

# Study of patient with premature rupture of membrane

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## Abstract

**Background:** Worldwide, there is a slight difference in the prevalence of premature rupture of membranes and this could be due to the difference in the population studied. **Aims and Objectives:** To Study patient with premature rupture of membrane. **Methodology:** This was a cross sectional study carried out in the ANC women presented with the clinical features of premature rupture of membrane at the OPD or Ward of the department of OBGY at tertiary health care centre during the one year period i.e. January 2018 to January 2019 so during the one year period there were 63. All the necessary information like age, clinical features, associated risk factors if any were noted and entered to excel sheet and analyzed by excel software for windows 10. **Result :** The associated Socio Demographic factors were Working mother in 57.14% followed by Housewife in 46.03%, By Residence Urban were 77.78%, followed by Rural in 25.40%, by SES - Lower were 42.86%, Higher were 33.33%, Middle were 23.81%. The most common clinical features were Leaking of the fluid per vaginally in 93.65%, followed by Rise of fever in 84.13%, Decreased movement of fetus in 77.78%, Decreased FHR in 60.32%, Abdominal tenderness in 55.56%, Foul smelling discharge in 33.33%. The most common associated risk factors were Frequent travelling were 39.68%, H/o PIH in 33.33%, H/o Abortion in 30.16%, H/o Carrying of heavy weight in 22.22%, H/o GDM in 17.46%, Cervical incompetence in 11.11%. **Conclusion:** It can be concluded from our study that the most common clinical features were Leaking of the fluid, Rise of fever, Decreased movement of fetus. The most common associated factors were Frequent travelling, H/o PIH, H/o Abortion, H/o Carrying of heavy weight etc.

**Key Words:** PROM (Premature Rupture of Membrane), PIH (Pregnancy induced Hypertension), GDM (gestational Diabetes Mellitus)

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## INTRODUCTION

Worldwide, there is a slight difference in the prevalence of premature rupture of membranes and this could be due to the difference in the population studied. The incidence of PROM ranges from about 5% to 10% of all deliveries, and PPROM occurs in approximately 3% of all pregnancies. Approximately 70% of cases of PROM occur in pregnancies at term, but in referral centers, more than 50% of cases may occur in preterm pregnancies.

PROM is the cause of about one third of all preterm births<sup>1</sup>. PROM is a significant cause of perinatal morbidity and mortality. The burden of PROM ranges from maternal and neonatal mortality and morbidity to national economic loss due to drug expense, hospitalization, absence from the workplace and expense to the health professionals.<sup>3</sup>

## METHODOLOGY

This was a cross sectional study carried out in the ANC women presented with the clinical features of premature rupture of membrane at the OPD or Ward of the department of OBGY at tertiary health care centre during the one year period i.e. January 2018 to January 2019 so during the one year period there were 63 after written and explained consent and confirmation of PROM by clinically and necessary investigations were included into the study. All the necessary information like age, clinical features, associated risk factors if any were noted and entered to excel sheet and analyzed by excel software for windows 10.

## RESULT

**Table 1:** Distribution of the patients as per the various Socio Demographic factors

24.56 ±3.45		
Average age (mean ±SD)	No.	Percentage (%)
Occupation	36	57.14
Working	29	46.03
Housewife		
Residence		
Urban	49	77.78
Rural	16	25.40
SES		
Lower	27	42.86
Higher	21	33.33
Middle	15	23.81

Socio Demographic factors were Working mother in 57.14% followed by Housewife in 46.03%, By Residence Urban in 77.78%, followed by Rural in 25.40%, by SES - Lower were 42.86% Higher were 33.33%, Middle were 23.81%.

**Table 2:** Distribution of the patients as per the various clinical features

Clinical features	No.	Percentage (%)
Leaking of the fluid per vaginally	59	93.65
Rise of fever	53	84.13
Decreased movement of fetus	49	77.78
Decreased FHR	38	60.32
Abdominal tenderness	35	55.56
Foul smelling discharge	21	33.33

(More than one clinical features in the patients so the total may be more) The most common clinical features were Leaking of the fluid per vaginally in 93.65%, followed by Rise of fever in 84.13%, Decreased movement of fetus in 77.78%, Decreased FHR in 60.32%, Abdominal tenderness in 55.56%, Foul smelling discharge in 33.33%.

