

# EXPERIENCE WITH ULTRASOUND IN THE FIRST HALF OF PREGNANCY

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## SUMMARY

Results of Ultrasonographic Evaluation of first half of pregnancy in 400 cases is presented. 121 subjects who had this examination gave H/o Vaginal bleeding. 133 cases were advised to have a routine examination. There were 55 cases with BOH and 26 cases of previous infertility. Other subjects included were cases of suspected missed abortion, mistaken dates, pregnancy with tumour or pregnancy with disproportionate uterine size, pregnancy with CuT and suspected ectopic pregnancy.

Majority were nulliparae (51.7%). Age of these subjects ranged between 25 to 45 years. 81.5% were in the age group between 20 to 30 years. 39.5% of the cases were in the first 12 weeks and 60.5% between 12-20 weeks of pregnancy. 121 cases (30.25%) had h/o Vaginal bleeding. Out of these 48 cases (39.6%) were in their first 12 weeks and 73 cases (60.3%) were between 12-20 weeks of pregnancy.

Incidence of abnormal pregnancies observed in these 400 cases is 16.25%. 9% had missed abortion. 2.75% showed a blighted ovum. 1% had an ectopic pregnancy and incidence of pregnancy with fibroid was 1%. Incidence of vesicular mole, twins, malformation and incomplete abortion was 0.5% each. Incidence of severe IUGR and pregnancy with ovarian cyst was 0.25% each.

## Introduction

Sonographic examination of pelvis in early pregnancy, normal and abnormal is invaluable. Demonstration of a normal gestation Sac, fetus, cardiac fetal pulsation, foetal movements, normality of organs and localisation of placenta is very

reassuring. Pregnant women who gave history of vaginal bleeding or complained of abdominal pain or appeared large for dates, or were not sure of dates, infertile subjects who had conceived after treatment, had a missed abortion an ultrasound examination cleared many doubts and provided guidance in their proper management. Purpose of this study is to highlight the indications and to find out

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the incidence and type of abnormal pregnancies amongst these cases.

### Material and Method

Over a period of two years February 1987 - February 1989, Sonographic examination of 400 women attending private OPD as well as patients from OPD/Indoor of Tagore Hospital and Kapur Hospital in first 20 weeks of pregnancy was undertaken. Many subjects had more than one examination. The Scanning was done with the help of Toshiba's SAL 304 Sonolayer Alpha Transducer Linear array PLA 308 M which is a real time Scan and frequency Transducer is 3.5 Mega Hertz. Full bladder technique was used. Indications for examination are given in Table I.

TABLE - I  
INDICATION FOR EXAMINATION

Routine	133
Vaginal bleeding	121
B O H	55
Missed Abortion	27
Infertility cases	26
Not sure of dates	15
Large for dates	8
Small for dates	4
Ectopic pregnancy	3
Pregnancy with fibroid	4
Pregnancy with CuT	3
Pregnancy with Ovarian cyst	1
<b>Total</b>	<b>400</b>

Two hundred and thirty one (81.5%) of the cases were in the age group between 20-30 years, 207 cases (51.7%) were Nulliparae. parity ranged between PO to P4, 158 cases were in the first 12 weeks of pregnancy and 242 cases were between 12 to 20 weeks of pregnancy, 121 cases (30.25%) had h/o vaginal bleeding. Out of these 48 cases (39.6%) were in their first

12 weeks and 73 cases (60.3%) were between 12-20 weeks of pregnancy.

### Results

In this series there were 48 cases with h/o vaginal bleeding in the first trimester. 42 cases (87.5%) with clinical diagnosis of threatened abortion revealed normal ongoing pregnancy with positive foetal cardiac pulsations in 28 cases (66.6%). Abnormal pregnancy was found in 14 cases (33.3%). J. Malhotra found positive foetal cardiac pulsation in 64.7% of threatened abortion cases. Thus Sonographic examination had a definite edge by 29% over clinical diagnosis in this study.

