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A study on first trimester vaginal bleeding and outcome of pregnancy in Thiruvananthapuram, Kerala

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Abstract

Background: Pregnancy is very special to each woman in her life; the first trimester bleeding is one among the common complication during the pregnancy. Not all bleeding lead to abortion but the continued pregnancy can cause some adverse events such as preterm labour, premature rupture of membrane, placental abruption, intrauterine death and intra uterine growth retardation. Normal pregnancy outcomes also can be seen in the patients with first trimester bleeding.

Materials and Methods: The study was an observational longitudinal study conducted in one of the private medical college in south Indian state Kerala, following the 100 participants for 10 months of their pregnancy during their OPD visits and noted the changes. The research objective was to determine materno-foetal outcomes in pregnancy complicated with first trimester bleeding.

Results: Among the 100 participants 83% were from the age group of 20-30 years mean age was 25.35 (SD±4.04). 78% of them were primigravida. There were six outcomes preterm labour (47), premature rupture of membrane (14%), placental abruption (8%), intrauterine death (3%), intra uterine growth retardation (7%) and normal pregnancy outcome (21%). If bleeding increases, there was an increased incidence of placental abruption in the third trimester (OR=1.107 95% CI 1.032 - 1.19). It was two times likely to have the chance of intra uterine growth retardation in the foetus if the mother had an experience of first trimester bleeding (OR=1.953 95% CI .413 – 9.244) also there are chances for normal deliveries too (OR=1.149 95% CI. 442 – 2.989).

Conclusion: The first trimester bleeding increases the adverse events in the pregnancy outcomes. The risk increases with the bleeding though we can reduce the risk through timely or early interventions. It was two times likely to have the chance of intra uterine growth retardation in the foetus if the mother had an experience of first trimester bleeding and also there are chances for normal deliveries too.

Keywords: First trimester pregnancy, bleeding, spotting, pregnancy outcomes, labour, preterm, foetal growth retardation

Introduction

First trimester of a pregnancy is starts from the first day of the last period to the 12th week of confirmed pregnancy. At this time a lot of rapid change happens with in both mother and the Foetus [1]. It has been estimated that vaginal bleed occurs in 16-20% of first trimester pregnancy [2-4]. The bleeding generates an anxiety for the mother about the outcome of that pregnancy [5]. Diabetes, obesity and hypertension are the lifestyle diseases which adversely affects the pregnancy [6-8]. Urinary tract infection, abdominal pain, nausea and vomiting are the other common symptoms during pregnancy⁷. Bleeding can be in different forms: Threatened abortion, incomplete abortion, complete abortion, missed abortion, thromboplastic disease, ectopic gestation, etc. It is one of the main reasons for emergency visits during pregnancy. Around one-third of the bleeding during first trimester bleeding that can occur in normal pregnancy not makes any anatomical changes in both mother and foetus. In several cases more than half of the bleeding complete with the pregnancy beyond 20 weeks [9]. The outcome of a pregnancy is directly related to the gestational age, cause and severity of bleeding. Clinically we manage the bleed as soon as possible prior to that; we take a detailed history, physical examination, imaging and diagnostic techniques [10]. There are so many adverse pregnancy outcomes in the first trimester bleeding such as preterm labour, premature rupture of membrane, placental abruption, intrauterine death, intra uterine growth retardation [11, 12]. Pregnancy is very special event to each woman in their life because it is a life changing thing in their life. It is very important that we should assure each pregnant woman to give birth to a healthy baby for the better tomorrow. First trimester bleeding is one of the common problems in pregnancy and it is important that we

should have better knowledge in outcome of the pregnancies those had an experience of first trimester vaginal bleeding. In this background it is very needful to know more about this in the Kerala context. So that we done this study for understanding the pregnancy outcome in the patients who had an experience of first trimester bleeding.

Materials and Methods

Study type and settings

The study was an observatory longitudinal study (Participants where followed up from the date of first visit till delivery/pregnancy outcome). Study population were all the women with vaginal bleeding in the first trimester who took an appointment in critical care or Obstetrics & Gynaecology OPD in one of the private medical college of Kerala - Sree Uthradam Thirunna Medical College, Thiruvananthapuram, Kerala during the period from 1st August 2018 to 1st August 2020. The ethical clearance obtained from the Institutional Human Ethics Committee (IHEC) of Sree Uthradam Thirunna Medical College, Thiruvananthapuram, Kerala.

