e-ISSN: 0975-1556, p-ISSN:2820-2643

Available online on www.ijpcr.com

International Journal of Pharmaceutical and Clinical Research 2023; 15(7); 1289-1292

Original Research Article

The Study of Maternal and PerinatalOutcome in Women with Subchorionic Hemorrhage in First and Second Trimester

Rajni Priyanka[1], Swati[2], Geeta Sinha[3], Juhi[4]

[1]Senior Resident, Department of Obstetrics & Gynaecology, PMCH Patna
[2]Senior Resident, Department of Obstetrics & Gynaecology, PMCH Patna
[3]Prof. Department of Obstetrics & Gynaecology, PMCH Patna
[4]Senior Resident, Department of Obstetrics & Gynaecology, NMCH Patna

Received: 16-05-2023 / Revised: 30-06-2023 / Accepted: 23-7-2023
Corresponding author: Juhi
Conflict of interest: Nil

Abstract:

Background and Objectives: Subchorionic hematoma is frequent finding on routine obstetric ultrasonography. It appears as a hypo echoic or anechoic crescent shape area behind the gestational sac in the first trimester and behind the fetal membranes in the 2nd trimester. To estimate the association between sub chorionic hemorrhage and adverse maternal and perinatal outcomes. To emphasize the importance of antenatal registration and admission needed for better timely obstetric care. To assess the value of current obstetric practice in managing sub chorionic hemorrhage. To emphasize the importance of early diagnosis and prompt treatment in the improvement of maternal and perinatal outcome.

Materials and Methods: Main source of data for study are ANCs from teaching hospitals, Total of 50 cases will be selected for the retrospective study from PMCH Patna.

Conclusion: The most important factor which affect the outcome is gestational age at which SCH was diagnosed and volume of hematoma. Chances of abortion are more if diagnosed in 1st trimester .There is no effect on perinatal outcome when patient reached term. Early diagnosis, bed rest, use of progesterone, regular antenatal checkup will help in continuing the pregnancy till term with good fetal outcome.

Keywords: Subchorionic hemorrhage; 1st trimester vaginal bleeding.

Introduction

Subchorionic hematoma is frequent finding on routine obstetric ultrasonogrpahy. It appears as a hypoechoic or anechoic crescent shape area behind the gestational sac in the first trimester and behind the fetal membranes in the 2nd trimester. Although the exact etiology is uncertain, it is believed to result from partial detachment of the chorionic membranes from uterine wall [1]. Vaginal bleeding affects approximately 15% to 20% of first trimester pregnancies with fetal loss of approximately 50%. Approximately 18% of women with vaginal bleeding in first trimester have a sonographically demonstrable subchorionic hematoma. Vaginal bleeding during the 2nd trimester is believed to increase the chance of a poor pregnancy outcome. It is hypothesized that subchorionic hematoma signifies an underlying placental dysfunction that subsequently results in pregnancy complications including abruption, preterm premature rupture of membranes, preterm delivery, pre-eclampsia and fetal growth restriction[2]. In some cases subchorionic hematoma may be present but will not be seen on USG because the blood drains into vaginal canal rather than collecting in subchorionic space around gestational sac, conversely there may be no bleeding associated with a subchorionic hematoma that can be seen on USG because it is not draining into vaginal canal. Worst pregnancy outcome is associated with large hematoma or severe bleeding compared with the outcome in patient with small hematoma or less bleeding [3].

Objectives

To estimate the association between subchrionic hemorrhage and adverse maternal and perinatal outcomes.

Material and Methods

A retrospective study is undertaken. Cases of first and second trimester subchorionic hemorrhage attending the hospitals Patna Medical College and Hospital Patna, attached to the other Medical College. Study Period: May 2018 to April 2019.

Inclusion criteria

- Single viable gestation
- Patient with vaginal bleeding and in whom subchorionic hematoma and a live fetus had been identified.

