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Original Research Article

A Hospital Based Observational Evaluation of Epistaxis/Nasal Bleeding during Pregnancy

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Abstract

Aim: Evaluation of Epistaxis/nasal bleeding during pregnancy.

Material and Methods: This study was conducted in the department of ENT, PMCH, Patna, Bihar, India. 300 pregnant patients admitted Hospitals' labor rooms for delivery and 115 non-pregnant individuals attend Hospitals' outpatient. The gestational age of the pregnant women ranged from 36 to 40 weeks, while their ages ranged from 28 to 40. The reproductive age of the non- pregnant women ranged from 26 to 46 years. All patients signed a form of informed consent.

Results: On 300 pregnant patients and 115 non-pregnant patients, the final data analysis was carried out. The average age (standard deviation) of pregnant women was (32±8) years. The average age (standard deviation) among non-pregnant women was (36± 8) years. 38 ±2 weeks was the average gestational age. Pregnancies terminated by cesarean section were 36.33 percent of the time, while vaginal delivery was 63.66 percent of the time. Pregnant and non-pregnant patients, there is statistically significant difference in the incidence of epistaxis (<0.05).

Conclusion: Epistaxis is a common complication during pregnancy. Elicitingthis history of active nosebleeds may aid to identify womenat elevated risk for disrupted hemostasis, just as it does in the nonpregnant population. With this in mind, obstetriciansand obstetric anesthesiologists may be better prepared to deal with postpartum bleeding, such as by getting preoperative blood bank specimens and having uterotonics on hand in the delivery room.

Keywords: Epistaxis, nasal bleeding, pregnancy.

Introduction

Epistaxis, commonly known as nosebleeds, is a prevalent condition that can occur during pregnancy. This condition is characterized by bleeding from the nasal mucosa, which can range from minor trickles to significant hemorrhages requiring medical intervention. Epistaxis is observed more frequently in pregnant women due to physiological changes that affect the nasal vasculature. Understanding the etiology, prevalence, risk factors, and management of epistaxis in pregnancy is essential for providing appropriate care and minimizing potential complications. [1-6] During pregnancy, several physiological changes contribute to an increased risk of epistaxis. Elevated levels of estrogen and progesterone lead to increased blood flow and vascular engorgement in the nasal mucosa, making the blood vessels more susceptible to rupture . [7-15] Additionally, the hyperdynamic circulatory state and increased blood volume during pregnancy further contribute to the likelihood of nasal bleeding. Studies indicate that the prevalence of epistaxis in pregnancy ranges from 20% to 30%. Several risk factors have been identified, including a history of chronic rhinitis, use of nasal sprays, environmental factors such as dry air, and preexisting conditions like hypertension. Furthermore, the frequency of epistaxis tends to increase as pregnancy progresses, particularly in the second and third trimesters. Although most cases of epistaxis in pregnancy are benign and self-limiting, they can be distressing for the patient and may occasionally require medical intervention. Management strategies typically involve conservative measures such as nasal lubrication, humidification, and avoidance of nasal trauma. In more severe cases, medical treatments including topical vasoconstrictors, cauterization, or nasal packing may be necessary. It is crucial to balance the efficacy of these interventions with their

safety profiles, particularly regarding potential effects on maternal and fetal health. Complications from epistaxis in pregnancy are rare but can include significant blood loss leading to anemia or secondary infection from frequent nasal packing. Prompt and effective management usually results in a favorable prognosis with minimal risk to the mother or foetus. Regular prenatal care and education about nasal hygiene and risk factors can help mitigate the incidence and severity of epistaxis during pregnancy . [16-20]

Material and Methods

This study was conducted in the department of ENT, PMCH, Patna, Bihar, India for one year. 300 pregnant patients admitted Hospitals' labor rooms for delivery and 115 non-pregnant individuals attend Hospitals' outpatient

The gestational age of the pregnant women ranged from 36 to 40 weeks, while their ages ranged from 28 to 40. The reproductive age of the non- pregnant women ranged from 26 to 46 years. All patients signed a form of informed consent (written consent). All patients had to complete an 18-question survey that included their obstetric history, previous history of epistaxis, and medications such as non-steroidal anti- inflammatory drugs, as well as other questions. Patients with known bleeding or clotting disorders, as well as pregnancy-induced hypertension, were excluded.

