Title: outcome of placenta Previa in scarred and non-scarred uterus in term pregnancy

1: dr iqra shams
   Mbbs fcps-II, iqrashams152@gmail.com

2: dr munaza yousaf
   Mbbs fcps gynea obs, medical officer
   Munazzamalik78@gmail.com, 00923365891670
3: dr nafeesa ghani
   Mbbs fcps gynea, nafeesaghani81@gmail.com, 03259819175

Corresponding author
Name: dr munaza yousaf
Designation:Mbbs fcps gynea obs, medical officer at merf
Email: Munazzamalik78@gmail.com,
Contact: 00923365891670

Abstract

Objective:to determine the frequency and distribution of placenta Previa in expectant mothers and examine the relationship between placenta Previa and age, gravidity, gestational age, and uterine scar status.

Methodology: The sample's mean gravidity was 3.1 ± 1.1 and its mean age was 31.9 ± 5.4 years. Two age groups of participants were established: those aged 22 to 30 and those aged over 30 to 40. The mean gestational age was 37.3 ± 2.8 weeks, with a range of 32 to 42 weeks. The women were divided into two groups based on the presence of uterine scars: those with unscarred uterus and those with scarred uterus. Placenta Previa was found to be common, and an analysis was conducted to determine how it related to the other variables. Tables with the data were used for presentation, and p-values were used for statistical analysis to assess significance.

Result:The sample's mean age was 31.9 + 5.4 years, as was also its standard deviation. The gravidity was 3.1 + 1.1 on average. The sample's mean gestational age was 37.3 + 2.8 weeks. Of the ladies, 70.4% had unscarred uterus and 29.6% had scars. In 17.4% of cases, placenta Previa was noted.

Conclusion: placenta Previa is rather frequent and has a strong correlation with uterine scarring. More research is advised, especially analytical studies with bigger sample sizes to find additional risk factors for placenta Previa and RCTs to find ways to lessen the impact of these previas or manage their unfavorable effects.

Keywords:Placenta Previa, bleeding, pregnancy , gestational age, gravidity.

Introduction:

An obstetric issue known as placenta Previa occurs when the placenta inserts itself entirely or partially in the lower uterine segment. In the second and third trimesters of pregnancy, it happens.The mother may experience significant morbidity and mortality as a result. The placental tissue is excessively near to the internal cervical OS in this syndrome. The risk of placenta Previa and placental abruption may increase after surgical uterine cavity displacement[1-3]. Placenta accreta is linked to about 10% of occurrences of placenta Previa.The degree to which the placenta encroaches on the cervix during labor has historically been used to classify placenta Previa; however, in more recent times, types and grades of placenta Previa have been identified as a result of the widespread availability of transvaginal ultrasound. In conjunction with the history, clinical examination, and transvaginal and abdominal ultrasound, individuals with placenta Previa have also been treated with magnetic resonance imaging (MRI), particularly for the diagnosis of adherent placenta.The end-myometrial junction defect caused by uterine scarring from trauma, infection, or surgery results in aberrant vascularization, which lessens the lower segment's differential growth[4-5]. As pregnancy progresses, this stops placental migration.Placenta Previa is a very uncommon condition (occurrence of 3 to 9 per 1000 births), however it is considered a major cause of uterine bleeding in the latter stages of gestation and has been linked to both negative fetal outcomes and maternal morbidity. It is a potentially fatal disorder for which management calls for a multidisciplinary approach. Women with myometrial injury from a prior caesarian delivery with either anterior or posterior placenta Previa covering the uterine scar are more at risk for placenta previa[6-8].Prior to delivery, a placenta Previa diagnosis is valuable because it facilitates interdisciplinary planning aimed at reducing the risk of morbidity and mortality in the mother or newborn.In these situations, early diagnosis, fast treatment, and thorough observation are essential[9-10]. The study findings will be very helpful in the future when it comes to recommendations and ideas for women who present with placenta Previa and its relationship to uteri that are scarred or not.

Methods and material:

After taking the hospital's ethical committee approval this descriptive cross-sectional study was conducted at hayatabad teaching hospital gynea ward and opd from Jan 2023 to DEC 2023. Patients who met the requirements for inclusion were chosen by means of sequential non-probability sampling. Every patient who was included was informed of the procedure's goal, how the data was used, and the study publication. The patients provided written, informed consent. Demographic data, including name, age, sex, and address, was noted. A thorough physical examination was done in addition to gathering information on the patient's age, parity, and gestational duration through history.All patients between the ages of 20 and 40 who had placenta Previa and both damaged and unscarred uterus met the inclusion criteria. All patients who have a singleton pregnancy, are 28 weeks or older at gestation, and have agreed to participate in the trial by providing informed permission. Primi gravidas, patients presenting with bleeding during the second trimester, and scars other than those from C-sections, such as myomectomy, were the exclusion criteria. All of the data was gathered using specially created proforma.To control for con founders and rule out bias in the study findings, the exclusion criteria were scrupulously adhered to. we personally watched every outcome, and all of the aforementioned data was entered into a proforma that had been previously created. At the 5% significant level, the post-stratification chi square test was applied. Every outcome was displayed using tables and, when necessary, charts and diagrams. The data was analyzed using SPSS version 24.

