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Dr. RP Patange
Dept. of Ob/gy, KIMS, Karad,
Maharashtra, India

Dr. Manisha M Laddad
Dept. of Ob/gy, KIMS, Karad,
Maharashtra, India

Ultrasonographic evaluation of first trimester P.V. bleeding and its co-relation to clinical findings

Dr. RP Patange and Dr. Manisha M Laddad

Abstract

Aim: Evaluation of first trimester p. V. Bleeding and its co-relation to clinical findings using ultrasonography.

Material and Method: prospective study will be carried out in department of Obstetric and Gynecology 1st trimester per vaginal bleeding. Pregnant women will be selected during antenatal OPD. Those with complaints of 1st trimester per vaginal bleeding, detail history will be taken, clinical examination, and diagnosis will be made. These patients will be subjected for detail ultrasonographic evaluation, cases referred from outside with similar complaints will also be studied (IPD).

Result: Threatened abortion was the major indication for ultrasonography. This table shows distribution of sonographic diagnosis of clinically diagnosed threatened abortion cases. Out of 52(52%) cases majority 36 (69.23%) were proved to be real cases of threatened abortion. 8 (15.38%) were of missed abortion, 4 (7.69%) were of Blighted ovum, empty uterus was found in 2 (3.84%) cases & 2 cases (3.84%) were to be hydatidiform mole on ultrasonography.

Conclusion: First trimester PV bleeding were studied of which maximum no. of patients were between the age of 21-25 yrs. (56%)Gravidity wise maximum no. of cases were primigravida (39%).Out of 52 cases clinically suspected as threatened abortion, 36 were confirmed, on real time ultrasonography.

Keywords: first trimester, ultrasonography

Introduction

The application of USG for diagnosis and differential diagnosis of P/V bleeding in 1st 12 weeks has had an indispensable value this is because USG is a safe, noninvasive, quick reliable and relatively inexpensive modality of investigation. The first trimester of pregnancy is a dynamic period that spans from fertilization implantation and organogenesis, bleeding in the 1st trimester of pregnancy is a difficult problem to tackle.

A basic principle of current medical practices is that patient management and treatment should be based on reliable information and accurate diagnosis. Until recently, this has been a difficult principle to follow in the field of obstetric, due to relative inaccessibility of the uterus and its contents to establish investigative techniques. As a result the management of patients with prenatal problems was often empirical at best and at worst quite inappropriate. Among recent advances in obstetrical care, the introduction of diagnostic ultrasonography has been a major contribution to improvements in prenatal diagnosis. The information this noninvasive technique provides when obtained by a skilled operator often influences patient's management quite dramatically. Hence the obstetrician may now have the option of adopting a more active approach to an individual problem which could otherwise have been unpreventable.

The first trimester of pregnancy is a dynamic period. That spans ovulation, fertilization, implantation and organogenesis USG is the only imaging modality that can accurately assess pregnancy during this critical period. Correction of known embryological and developmental events has led to recognition of reliable sonographic landmarks to assess both normal and abnormal pregnancies. The facility to obtain sonographic measurement has resulted in useful criteria by which one can determine quite accurately whether the pregnancy is progressing an appropriate rate fetal viability and well being are readily confirmed in an innocuous manner by USG.

Correspondence
Dr. RP Patange
Dept. of Ob/gy, KIMS, Karad,
Maharashtra, India

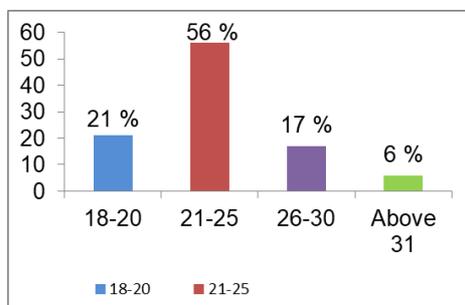
So to summarize sonography plays an important role in documenting, assessing and understanding the events that occur during pregnancy and also in diagnosing early pregnancy miscarriage, thus enabling us to offer the patient early and correct medical care and reducing her hospital stay.