**Table 3:** Distribution of the patients as per the associated risk factors

Risk factors associated	No.	Percentage (%)
Frequent travelling	25	39.68
H/o PIH	21	33.33
H/o Abortion	19	30.16
H/o Carrying of heavy weight	14	22.22
H/o GDM	11	17.46
Cervical incompetence	7	11.11

The most common associated risk factors were Frequent travelling were 39.68%, H/o PIH in 33.33%, H/o Abortion in 30.16%, H/o Carrying of heavy weight in 22.22%, H/o GDM in 17.46%, Cervical incompetence in 11.11%.

## DISCUSSION

Premature rupture of membranes (PROM) is defined as rupture of fetal membranes before onset of labour. If it happens between 37 completed weeks and 42 weeks of gestational age, it is called term premature rupture of membranes (TPROM), while that occurring between 24 weeks and 37 weeks is called preterm premature rupture of membranes (PPROM). Rupture of membranes for > 24 hours before delivery is called prolonged rupture of membranes. Fetal membranes are made of an outer four to six layered chorion attached to a collagen rich connective tissue and an inner single cell layer amnion.<sup>4</sup> Weakness in the chorioamnion membrane is the overall mechanism of PROM, which may be due to deficiency of

type III collagen, reduced size of the membrane at the affected site and reduced collagen content.<sup>4-7</sup> In addition, it may be caused by proteolytic enzymes from bacteria.<sup>10</sup> A number of risk factors e.g. smoking have been identified to be directly associated with PPROM. However, the cause is uncertain and it is believed to be multifactorial.<sup>11</sup> Patients with premature rupture of membranes may present with leakage of vaginal fluid or vaginal bleeding but without contractions. If infection sets in, patients may also present with symptoms and signs of chorioamnionitis. Diagnosis of PPROM is made through history from the woman and by a sterile speculum vaginal examination. Pooling of liquor in the posterior vaginal fornix or leakage of it from the cervical os confirms the diagnosis. Ferning of liquor as observed

on the microscope or change of nitrazine paper to blue because of the alkalinity of the amniotic fluid is supportive of the diagnosis of premature rupture of membranes. In PPROM, the management involves administration of antibiotics that reduces the risk of perinatal infection and increases the latency period while steroids reduce perinatal morbidity and mortality.<sup>5,12</sup> Preterm premature rupture of membranes is one of the significant causes of preterm delivery and is associated worldwide with increased rates of neonatal and maternal morbidity and Mortality.<sup>10,13</sup> The associated Socio Demographic factors were Working mother in 57.14% followed by Housewife in 46.03%, By Residence Urban were 77.78%, followed by Rural in 25.40%, by SES - Lower were 42.86%, Higher were 33.33%, Middle were 23.81%. These findings are similar to Natnael Etsay Assefa<sup>14</sup> they found The median age of the women for the case and control were 27 (IQR = 5) and 26 (IQR = 7) respectively. Regarding residence, majority of cases and controls were living in urban. The proportion of participants were lower followed by Middle Socio Economic Class The most common clinical features were Leaking of the fluid per vaginally in 93.65%, followed by Rise of fever in 84.13%, Decreased movement of fetus in 77.78%, Decreased FHR in 60.32%, Abdominal tenderness in 55.56%, Foul smelling discharge in 33.33%. Shadma Khan *et al*<sup>15</sup> they found the similar symptoms. The most common associated risk factors were Natnael Etsay Assefa<sup>14</sup> they found Frequent travelling were 39.68%, H/o PIH in 33.33%, H/o Abortion in 30.16%, H/o Carrying of heavy weight in 22.22%, H/o GDM in 17.46%, Cervical incompetence in 11.11%. These findings are similar to Preterm delivery, Previous PROM , Cervix operation , Cervical cerclage etc.

## CONCLUSION

It can be concluded from our study that the most common clinical features were Leaking of the fluid, Rise of fever, Decreased movement of fetus. The most common associated factors were Frequent travelling, H/o PIH, H/o Abortion, H/o Carrying of heavy weight etc.

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