Inclusion criteria

- Bleeding per vaginum
- First trimester pregnancy
- Positive Pregnancy Test

Exclusion criteria

- Emergency cases
- Bleeding at the time of loss
- Women with more than 12 weeks of completed pregnancy.

Procedure

The study included total 120 patients with bleeding among them 9 had a gestational age of more than 12 weeks, 5 were not willing for the study and 6 of them have changed their hospital. Objective was to determine materno-foetal outcomes in pregnancy complicated with first trimester bleeding. The participants were within reproductive age group (15-44years) [13] with vaginal bleeding who came to the causality were subjected to the study. After confirmation of the pregnancy with first trimester gestational growth each one was assigned to the study. We took consent from each participant prior to the study. We followed up each participant once in a month till 7th month of pregnancy: then twice in a month in the 7th and 8th months after that change the follow up of each one once in a week from 9th month till the delivery. We maintained each person's data in one excel sheet and maintain it very confidentially in primary investigator's (PC), which she only had access (Picture-1).

Statistical analysis

The data was analysed quantitatively in SPSS data analysing software. The independent variable was age and first trimester uterine bleeding and dependent variable was pregnancy outcomes such as preterm labour, premature rupture of membrane, placental abruption, intrauterine death, intra uterine growth retardation.

Results

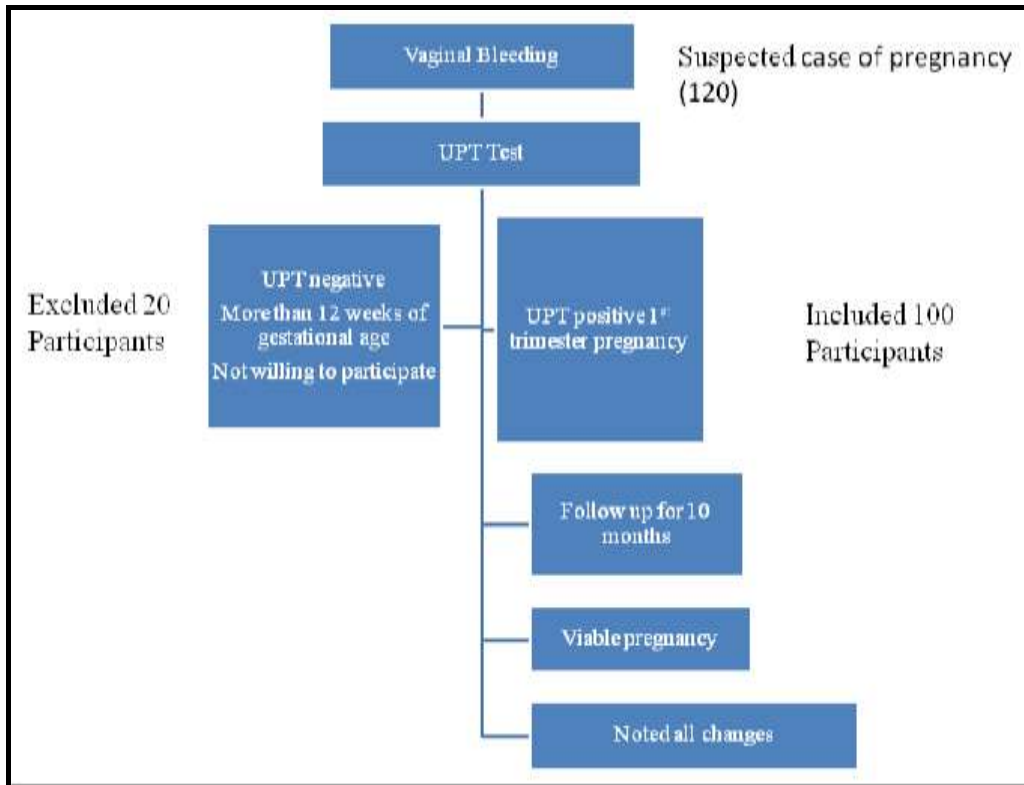
The study included 100 patients for the study among them 83% (n=83) were from an age group of 20-30 and the mean age was 25.35 (SD±4.04). Majority of them were primigravida (78%) and 6% of them were had at least a live child (Table-1). It was found that 17% of the participants experienced spotting and there was double the risk of premature rupture of membrane with bleeding (OR=2.712(1.038-7.089), 95% CI 1.038-7.089). If bleeding increases, there was an increased incidence of placental abruption in the third trimester (OR=1.107 95% CI 1.032-1.19). Also, there were more chances of intra uterine death associated with the first trimester bleeding (OR=1.04 95% CI 0.995-1.082). It was two times likely to have the chance of intra uterine growth retardation in the foetus if the mother had an experience of first trimester bleeding (OR=1.953 95% CI 1.413-9.244) also there are chances for normal deliveries too (OR=1.149 95% CI 1.442-2.989). The chances for the primigravida to get an incidence of bleeding, when compared to others are more and it was found that they have more chances of premature rupture of membrane too (Table-2 and Graph-1).