Exclusion criteria

- Multiple gestation
- Nonviable fetus (blighted ovum, missed abortion)
- Early fetal death

Molar pregnancy (partial/complete) Minimum number of cases: 50 cases

On admission to the labour room, a complete, but quick history was taken. Information regarding her identify, age, address, socioeconomic status and dietary habits was noted. Special enquiry was made, regarding smoking and drug use; history regarding her previous antenatal checkups, the kind of antenatal care received and the number of antenatal visits was noted.

History of present complaint: History was taken in detail, so as to ascertain the amount and character of bleeding, any initiating factors such as trauma or coitus, previous vaginal bleeding, association of abdominal pain or labour pains; duration between time of onset of bleeding and time of admission and distance traversed to get admitted to the hospital. Period of gestation was calculated from her last menstrual period (nearest number of weeks from the patient's last menstrual period to time of presentation) or previous ultrasonography (if done earlier during this pregnancy). Past History, Any history of associated gynecological disorders like fibroid, ovarian cyst etc and any previous gynecological surgery were taken. Medical history and family history, any history of hypertension, blood disorders, diabetes mellitus, jaundice etc. was noted.

Menstrual history: Patients last menstrual period, previous menstrual cycle, duration, amount of flow, associated dysmenorrhoea were noted.

Obstetric History: History was taken regarding the number of previous pregnancies and their outcome, number of live issues, complication during previous pregnancies, mode of delivery and complications during and after deliveries. Any previous: history of bleeding PV was specifically enquired. Patient and the newborn were kept under close observation for early detection of any complications.

Maternal .compliances specifically looked for were; postpartum haemorrhage, puerperal infection, postpartum anaemia, coagulation failure, renal failure and were treated accordingly. Follow-up of the neonate with regards to wellbeing and complications like sepsis, anaemia, convulsions, respiratory distress syndrome (RDS), jaundice, and death in neonate were recorded till the time of discharge. Date of discharge and duration of hospital stay (mother and baby) was noted along with date of delivery.

Results

A total of 50 patients were admitted and formed the study group. Patients were distributed according to trimester, gestational age, parity, volume of bleeding and perinatal outcome.

Details regarding the no. of antenatal visits, type of antenatal care received by each group was recorded.

Table 1: Distribution of Patient According to Trimester

Causes	No. of patients	Percentages
First trimester	**38**	**76%**
Second trimester	**12**	**24%**
Total	**50**	**100%**

In the study of 50 cases 76% (38 patients) had come with first trimester bleeding and 24% (12 patients) 2nd trimester bleeding. This shows that subchorionic haemorrhage is more common in first trimester.

Table 2: Distribution of Patients According to Age Group

	Age group in years				Total
	20-24 No (%)	**25-29 No (%)**	**30-34 No (%)**	**>35 No (%)**	
First trimester	10 (26.3%)	15 (39.4%)	12 (31.5%)	1 (2.63%)	38
Second trimester	10 (83.3%)	2 (16.7%)	0	0	12
Total	20 (40%)	17 (34%)	12 (24%)	1 (2%)	50 (100%)

The study showed most of the patients with subchorionic haemorrhage was in early reproductive age rather than the late one 40% cases were from the age groupe 20-24yrs.

Table - 3: Distribution of SCH Patients According yo Parity

	Parity				
	1	**2**	**3**	**4**	**Total**
First trimester	21 (55.3%)	16 (42.1%)	1 (2.6%)	0	38 (76%)
Second trimester	8 (66.7%)	3 (25%)	1 (8.33%)	0	12 (24%)
Total	29 (58%)	19 (38%)	2 (4%)	0	50 (100%)

Maximum number of SCH patients was primi gravida. Distribution of SCH patients according parity

was not found to be significant.

Table 4: Maternal Outcome

Maternal outcome	1st trimester	2nd trimester	Total
Normal	36 (94.7%)	11 (91.7%)	47 (94%)
Anaemia	2 (5.2%)	1 (8.33%)	3 (6%)

Maternal condition during ante, intra and postpartum period and during puerperium was noted. There were total of 3 cases (6%) of anaemia for which blood was transfused. Out of 3 patients, 2 cases were diagnosed with SCH in first trimester and 1 in second trimesters. There was one case of abruptio placentae. There were no other complications seen.