Amongst 48 cases who had vaginal bleeding in the first Trimester 58.3% had normal pregnancy on Sonographic examination, blighted Ovum in 22.9% missed abortion in 12.5%, incomplete abortion 2% and ectopic pregnancy in 4%. In Rajan series of similar cases 54.05% had ongoing pregnancy, blighted ovum in 18.92%, missed abortion 5.41% vesicular mole in 16.22% and ectopic in 5.41%.

Observations of 121 cases who gave h/o vaginal bleeding in first 20 weeks is shown in Table II.

Ongoing pregnancy with positive foetal Cardiac pulsation	95	78.5%
Blighted Ovum	11	9.0%
Missed abortion	7	5.7%
Ectopic pregnancy	3	2.4%
Vesicular Mole	2	1.6%
Incomplete abortion	2	1.6%
PRM	1	0.8%
<b>Total</b>	<b>121</b>	

Percentage of normal pregnancies in bleeding group is 78.5%. Thirty six patients (28%) in bleeding group had low lying placenta.

Various types of abnormal pregnancies observed in this series of 400 cases are given in Table III.

Type of abnormalities	Number	Percentage
Missed abortion	36	9.00
Blighted Ovum	11	2.75
Ectopic pregnancy	4	1.00
Pregnancy with fibroid	4	1.00
Vesicular Mole	2	0.50
Twins	2	0.50
Malformation	2	0.50
Incomplete abortion	2	0.50
Severe IUGR	1	0.25
Pregnancy with Ovarian cyst	1	0.25
Total	65	16.25

### Discussion

Complications occurring in early pregnancy pose diagnostic challenge for the Obstetrician. Hence since the introduction of Ultrasound in the diagnostic armamentarium a precise identification of normal from abnormal pregnancy is possible. This study was undertaken to find out the incidence of abnormal pregnancies amongst these 400 cases who had Ultrasound examination done for various indications in the first 20 weeks. 133 cases (33.25%) were routine Scans. 55 cases (15.75%) were cases with BOH which included cases with h/o 1-5 abortions, still births and preterm births.

There were 2 cases with malformed foetuses in this series, one had Anencephalic fetus and one had hydrocephalus. There were 3 cases of ruptured ectopic and one unruptured. 3 cases were suspected ectopic pregnancy and diagnosis was confirmed by absence of intrauterine gestation sac and fluid collection in POD. One patient had no complaint, except slight abdominal pain and was also confirmed by

Laparoscopy. Amongst 27 cases with clinical diagnosis of missed abortion there were 2 cases with live pregnancy (mistaken dates) and in 25 cases diagnosis of missed abortion was confirmed. Finding of a normal gestation Sac and live fetus in infertility cases is reassuring both to the patients and doctor. Patients who were not sure of dates, correct estimation of gestational age in early pregnancy saves a lot of confusion and unnecessary intervention for so called post term pregnancy later on. Amongst 8 cases, where uterine size was more than POA, there were two cases of Twin pregnancy and in 6 cases the dates were wrong. In 4 cases who were small for dates, 3 had normal pregnancies (mistaken dates) but one patient who was hypertensive showed severe IUGR in 18 weeks of pregnancy (later on had abortion). 3 patients who conceived with CuT one was incomplete abortion and had evacuation and CuT removed. 2 had normal pregnancy alongwith CuT, but had MTP as they did not want to continue pregnancy. Cases of pregnancy with Fibroid were treated conservatively and one case who had Ovarian cyst with 12 weeks of pregnancy had Ovariectomy later on.

In this series as shown in Table II percentage of abnormal pregnancy is 16.25%. This may be apparently high because quite a good number of cases had sonologic examination because of some symptoms. Unless there is some indication earlier routine ultrasound examination is recommended between 16-18 weeks of pregnancy. However, it is a goal that will take a long time to be achieved. With Sonographic guidance unnecessary delay in terminating abnormal pregnancies like Blighted Ovum and missed abortion is avoided.