Discussion

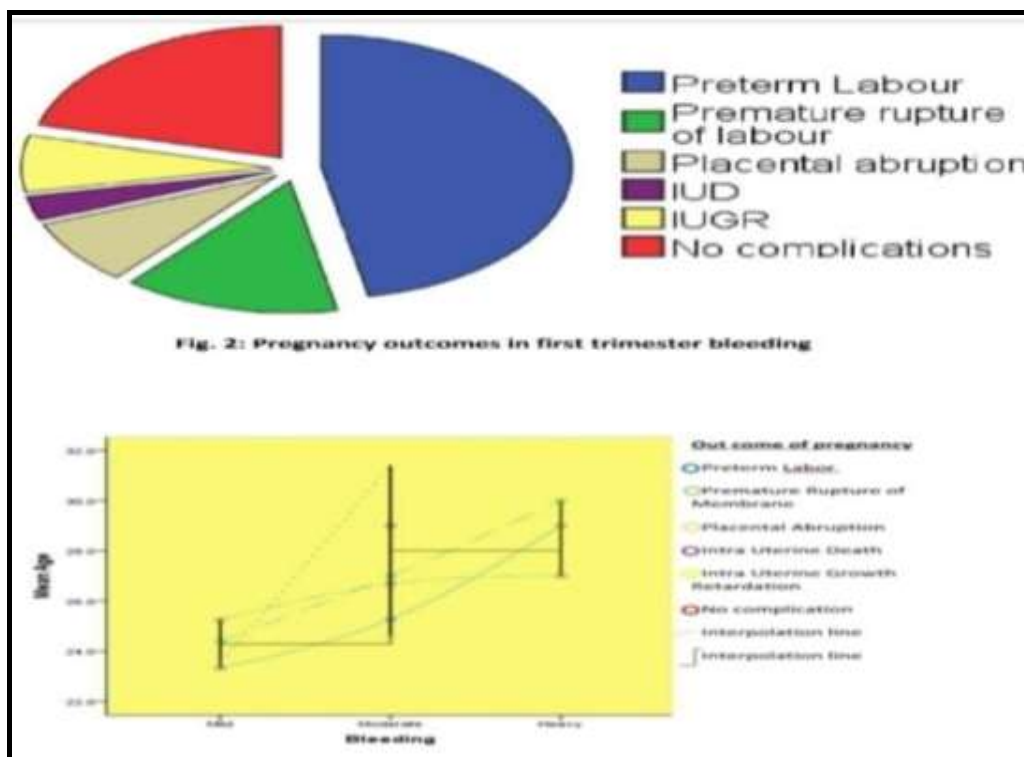
First trimester bleeding increases the risk of complications during pregnancy [4, 5, 14] and it is estimated about 12-40%. The risk increases with the increase in bleeding [15]. Most of the bleeding cases reporting between the ages of 20-35 years. Most of them had a bleeding from mild (Spotting) moderate [10, 11]. There are some complicated pregnancy outcomes due to first trimester bleeding they are preterm labour, premature rupture of membrane, placental abruption, intra uterine death, intra uterine growth retardation [5, 11, 14, 16, 17]. More than half (53%)¹⁶ of the primigravida have an experience of first trimester bleeding, even though it is a complication but more than 60% can continue the pregnancy with timely intervention. The bleeding increases adverse pregnancy outcomes.