Table 5:

Apgar score at 5 min	First trimester	Second trimester	Total
<5	1 (4.2%)	5 (41.7%)	6 (16.66%)
6-8	9 (37.5%)	4 (33.3%)	13 (36.1%)
>8	15 (62.5%)	2 (16.7%)	17 (47.2%)
Total	24 (100%)	12 (100%)	36 (100%)

In all cases, 44.4% had apgar score 4-7 at 1 minute and apgar score >8were seen in 47.22% cases at 1 minute. 36.1% had apgar 6-8 at 5 min and >8 in case of 47.2%.

Table 6: Fetal Weight

Fetal Weight	First Trimester	Second Trimester	Total
<1.5 Kg	1 (4.1%)	0	1 (2.7%)
1.6 – 2kg	3 (12.5%)	2 (16.7%)	5 (13.9%)
2.1 – 2.5 Kg	7 (29.1%)	2 (16.7%)	9 (25%)
2.6 – 3 Kg	11 (45.8%)	5 (41.7%)	16 (44.5%)
>3 Kg	2 (8.3%)	3 (25%)	5 (13.9%)
Total	24 (100%)	12 (100%)	36 100%)

44.5% of the babies had birth weight of 2.6-3 kg only 1 baby had birth wt of <1.5 kg (preterm delivery.

Discussion

Intrauterine hematoma is not an uncommon finding at ultrasound scanning in the early stages of pregnancies. Preexisting medical conditions, autoimmune diseases and immunological factors have been associated with intrauterine hematoma, but the etiology of this condition is still unknown. SCH is defined as a collection of blood between the uterine wall and chorionic membrane and it is believed to result from Subchorionic bleeding caused by partial detachment of trophoblast from the uterine wall this condition was diagnosed only by USG. Mantoni and Pedersen [9] first described its sonographic patterns. On USG examination, it appears as an anechoic area that has a falciform shape, and it is usually observed behind or below the gestational sac, separating the chorion from the inner wall of uterus. Small echogenic structures can be found in such areas and they are believed to be blood clots. In the study 50 cases 76% had come with first trimester bleeding and 24% had come with second trimester bleeding. This shows that subchorionic hemorrhage is more common in first trimester rather than in second trimester. Most of the patients with SCH were in early reproductive age group rather than the late. 40% cases were in the age group of 20-24 years. 34% were from 25-29 years, 24% were from 30-34 years and Bennett et al8 found large intra uterine hematoma volume more common with advanced maternal age (>35 years). But in our study there was no significant change in relation to age group. Thus it can be considered insignificant. In our study 58% were primi gravida, 38% gravida 2 and 4% were gravida [3]. A study done by Florida by a Caroline C Signore, et al, [4] 2nd trimester vaginal bleeding : with correlation of ultrasonographic findings with perinatal outcome where they concluded that SCH is more common in multi parous as compared to primigravida. In our study there was no significant change according to the parity. In the study of 50 patients there was significant difference depending on gestational age. 24% cases were less than 8 weeks gestation, as compared to 52% of cases at 9-12 weeks of gestation. Only 2% were from 21-24 weeks of gestation [5]. Thus most of the cases came between 9-12 weeks gestation showing SCH more common in first trimester. Another study in US done in SCH in the first half of pregnancy showed maximum patient came with bleeding at 10-20 weeks of gestation. Gian Paolo Maso et al [6] observed that risk of abortion is 15 times greater for causes diagnosed before 9 weeks of gestation, than for those observed after this period. Ball et al [10] in their large case control study evaluated the prognostic significance of clinical bleeding and intrauterine hematoma variables, drawing no definitive conclusions. Doppler studies revealed a significant relationship between hematoma enlargement and reduction of blood flow