Material and Methods

The following study is prospective study will be carried out in department of Obstetric and Gynecology with the help of radiology department KIMS Deemed University, Karad. The period of study will be from 1st Sept. 2009 to 31st Aug. 2011.100 pregnant women with 1st trimester per vaginal bleeding.

1st trimester per vaginal bleeding. Pregnant women will be selected during antenatal OPD. Those with complaints of 1st trimester per vaginal bleeding, detail history will be taken, clinical examination, and diagnosis will be made. These patients will be subjected for detail ultrasonographic evaluation, cases referred from outside with similar complaints will also be studied (IPD). RESULTS

Table 1: Age wise distribution



Majority of cases studied were under the age group of 21-25 yrs (56%) which is the peak age group of fertility for women.

Table 2: Gravidity wise distribution

Gravidity	No. of cases	Percentage
Primi Gravida	39	39%
2 nd Gravida	33	33%
3 rd Gravida	13	13%
4 th Gravida	4	4%
5 th Gravida	11	11%
Total	100	100%

In our study, 39% patients were primis, 33% were 2nd gravid, 13% were 3rd gravid and 4% were 4th gravid, 11% were 5th gravid above.

Table 3: Clinical indication for ultrasonography (N=100)

Clinical diagnosis	No. of cases	Percentage
Threatened abortion	52	52%
Ectopic pregnancy	12	12%
Missed abortion	20	20%
Hydatiform mole	3	3%
Complete abortion	6	6%
Inevitable abortion	7	7%
Total	100	100%

Above table shows clinical indications for ultrasonography. Most of the 1st trimester bleeding patients were clinically diagnosed as threatened abortion (52%) other were diagnosed as Missed abortion (20%) and Ectopic pregnancy (12%), Hydatiform mole (3%), Complete abortion (6%),

Inevitable abortion (7%). Out of 100 cases 46 (46%) cases were diagnosed as threatened abortions, empty uterus was found in 6 (6%) cases, 18 (18%) cases were missed abortion, 12 (12%) cases were of ectopic pregnancy, 6 (6%) were diagnosed as blighted ovum, 3 (3%) were hydatidiform mole, 3 (3%) were multiple pregnancy and 06 (06%) were incomplete abortions.

Threatened abortion was the major indication for ultrasonography. This table shows distribution of sonographic diagnosis of clinically diagnosed threatened abortion cases. Out of 52(52%) cases majority 36 (69.23%) were proved to be real cases of threatened abortion. 8 (15.38%) were of missed abortion, 4 (7.69%) were of Blighted ovum, empty uterus was found in 2 (3.84%) cases & 2 cases (3.84%) were to be hydatidiform mole on ultrasonography.

Discussion

Diagnosing the cases of 1st trimester per vaginal bleeding had traditionally been based on the history, physical examination and clinical findings and too much dependence on the result of pregnancy test. Many times symptoms are often misleading resulting in a delay in diagnosis and treatment [5]. Real time ultrasonography has now opened a completely new dimension in obstetrics in the diagnosis of exact pathology in early pregnancy bleeding so that specific treatment could be planned. Various studies have been carried out at different places in order to evaluate diagnostic accuracy of ultrasound in cases of per vaginal bleeding during early pregnancy [6]. In the literature, the diagnostic accuracy varies with each category of clinical diagnosis. The variation in the result is partly due to different criteria such as specificity, morphological features, clinical experience of sonographer and the equipment [7]. In the present prospective study of 100 cases of 1st trimester bleeding were selected for ultrasonography examination, for the contribution of clinical diagnosis.

Age Wise Distribution

Table No. 1 Illustrates the age wise distribution of cases in study group 21% of patients were age group 16-20, 56% were between 21-25 yrs, were between 26-30 yrs, & only 6% were above 31 yrs. Majority of the study population comes under the age group of 21-25 yrs. [8]Which is peak age group of fertility has women. S. Mukherjee of at (1959) observed that early pregnancy per vaginal bleeding is move in those who were pregnant for first time.