The use of Uterotonic agents beyond routine, as well as the requirement for blood transfusions during labor, mode of delivery, and type of anesthetic, bleeding, and other statistical data analysis, were all performed using SPSS version 23. The 2 test was used to assess the prevalence of epistaxis between pregnant and nonpregnant participants, as well as the rates of postpartum hemorrhage between pregnant women with and without epistaxis. The odds ratios were estimated using a 95% confidence interval. Other study factors that were compared between pregnant women with and without a history of epistaxis were compared using univariate analysis utilizing the 2 test: history of seasonal allergies, recent respiratory infection, easy bruising, patient's blood type, and delivery method. A logistic regression analysis was intended to investigate the effect of those variables on postpartum hemorrhage if significant differences were discovered in the univariate analysis. A pregnancy is used in every statistical analysis. Postpartum hemorrhage was defined as an estimated blood loss of more than 500mL for a vaginal delivery and more than 1000mL for a cesarean birth that adversely affected the patients' overall status.

Results

On 300 pregnant patients and 115 non-pregnant patients, the final data analysis was carried out.

Table.1: Pregnant Patients Age

	Range	Average
Age	28-40	32 ±8

According to table (1), the average age (standard deviation)of pregnant women was (32±8) years.

Table.2: Non-Pregnant Patients Age

	Range	Average
Age	26-46	36 ±8

According to table (2), the average age (standard deviation)among non-pregnant women was (36± 8) years.

Table.3: Gestational age

	Range	Average
Gestational Age	28-36	34 ±2

According to table (3), (38 ±2) weeks was the average gestational age (standard deviation).

Table.4: Pregnancy Termination

Method of termination	Number	Incidence
Vaginal delivery	191	63.66%
Cesarean	109	36.33%
Total	300	100%

According to table (4), Pregnancies terminated by cesareansection were 36.33 percent of the time, while vaginal delivery was 63.66 percent of the time.

Table.5: Non-pregnant and pregnant patients' Incidenceof Epistaxis

Status	Number	Incidence ofepistaxis	Incidence
Non pregnant	115	5	3.34%
Pregnant	300	31	10.30%

According to table (5), between pregnant and non-pregnant patients, there is statistically significant difference (<0.05) in theincidence of epistaxis.

Discussion

Epistaxis occurred 3.34% of the time in non-pregnant individuals and 10.30 percent of the time in pregnant patients in this study. In comparison to other research, this is in agreement with the previous studies who discovered that pregnant women were much more likely to suffer epistaxis, with a pregnancy incidence of 19.2 percent compared to 5.9 percent in non- pregnant individuals (p-value = 0.0001). [16]

In our study, the incidence of postpartum hemorrhage in patients with pregnancy epistaxis was 10%, while the incidence of postpartum hemorrhage in patients without pregnancy epistaxis was 5.07 percent, with a statistically significant difference in p- value between the two results. This research backs up the long-held view that epistaxis and gingival bleeding are more common in pregnant women than in non-pregnant women. More crucially, our findings imply that a history of epistaxis during pregnancy is linked to a higher risk of postpartum hemorrhage, even after accounting for cesarean delivery and previous epistaxis.5 However, it's likely that, in addition to this other factors like local mucosal changes, modest changes in hemostasis and clotting ability could lead to pregnancy epistaxis and, as a result, a higher risk of postpartum hemorrhage. [18] Another explanation for our findings is that epistaxis is caused by changes in artery integrity or structure, which also puts women at risk for postpartum hemorrhage. These options will be investigated in future investigations. It's uncertain if a history of epistaxis during pregnancy is linked to a higher risk of spinal–epidural hematoma after neuraxial procedures.[15] Because the occurrence of spinal– epidural hematoma in this patient population is uncommon, a large investigation would be necessary to test this link. The huge size of our study sample and the thoroughness of our data gathering are two of our study's advantages. Our study was adequately powered to detect even slight changes in outcomes between the two groups since the prevalence of epistaxis among pregnant women was higher than predicted. Seasonal or climate-related causes of epistaxis were eliminated as a confounding factor in our investigation because data was collected from each group continuously throughout the year. [11] Furthermore, the survey or data collectors were only involved in a few rare cases in the actual delivery or calculation of delivery-associated blood loss, minimizing the role of provider knowledge of a patient's bleeding history as a confounding factor.12 The fact that study data on epistaxis and bleeding risk factors, including medication use during pregnancy, was obtained retrospectively and thus vulnerable to recall bias, is one of the study's flaws. Another flaw was that we were unable to incorporate some study variables in our analysis because of their low prevalence, such as major family history and past bleeding history.

Conclusion

Epistaxis is a common complication during pregnancy. Elicitingthis history of active nosebleeds may aid to identify women at elevated risk for disrupted hemostasis, just as it does in the nonpregnant population. With this in mind, obstetriciansand obstetric anesthesiologists may be better prepared to deal with postpartum bleeding, such as by getting preoperative blood bank specimens and having uterotonics on hand in the delivery room. The fundamental causes for this disrupted hemostasis will be investigated more in the future. There is a statistically significant difference observed in the incidence of epistaxis between pregnant and non-pregnant women.

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