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ANALYSIS OF RISK FACTORS FOR PREMATURE RUPTURE OF FETAL MEMBRANES

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Annotation: Premature rupture of membranes (PROM) is a prevalent obstetric complication occurring in up to 20% of pregnancies, leading to significant maternal and neonatal morbidity. This study aimed to identify and compare the primary risk factors for PROM and premature labor without PROM. Analysis of 100 pregnancies complicated by PROM and 100 cases of premature labor without PROM revealed that complicated obstetric histories, including induced abortions and stillbirths, were common in both groups. PROM predominantly occurred between 29–37 weeks of gestation, with microbial infections such as Enterococcus faecalis and E. coli playing a significant role. In contrast, severe preeclampsia was the primary cause of premature labor in the control group. Management strategies varied between groups, emphasizing the need for targeted interventions based on underlying risk factors.

Keywords: Premature rupture of membranes (PROM), Preterm labor, Chorioamnionitis, Obstetric history, Twin pregnancy, Preeclampsia, Risk factors, Microbial growth, Maternal complications, Neonatal outcomes.

Introduction: One of the common complications during pregnancy and childbirth is premature rupture of membranes (PROM), which occurs in up to 20% of pregnancies and its prevalence has not decreased over time. Obstetricians and gynecologists have noted an increase in complications both for the mother and the fetus associated with PROM.

Objective: To identify and compare the main risk factors for PROM and premature labor.

Materials and Methods: A total of 100 case histories of pregnancies and deliveries complicated by PROM were analyzed. The control group consisted of 100 case histories of premature labor without PROM, covering gestational ages from 24 weeks to 37 weeks in 2023.

Results: The age of the patients ranged from 19 to 47 years, with most women being between 27-35 years old. On average, the number of pregnancies per patient was 3. Obstetric histories were complicated in 67% of cases in both groups studied. In the PROM group, 37% had a history of induced abortions, and 20% had two or more abortions. In the control group, 25% had a history of induced abortion, and 9% had two or more abortions. Stillbirths occurred in 19% of the PROM group and 17% in the control group. PROM in the study group occurred between 22-28 weeks in 23% of cases, and between 29-37 weeks in 77% of cases. Most patients (54%) experienced a rupture lasting less than 24 hours, while 27% had a rupture lasting between 24 hours to 5 days, and 19% had a rupture lasting between 6-32 days. In the control group, the rupture duration did not exceed 5 hours, with 75% delivered by cesarean section and 25% delivered vaginally. Twin pregnancies accounted for 14% in the PROM group and 8% in the control group. Among the signs of

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chorioamnionitis, fever and leukocytosis were observed in 10% of cases. Cultures showed microbial growth in 60% of cases in the PROM group, with Enterococcus faecalis (26%), E.coli (25%), Candida albicans (14%), and Klebsiella pneumoniae (9%) being the most common pathogens. In the control group, leukocytosis was the main sign of chorioamnionitis (12%), with microbial growth observed in 8% of cases: Enterococcus faecalis (20%), Candida albicans (26%), and E.coli (15%). The main cause of premature labor in the control group was severe preeclampsia (72%) and moderate preeclampsia (15%). Consequently, treatments in the control group included dopegit, dexamethasone, magnesium sulfate, and antibiotic therapy. The medications used in PROM cases included dexamethasone, ginipral, and antibiotic therapy.

Conclusions: The main risk factors for PROM and premature labor include a complicated obstetric history and signs of chorioamnionitis. Multiple pregnancies are also a risk factor for PROM. In the control group, the primary cause of premature labor without PROM was severe preeclampsia (87%).

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