

ORIGINAL RESEARCH**Evaluation of Vaginal Bleeding in first Trimester of Pregnancy using Ultrasonography****Dr. Neelam Sharma**

Anti Natal Medical Officer and Assistant Professor, Department of Obstetrics and Gynaecology, Government Medical College, Rajouri, Jammu and Kashmir, India

Corresponding author

Dr. Neelam Sharma

Anti Natal Medical Officer and Assistant Professor, Department of Obstetrics and Gynaecology, Government Medical College, Rajouri, Jammu and Kashmir, India

Email: neelamsharma12@gmail.com

Received: 14 December, 2022

Accepted: 19 January, 2023

Abstract

During the first trimester of a pregnancy, hemorrhage from the cervix is the most prevalent obstetric condition that leads to hospital admissions, leading both the patient and the gynecologist to be frightened and worried. The common reasons of bleeding in the first trimester of pregnancy include several sorts of miscarriages, placenta previa, and molar pregnancy. The cause and outcome of first trimester hemorrhage cannot be absolutely evaluated by eliciting the necessary history and pelvic examination. Purpose of our study was to investigate the reasons of bleeding per vagina in first trimester of pregnancy and to analyse the sensitivity and specificity of Ultrasound in diagnosing the etiology of first trimester vaginal bleeding.

Introduction`

In the first trimester of pregnancy, hemorrhage from the vagina is the most prevalent obstetric condition that leads to hospital admissions, leading to both the patient and the obstetrician to be frightened and worried. It is also one of the most important justifications for the volume of the obstetrics department's emergency admissions.¹ A complex phase including ovulation, fertilisation, implantation and organogenesis is the first trimester. In the early months of labour, 20-25 percent of pregnant women will experience some degree of bleeding. In a specific patient, the importance of bleeding in early pregnancy might vary from an inconsistent episode to a life-threatening emergency.² The first trimester, which needs continuous monitoring of the foetus and the mother, is the most crucial stage in the antenatal period. In detecting the causes of the first trimester bleeding, ultrasound (both abdominal and TVS) plays a significant role in prognosticating and predicting the status of abnormal pregnancies. Real-time sonography is a non-invasive and readily accessible approach that is highly advantageous for a specific diagnostic to be reached.³ The age of marriage for women has risen with the recent changes in culture and social life, resulting to an increase in maternal age. The family's population has dropped as well. The probability that women will have a normal pregnancy outcome has increased.⁴ These elements placed increased pressure on clinicians, especially obstetricians, to produce typical results. Hence, considerable significance is given to Ultrasonography for diagnosing and estimating prognosis of first trimester vaginal haemorrhage. Sensitivity, specificity, PPV, NPV and accuracy were calculated. A P-value below 0.05 was regarded as statistically significant. Written

permission in writing was acquired from the participants. Participants were ensured about confidentiality of the participants information.

Methodology and results

12 out of 20 sonologically verified cases of threatened abortion were followed up to term gestation with successful outcome. 6 cases of threatening abortion were terminated on follow-up with 2 cases as complete abortion, 2 cases as missed abortion and 2 cases with repeat bleeding indicating incomplete abortion. 20 sonologically reported cases of threatened abortion were followed up to term gestation with favourable outcome. 6 cases of threatened abortion were aborted on followup with 2 cases as entire abortion, 2 cases as missed abortion and 2 cases with recurring bleeding showed incomplete abortion.

The gestational age of most (57%) of the participants were in between 8 and 10 weeks. Abortion was the major cause of haemorrhage contributing to 83%. There was a disparity of 41% between clinical and sonologically diagnosis. All the cases of threatened abortion (20 cases), incomplete abortion (11 cases), missed abortion (3 cases), blighted ovum (1 case) and molar pregnancy (3 cases) were appropriately detected on ultrasonography. Diagnosis by ultrasound could not detect one incidence of ectopic pregnancy which was misinterpreted as complete termination.

