



PREVALENCE OF PREMATURE RUPTURE OF MEMBRANE AND ITS ASSOCIATED FACTORS AMONG PREGNANT WOMEN

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ABSTRACT

Introduction: Premature rupture of membrane is a disruption of fetal membrane followed by passage of amniotic fluid before the onset of labor, beyond 28 weeks gestation. This study aimed to identify prevalence and associated factors of PROM. **Method:** Hospital-based case control study was conducted on 96 cases of PROM from 900 patients from March 2023 to May 2024. **Results:** Incidence of PROM in singleton full term patients was 10.6%. Relationship between Genitourinary Infection and PROM, history of previous CS , previous history of PROM & PROM was established. **Conclusion:** Planning appropriate pregnancy care during antenatal is recommended. In addition health care providers are suggested to identify at risk pregnancies.

KEYWORDS :

INTRODUCTION

Premature rupture of the membranes (PROM) is usually defined as rupture of membranes at any time before the onset of uterine contractions.

The fetal membrane is composed of the inner amnion and the outer chorion. At term, the amnion is a tough ,firm & pliable membrane.

The incidence of PROM ranges from about 5% to 10% of all deliveries. PROM is the cause of about one third of all preterm births [1].

The burden of PROM ranges from maternal ,neonatal ,perinatal morbidity and mortality to national economic loss. The risk factors of PROM include smoking, polyhydramnios, urinary tract infections , prior history of PROM, previous cs.

Objectives

To investigate the incidence of premature rupture of fetal membranes in singleton pregnancies and to identify the risk factors associated .

MATERIALS AND METHODS

Hospital based retrospective case control study design was implemented. The Study population was pregnant mothers in Civil hospital Ahmedabad during the data collection period. Pregnant Women with PROM and without PROM beyond 37 weeks of gestation were included in this study.

Structured questionnaire and checklist was designed .SPSS was used for analysis. Statistical significance considered at P < 0.05

RESULTS

- In present study, we analyzed the data of 900 patients of which there were 96 cases of PROM (10.6%). Routine antenatal workup, hemogram, urine routine microbiology & CS were done.

Table 1: Demographics

Age group	Patients with PROM	%	Patients without PROM	%
18-24	74	77	644	80
25-30	18	18.7	120	14.9
>30	4	4.16	40	4.97

77% of patients presenting with PROM were of younger age group (18-24) chiSquare value 1.03 , p value 0.59(not significant)

Table 2: Parity status

Parity status	Patients with PROM	%	Patients without PROM	%
Nullipara	62	64.5	563	70
2&3rd para	24	25	180	22.38
>3 para	10	10.41	61	75.8

64% of total patients presenting with PROM were nullipara ,while 70% of patients without PROM were nullipara. ChiSquare 1.49, p value 0.47, not significant

Table 3: Genitourinary Infection and PROM

Genitourinary tract infection	Patients with PROM	Patients without PROM
Present	28	113
absent	71	688

The chi-square 13.8615 , p-value 0 .000197 , statistically significant. Out of 141 patients G-UTI, 28 patients developed PROM.

Table 4: History of Abortion

History of abortion	Patients with PROM	Patients without PROM
Present	26	161
Absent	70	643

27% of patients with PROM had history of abortion. chi-square 2.5957, p-value 0.107153, Not significant.

Table 5: History of previous C-section

History of previous CS	Patients with PROM	Patients without PROM
Present	30	154
Absent	66	650

chi-square 7.7145 , p-value 0.005478. significant.

Table 6: Previous History of PROM

Previous History of PROM	Patients with PROM	Patients without PROM
Present	26	130
Absent	70	674

chi-square 7.1294, p-value .007583, significant

Recurrent PROM seen in 26 patients.

DISCUSSION

Out of 900 patients ,96 cases of patients had premature Rupture of membranes (10.6%).

Extremes of age , nulliparity & history of abortion were not found significantly associated with PROM Genitourinary tract infections are known to be a major riskfactor for PROM.This finding is consistent with study in China and Uganda [2,3].Infection results in inflammation of the amniotic membrane leading to rupture[2,4,5].

Henceforth prevention ,early detection & treatment of Genitourinary tract infections in pregnancy can lead to decrease in the incidence of PROM and its complications.

Patients with prior C-section are at more risk of PROM,supported by studies done in Uganda and Tigray [6,7]. Cesarean scars could cause abnormal placentation and structural abnormalities in the fetal membrane [6].

In this study recurrent PROM was seen in 26 patients. Hence prior history of PROM is a significant risk factor,supported by study findings from Mekelle-Tigray [7].

CONCLUSION

This study identified that history of CS, previous PROM and Genitourinary infections to be significantly associated with PROM.Appropriate pregnancy care during antenatal visits and subsequent follow-up is recommended.

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