Results:

A total of 115 pregnant women were included in this study. The mean age and standard deviation of the sample was 31.9 + 5.4 years. We distributed the patients in two different age groups (see table 1) The mean gravidity was 3.1 + 1.1. See table 1 for categories. The mean gestational age of the sample was 37.3 + 2.8 weeks (See table 2 for categories). 29.6% of women had scarred uterus and 70.4% had un scarred uterus (table 2).Placenta Previa was recorded in 17.4% in table 2. The subsequent tables explain age groups, gravidity, gestational age and uterine scar status wise stratification of placenta Previa (table 3).

Table: 1 age and gravida wise distribution

distribution		frequency	percentages
age	22-30	50	43.5%
	>30-40	65	56.5%
gravida	2-4	105	91.3%
	>4-7	10	8.7%

Table 2: gestational age and uterine scarred status

distribution		frequency	percentages
Placenta Previa	yes	20	17.4%
	no	95	82.6%
Gestational age	32-36 weeks	35	34.4%
	37-42 weeks	80	69.6%
Uterine scar	Scarred uterus	34	29.6%
	Un scarred uterus	81	70.4%

Table 3: different variable wise stratification of placenta Previa

variables		Placenta Previa		P-value
		Yes	no	
Age group	22-30	12(24%)	38(76%)	0.101
	>30-40	8(12.3%)	57(87.7%)	
gravidity	2-4	18(17.1%)	87(82.9%)	0.820
	>4-7	2(20%)	8(80%)	
Gestational age	32-36 weeks	7(20%)	28(80%)	0.625
	37-42 weeks	1316.2(%)	67(83.8%)	
Uterine scar	Scarred uterus	13(38.2%)	21(61.8%)	<0.001
	Un scarred uterus	7(8.6%)	74(91.4%)	

Discussion:

Analyzing a sample of 115 expectant mothers, the study looks at a number of variables and their relationships to placenta Previa, including age, gravidity (number of pregnancies), gestational age, and uterine scar status. With a standard deviation of 5.4 years, the participants' mean age was 31.9 years. Women with placenta Previa are at 4-fold of increased risk of second trimester vaginal bleeding and is characterised by abnormal overlying the endocervical OS and is known as most feared complications in obstetrics[11-12].Two age categories of women were created: those over 30 and 40 and those between 22 and 30. With a standard deviation of 1.1 and a mean gravidity of 3.1, the majority of women had two to four pregnancies. Most pregnancies were near term, with a mean gestational age of 37.3 weeks and a standard deviation of 2.8 weeks.A comprehensive distribution of the sample by age and gravidity is given in Table 1. Of the 115 women, 43.5% were between the ages of 22 and 30, and 56.5% were between the ages of 30 and 40. neonatal mortality rates are increased 4-fold in singleton pregnancies with placenta Previa and their etiology is still unknown, the pathogenesis is likely o be the result of endometrial damage and uterine scaring[13-14]. This indicates a fairly equal distribution with a minor female elder predominance. In terms of gravidity, 9.7% of the population had more than four pregnancies, whilst a sizeable majority (91.3%) had between two and four pregnancies. The majority of participants had moderate reproductive histories, according to the data.Table 2 explores the level of uterine scarring and gestational age. It indicates that the majority of pregnancies were in their later stages, with 34.4% of the women being between 32 and 36 weeks and 69.6% being between 37 and 42 weeks. The clinical risk factors of this disease include advance maternal age, multiple gestations, previous Previa, induced labor and previous caesarian section[15]. Furthermore, compared to 70.4% of the women, only 29.6% of them had a scarred uterus. Placenta Previa was found to be 17.4% prevalent in the group under study, suggesting that this condition is rather widespread.The stratification of placenta Previa across many factors is seen in Table 3. In the age group analysis, the prevalence of placenta Previa was found in 24% of women aged 22–30 and 12.3% of women aged 30–40, however the difference was not statistically significant (P=0.101).for gravidity, there was no statistically significant difference (P=0.820) between the 17.1% of women with 2-4 pregnancies and the 20% of women with more than 4 pregnancies for placenta Previa.20% of women between 32 and 36 weeks and 16.2% of women between 37 and 42 weeks, respectively, had placenta Previa, according to the analysis of gestational age; nevertheless, there was no significant difference (P=0.625) between the two groups. Nonetheless, a noteworthy discovery was noted about the state of uterine scars. There was a significant correlation (P<0.001) between the prevalence of placenta Previa and uterine scarring, as 38.2% of women with scarring and only 8.6% of women without scarring had placenta Previa.

Conclusion: The prevalence and location of placenta Previa in pregnant women are highlighted in this study, which also demonstrates a strong correlation between the condition of uterine scars. Based on available research, women who have uterine

scarring may be more susceptible to placenta Previa. Even though there were no statistically significant changes in age, gravidity, or gestational age, the knowledge collected can direct future studies and improve clinical procedures for better care and monitoring of placenta previa-risk pregnancies.

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