Table 1: Outcome of Patients

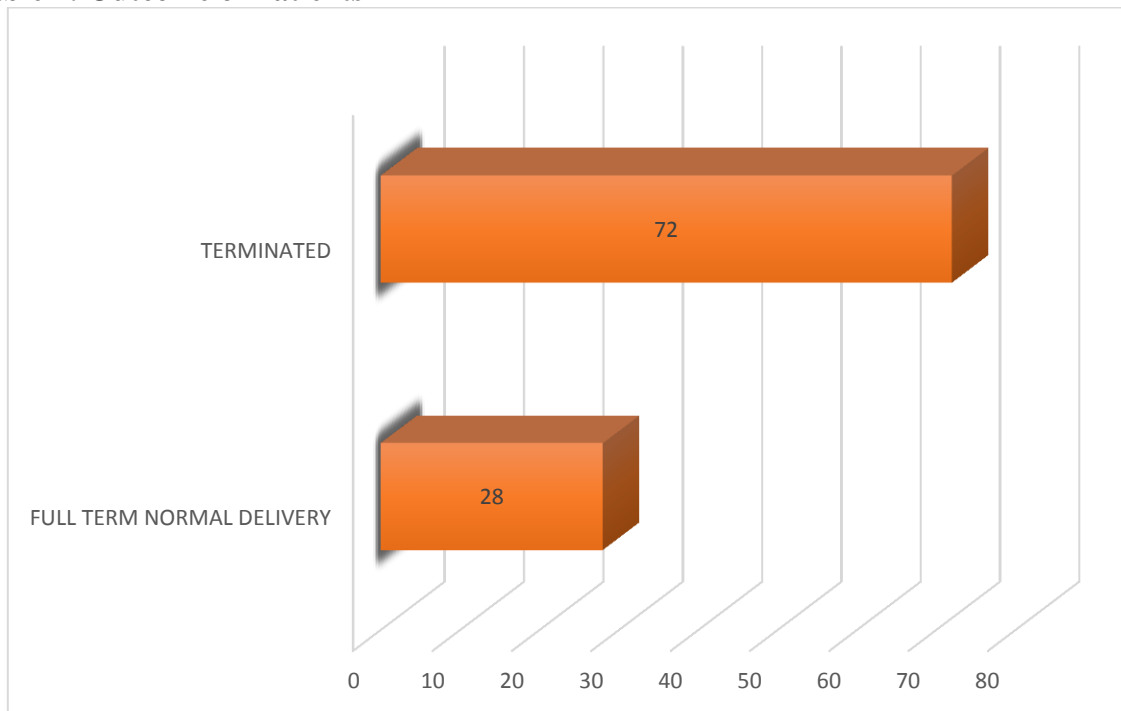
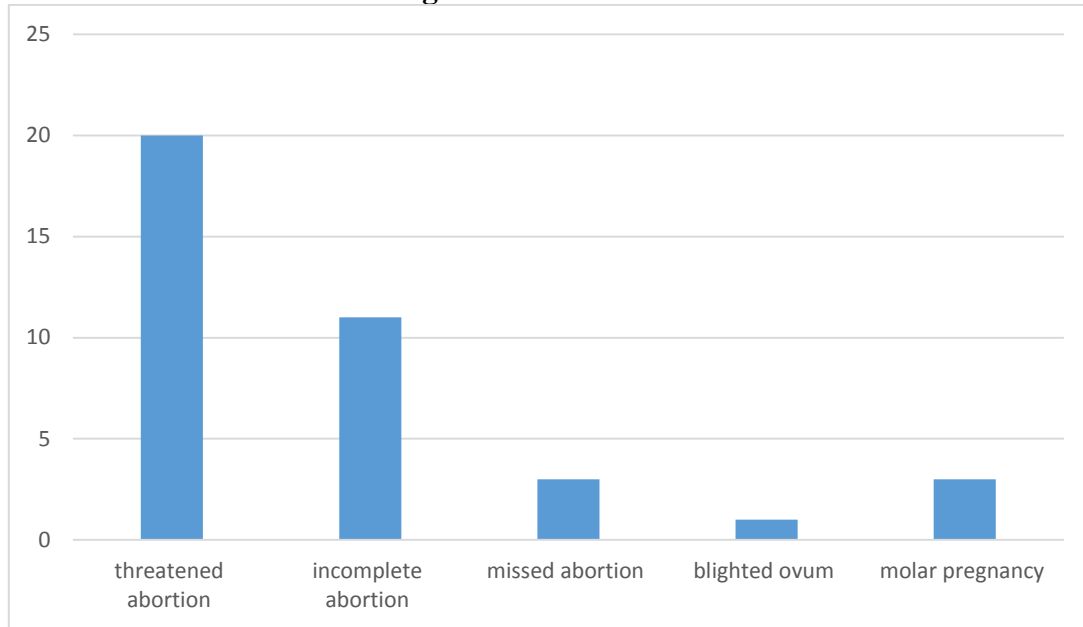