velocities in spiral arteries with the potential threat to continuance of pregnancy by direct pressure volume effect.[11] The perinatal outcomes were affected by various factors like birth asphyxia, MAS and prematurity. Total outcome of the pregnancies in this study showed 14 abortions, 7 preterms, 1 abruptio, and 28 had continued till term. Mode of delivery were dependent both on fetal and maternal condition. Depending on which 7 delivered, preterm babies, FTND in 20 cases, 9 had CS birth i.e. 25% CS, 19.44% had preterm birth, and 55.55% full term birth. Fetal morbidity was because of causes like birth asphyxia, MAS and prematurity. Weight of the baby did not show any relation with the amount of SCH. Amongst those 36 outcome 16 cases showed baby weight from 2.6 – 3 kg. Thus showing no significance with the amount of SCH. Rosati et al [12] reported that in 1257 patients with first and second trimester vaginal bleeding, there was no significant difference in outcome among patients with abnormal USG finding compared with those normal USG findings. Caroline C. Signore et al, [4] supports the finding of poor pregnancy outcome when USG abnormalities are detected with vaginal bleeding. Over the last few years the quality and availability of USG has progressively improved. However, previous studies incorporating USG finding in prediction of outcome for pregnancies complicated by bleeding have been less conclusive. One of major aims of proper management of SCH cases is to minimize the maternal morbidity and mortality. Anaemia was the most common complication seen. Total of 3 cases of anaemia were found, out of that 1 had abruptio placenta also for which blood was transfused.

Conclusion

From the present study it can be concluded that chances of subchorionic hemorrhage is more in cases of 1st trimester as compared to 2nd trimester. The most important factor which affect the outcome is gestational age at which SCH was diagnosed and volume of hematoma. Chances of abortion are more if diagnosed in 1st trimester. There is no effect on perinatal outcome when patient reached term. Though there were 3 reported cases of anaemia in the study it cannot be said to be directly related to the SCH.

References

1. Methodius G. Tuuli, et al. Perinatal outcomes in women with subchorionic hematoma. Obstetrics and Gynecology 2011 May;117(5):
2. Genevieve L. Bennett, et al. Subchorionic hemorrhage in first trimester pregnancies: prediction of pregnancy outcome with sonography, Practical sonography in obstetrics and gynecology. 2nd edition. 1996.
3. Robert H. Ball, et al. The clinical significance of ultrasonographically detected subchorionic hemorrhage. Am J ObstetGynecol 1996 Mar; 174(3).
4. Caroline C. Signore, et al. Second trimester vaginal bleeding: correlation of ultrasonographic findings with perinatal outcome. Am J ObstetGynecol 1996 Feb; 178(2).
5. Eric E. Sauerbrei, and Dieu H. Pham. Placental abruption and subchorionic hemorrhage in the first half of pregnancy: US appearance and clinical outcome. Practical sonography in obstetrics and gynecology 1986.
6. Maso G, D'Ottavio G, De Seta F, Sartore A, Piccoli M, Mandruzzato G. First trimester intrauterine hematoma and outcome of pregnancy. Obstet Gynecol 2005; 105:339-44.
7. Shayna M. Norman, et al. Ultrasound detected subchorionic hemorrhage and the obstetric implications. Obstetrics & Gynecology 2010 Aug;116 (2-Part 1):
8. Bennett GL, Bromley B, Lieberman E, Benacerraf BR. Sub-chorionic hemorrhage in first-trimester pregnancies: prediction of pregnancy outcome with sonography. Radiology 1996; 200:803-6.
9. Pedersen JF, Mantoni M. Prevalence and significance of subchorionic hemorrhage in threatened abortion: a sonographic study. Am J Roentgenol 1990; 154:535-7.
10. Ball RH, Ade CM, Schoenborn JA, Crane JP. The clinical significance of ultrasonographically detected subchorionic hemorrhages. Am J ObstetGynecol 1996; 174:996-1002.
11. Kupesic S, Kurjak A, Chervenak FA. Doppler studies of subchorionic hematomas in early pregnancy. In: Chervenkak FA, Kurjak A, editors. Current perspectives on fetus as a patient. New York: The Parthenon Publishing Group; 1996 .p.33-8.
12. Rosati P, Noia G, Masini L, Mancuso S. Usefulness and limits of the ultrasonic examination in the diagnosis and prognosis of early pregnancies with vaginal bleeding. Minerva Ginecol 1989; 41:485-8.