had complete abortion. In addition, ultrasonography diagnosed 7 more cases of missed abortion, which were clinically

TABLE II

CORRELATION OF CLINICALLY DIAGNOSES CASES OF THREATENED ABORTION AND ULTRASONOGRAPHIC DIAGNOSIS

Ultrasonographic diagnosis cases	No. of	Percentage	Outcome
Normal pregnancy	43	68	
Vesicular mole	3	5	Dialatation & evacuation
Missed abortion	5	8	-do-
Blighted ovum	3	5	-do-
Not pregnant	4	7	Follow up-no pregnancy
Complete abortion	2	3	-do-
Inevitable abortion	2	3	Dialatation & evacuation
Incomplete abortion	1	1	-do-
Total	63	100	

diagnosed as threatened abortion or vesicular mole.

Out of the 3 clinically diagnosed cases of incomplete abortion, USG showed evidence of retained products in two who were submitted to surgical evacuation of the uterus while the third showed empty uterus and hence could be sent home without a curettage.

Nine patients were clinically suspected to be having vesicular more. On USG, in 6 patients the diagnosis was confirmed. In addition, 3 patients clinically diagnosed as threatened abortion on USG showed evidence of a molar pregnancy. Thus USG gave 100 % accuracy in diagnosis of molar pregnancy.

Five cases gave a clinical suspicion of ruptured tubal gestation. On USG none of these showed evidence of an intrauterine pregnancy. One patient did not reveal any significant pathology who was conservatively managed with subsequent improvement. Other patient showed a cystic mass in adnexal region with well defined margins with no evidence of fluid in Cul-de-sac suggesting a diagnosis of tubo-ovarian mass. At laparotomy this turned out to be twisted ovarian cyst. The rest of the 3 patients were confirmed to be having tubal pregnancy at laparotomy, two with tubal rupture and one tubal abortion.

PREGNANCY OUTCOME OF VIABLE PREGNANCIES

Of the ultrasonographically diagnosed 44 patients with viable pregnancy 36 (82%) could be followed until termination of pregnancy.

TABLE III

ACCURACY OF CLINICAL DIAGNOSIS AFTER USG EVALUATION

Diagnosis	Clinical	USG confirmed	Accuracy %	Discrepency
Threatened abortion	63	43	68	Table II
Missed abortion	10	8	80	1 Viable pregnancy
Incomplete abortion	3	2	66	1 complete abortion
Vesicular mole	9	6	66	3 missed abortion
Ectopic pregnancy	5	3	60	1 not pregnant 1 twisted ovrian cyst
Total	90	62	68.9%	

24 patients had full term vaginal delivery of whom one had minor degree of placenta praevia.

The mean birthwright of the neonates in these patients was 2495 gms (range between 2300-2900 gms). Nine (37%) babies weighed less than 2.5 kg at birth.

Five patients (11.4%) delivered preterm (between 30 and 35 weeks of gestation). All five neonates weighed less than 2 kg at birth.

DISCUSSION

Out of 90 patients presenting with vaginal bleeding, on ultrasonography nearly 50% were diagnosed to be having viable pregnancy who further needed only careful observation and conservative aproach.

In 40 patients showing various categories of early pregnancy failure, USG helped in categorising the abnormality. Blighted ovum was essentially an ultrasonographic diagnosis made in 4 cases. Missed abortion (16%) and vesicular

mole (10%) were the commonest abnormalities noted. A quick confirmation of diagnosis of non-viable and abnormal pregnancy facilitated an early decision of their termination.

Diagnosis of empty uterus in four cases of complete abortion could help them in getting early discharge from the hospital.

In addition in 7% patients, pregnancy could be excluded conclusively which spared them from unnecessary hospitalisation and surgical intervention.

For diagnosis of ruptured tubal pregnancy USG cannot provide a conclusive evidence and use of other diagnostic aids is often necessary. However it helps in excluding an intrauterine pregnancy in them.

Ultrasonography thus appears to be an excellent tool in the management of early pregnancy bleeding for a prognosticating the safe continuation of pregnancy, timely intervention for abnormal pregnancies and for avoiding unnecessary intervention in those who do not need them.

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