Table 1: Distribution of study population based on Demographic and clinical data

Demographic and clinical data	Number	Percentage (%)
Age (Years)		
>19	4	4.00
20-29	76	76.00
30-39	20	20.00
Number of foetus		
One	97	97.00
Two	3	3.00
Gravida		
1 st	78	78.00
2 nd	19	19.00
3 rd	3	3.00
Parity		
0	94	94.00
1 st	5	5.00
2 nd	1	1.00
Bleeding		
Mild/spotting	17	17.00
Moderate	80	80.00
Severe	3	3.00



Picture 1: Sampling procedure



Picture 2: Distribution of patients based on the outcome of pregnancies

Conclusion

All the first trimester bleeding does not necessarily lead to abortion. It has been found that first trimester bleeding increases the adverse events in the pregnancy outcomes. The risk increases with the bleeding though we can reduce the risk through timely or early interventions. We need to do more researches on bleeding in pregnancy to improve the knowledge among both physician and patients through this we can reduce the adverse events.

References

1. Surabhi Chandra, Anil Kumar Tripathi, Sanjay Mishra MA. Physiological Changes in Hematological Parameters During Pregnancy. Indian J Hematol Blood Transfus 2012;58:144-6.
2. Catherine Stevens-Simon, Klaus J, Roghmann ERM. Early Vaginal Bleeding, Late Prenatal Care, and Misdating in Adolescent Pregnancies. Pediatrics 1991;87(6):838-40.
3. Lykke JA *et al.* First-Trimester Vaginal Bleeding and

- Complications Later in Pregnancy. *Obstet Gynecol* 2010;115(5):935-44.
4. Kavyashree HS, Rajeshwari K. A study on pregnancy outcome in patients with first trimester vaginal bleeding. *Int J Reprod Contraception, Obstet Gynecol* 2019;8(3):820.
 5. Suganya M. Pregnancy Outcome in First Trimester Bleed Bonafide Certificate 2010.
 6. Artal R, O'Toole M. Guidelines of the American College of Obstetricians and Gynecologists for exercise during pregnancy and the postpartum period. *Br J Sports Med.* 2003;37(1):6-12.
 7. Bhowmik B. First trimester complications in pregnancy with diabetes. *J Pak Med Assoc* 2016;66(11):78-80.
 8. Coustan DR. Gestational diabetes mellitus. *Clin Chem* 2013;59(9):1310-21.
 9. Patel N, Patel M, Shah S, Jani S, Patel J, Shah J. Study of outcome of pregnancy in patients with first- trimester bleeding per vaginum. *Int J Adv Med* 2014;1(3):230.
 10. Kamble PD, Bava A, Shukla M, Nandanvar YS. First trimester bleeding and pregnancy outcome. *Int J Reprod Contraception, Obstet Gynecol* 2017;6(4):1484.
 11. Yakiştrın B, Yüce T, Söylemez F. First trimester bleeding and pregnancy outcomes: Case-control study. *Int J Women's Heal Reprod Sci* 2016;4(1):4-7.
 12. De Sutter P, Bontinck J, Schutysers V, Van der Elst J, Gerris J, Dhont M. First-trimester bleeding and pregnancy outcome in singletons after assisted reproduction. *Hum Reprod* 2006;21(7):1907-11.
 13. Indian Association of Preventive and Social Medicine. Reproductive age group [Internet]. IAPSM. 2020 [cited 2020 Sep 16]. Available from: <http://iapsm.org/maternal-health.html#:~:text=In India women of the,vulnerable or special risk group>.
 14. Falco P, Milano VGP *et al.* Bleeding.pdf. *Ultrasound Obs* 1996;7:165-9.
 15. Olugbenga A. Pregnancy outcome in women with early pregnancy bleeding in a tertiary health care facility in South Western, Nigeria. *J Mahatma Gandhi Inst Med Sci* 2019;24(2):87.
 16. Bhatu JJ, Prajapati DS. A study of fetomaternal outcome in bleeding per vaginum in first trimester of pregnancy. *Int J Reprod Contraception, Obstet Gynecol* 2020;9(3):1191.
 17. Hjort L, Lykke Møller S, Minja D, Msemu O, Nielsen BB, Lund Christensen D *et al.* FOETAL for NCD - Foetal Exposure and Epidemiological Transitions: The role of Anaemia in early Life for Non- Communicable Diseases in later life: A prospective preconception study in rural Tanzania. *BMJ Open* 2019;9(5):1-14.