Table 2: Patient with different diagnosis

Discussion

In the first trimester, about twenty-five percent of all pregnant women complained of hemorrhage. For them, numerous medical considerations should be taken into account, and there are various causes of bleeding that cover a variety of illnesses spanning from viable fetus to nonviable pregnancy.¹ To give a clear diagnosis, clinical history and assessment are not enough. In delivering a definitive diagnosis; ultrasound imaging has become a blessing for obstetricians, so that extra treatment, medicinal or surgical, can be begun quickly.^{2,3} A proper (viable or non-viable) identification of the nature of the pregnancy can avert unnecessary hormonal care and prolonged hospitalization. It also suggests the need for dilatation and curettage in the uterine lining by diagnosing retained conception products. Ultrasonography monitoring offers an effective evacuation index in cases of abortion. If remnant contents are observed, curettage is required, but not when the uterus appears empty, though bulky.^{4,5} The primary causes of bleeding are different sorts of abortions (83 percent) in the present study. In all other research, a related outcome was discovered. However, a few studies have reported a greater proportion, and other studies have found a smaller proportion. The second common reason of first trimester bleeding in this study was ectopic pregnancy, which was in accordance to prior other research. Molar pregnancy is the second prevalent cause discovered. In our sample, ultrasonography with a reliability of 100% was properly diagnosed with all cases of threatened abortion, missed abortion, incomplete abortion, blighted ovum, H Mole and inevitable abortion. In 1 out of 6 cases of ectopic pregnancy, total abortion was misdiagnosed, leading to 98% accuracy in the diagnosis of ectopic gestation and complete abortion. All other research, with the exception to this the studies have 100% reliability in the diagnosis of threatened abortion using ultrasonography.²⁻⁷

Conclusion

With 100% specificity in the diagnosis of threatened abortion, incomplete abortion, missed abortion, hydatiform mole, anembryonic conception, and inevitable abortion in the first trimester, ultrasound has proven to be a very effective means of determining the precise source of vaginal bleeding. USG exhibited a 98 percent accuracy rate for ectopic pregnancy and complete termination diagnoses. As a result, this research has shown how well ultrasound can diagnose first trimester bleeding, allowing for the planning of therapeutic modalities.

References

1. Kathuria S, Lolge S, Lakhkar D. Evaluation of first trimester vaginal bleeding in early pregnancy by transvaginal sonography. IOSR J Dent Med Sci 2019; 18:14-20.
2. Neelam Bharadwaj. Sonography evaluation as an aid in the management of bleeding in early pregnancy. J ObstetGynaecol India1988; 38:640-642.
3. Drumm JE, Clinch J. Ultrasound in management of clinically diagnosed threatened abortion. Br Med J 2011; 2.
4. Rajan R, Rajan V. Ultrasonography in first trimester bleeding. J ObstetGynecol 1987; 37:457-461.
5. Donald I, Macvicar J, Brown TG. Investigation of abdominal masses by pulsed ultrasound. Lancet 1958; 1:1188-1195.
7. Misra R. Ian Donald's Practical obstetric problem. 6th Edn. BI Publications Pvt Ltd 2006.
8. Kumar P, Mehrotra A, Gupta D, et al. First Trimester bleeding: A diagnostic dilemma—probing it with ultrasound. Int J Adv Integrated Med Sci 2017; 2:117-124.