Clinical Indications for Ultrasonography

Most of the 1st trimester cases were clinically diagnosed as threatened abortion (52%) other were diagnosed as missed abortion (20%) Ectopic pregnancy (12%), Hydatiform Mole (3%), complete abortion (6%), Inevitable abortion (7%). Similar study was carried out by K. R. BAMANIA *et al.* at Nowrosjee wedia Maternity Hospital. They evaluated 652 patients of 1st trimester hemorrhage. The evaluation of their series is compared with the present series as shown in following task.

According to their series 38% cases were clinically diagnosed as threatened abortion, 2% as ectopic pregnancy, 17% as missed abortion, 1% hydatiform mole, 10% as complete abortion & 32% as incomplete abortion. Similar study was carried out by K. R. Bamanian *et al.* [9] their results are compared with the present series as shown in table listed

belong. According to their series on the ultrasonography 38.1% were diagnosed as threatened abortion missed abortion/blighted ovum were diagnosed 39.1% cases empty uterus was found in 18.1% cases V. Mole/ectopic pregnancy was found in 4.7% cases.

In present study 3 cases (3%) were detected as cases of multiple pregnancy. According to study done by Malhotra & Saxena and another study by Rama sofat the results are shown in above table. In their series, threatened abortion was found to be the commonest cause of bleeding during early pregnancy. According to Malhotra & Saxena it was responsible for 70% of cases. In present study it is seen in 46% of cases & study done by Rama Sofat it was 51% cases. Similar study was carried out by K. R. Damania *et al.* [9] they did the USG evaluation in 172 patients with clinical diagnosis of threatened abortion. The results are shown in the given table of comparison with present study.

(12%) were diagnosed clinically as ectopic pregnancy out of which 6(50%) turned out to be real cases of ectopic pregnancy on sonography 4(33.3%) were threatened abortion and 2 (16.7%) cases uterus was empty with no adnexal pathology [10]. In a series of 22 ectopic pregnancies published by Shapiro *et al.* (1988) and adnexal mass was identified in 50% of patients using abdominal imaging techniques & 91% patients using transvaginal ultrasound. Diagnosis of ectopic gestation is often difficult which a clinical picture is not classical sonography was useful in pinpointing an ectopic gestation which was missed on clinical examination.

A missed abortion is a pregnancy in which embryonic or early fetal death has occurred. On sonography fetal pole is visible but no fetal heart is seen a missed abortion occurs at a late stage than blighted ovum. In the study group 20(21%) cases were suspected clinically as missed abortion and on sonography 10(50%) were turned out to be real cases & missed abortions. In 2 cases empty uterus was diagnosed 6(30%) cases were of threatened abortion & 2(10%) turned out to be blighted ovum.

In another study by Rajan *et al.* found that missed abortion was second common early pregnancy disorder witnessed in the sonographic study of 674 1st trimester subjects 33 subjects had missed abortion & this constituted for 26.6% of the total abnormal pregnancies.

As a study done by Dr. Saxena, Dr. Malhotra J. and Dr. Malhotra H. (Fogsi 25th All INDIA obst & Gynaec. Lec (1985) they have studied 150 cases of bleeding per vaginal in the 1st trimester of pregnancy. Out of that 2 cases were clinically suspected as a case of vesicular mole. After subjecting them for ultrasonographic examination only one (75%) case diagnosis of vesicular mole was confirmed.

Conclusion

First trimester PV bleeding were studied of which maximum no. of patients were between the age of 21-25 yrs. (56%) Gravidity wise maximum no. of cases were primigravida (39%). Out of 52 cases clinically suspected as threatened abortion, 36 were confirmed, on real time ultrasonography. Out of 20 cases suspected as missed abortion, 10 were confirmed on USG findings. (50%)12% patients were suspected clinically as ectopic pregnancy. 50% of them were confirmed on ultrasonography 2 were diagnosed as empty uterus with no adnexal pathology and 4 were diagnosed as threatened abortion (33.3%).3 patient were clinically suspected as vesicular mole and all were confirmed on sonography.

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