INTRODUCTION
Preterm Prelabour Rupture of Membranes (PPROM) is the Spontaneous Rupture of the fetal Membranes (SROM) after 22 weeks and prior to 37 weeks of gestation. It complicates 2% of all pregnancies, whereas pre-term labour occurs in 2-10% of all pregnancies. Delivery occurs within 7 days of PPROM in about 80% of cases.\(^1\) It can lead to significant perinatal morbidity and mortality.

The management options of such patients range from expectant or conservative and aggressive intervention depending upon gestational age, clinical evidence of infection and maternal and fetal condition. Even in developed countries, with good neonatal facilities, the survival rate of neonates born between 20-25 weeks is only 25%.\(^1\)

Some clinicians prefer delivery soon after fetal viability because of the short and long-term sequelae. But beyond the use of steroids, antibiotics and fetal monitoring, there continues to be little consensus regarding the optimal management of PPROM.\(^2\)

This case report describes a case of PPROM occurring at 23rd week of gestation and extended till 30th week with conservative management without untoward outcome.

CASE REPORT
A 28-year-old primigravida presented in the antenatal clinic at 23 weeks gestation, with history of SROM. It was a spontaneous planned pregnancy confirmed by pregnancy test at 7 weeks of gestation. There was no history of any flu-like febrile illness, vaginal discharge or vaginal bleeding in the first trimester.

At presentation, she gave history of painless loss of fluid per vaginum for the last 10 days, which had progressively decreased in quantity. It was not associated by any smell or irritation. She did not have any urinary or bowel symptoms. The fetal movements were reported as normal.

The patient was admitted and her pulse, blood pressure and temperature were normal at that time. There was no uterine tenderness. On sterile speculum examination, clear amniotic fluid was seen coming from the cervical os. High Vaginal Swab (HVS) was taken. Ultrasoundography revealed a live fetus of 23 weeks with no gross congenital anomalies and anhydramnios. TLC at that time was 8500 mm\(^3\) and C-reactive protein was < 6 mg/dl (normal). HVS culture showed normal vaginal flora. Her body temperature remained normal during admission and sterilized pad was dry. She was given a prophylactic course of antibiotics (erythromycin and metronidazole) for 10 days, and dexamethasone cover to mature the fetal lungs for the prevention of respiratory distress syndrome.

The patient and her husband were counselled about the complications, the outcome and chances of survival of the neonate. The couple chose to have expectant management.

The patient was then sent home and advised weekly follow-up. She was advised monitoring of body temperature at home and told to report on having any temperature rise, offensive vaginal discharge, abdominal pain or decreased fetal movements. After one week, she was reviewed for signs of chorioamnionitis. TLC was 10,000 mm\(^3\) and she was draining clear fluid vaginally. HVS was repeated fortnightly. At 25 weeks gestation, it showed growth of beta hemolytic streptococci group B, and appropriate antibiotic were given, to which, the organism was sensitive. Her C-reactive protein was again below 6 mg/dl, her TLC was 10,000 mm\(^3\).

Fortnightly ultrasonography showed normal fetal growth but persistently scanty liquor. The pregnancy continued
to 30+ weeks when she went into spontaneous labour. The neonatal outcome even at this gestation was not very promising, but since tocolysis was not justified so the couple was counselled and the patient was admitted. Spontaneous vaginal delivery was planned, although the complications associated with almost anhydramnios were a matter of consideration. Fetal heart monitoring was done with electronic cardiotocograph. The neonatologist was involved and an incubator arranged in the nursery. The labour went smoothly and lasted for about 4 hours. She delivered a female baby weighing 1400 g but with Apgar score of only 1 and 3 at 0 and 5 minutes.

The baby needed resuscitation and was admitted in nursery but did not need surfactant, and maintained oxygen saturation. There was no evidence of neonatal sepsis and no intraventricular hemorrhage or any other complications. The baby was discharged after 3 weeks. The baby was brought to pediatric OPD for regular follow-up as was advised by the pediatrician. Her last visit was at the age of one year. The physical growth and milestones of the baby were normal.

DISCUSSION

Preterm Prelabour Rupture of Membranes (PPROM) increases the risk of prematurity and leads to a number of other perinatal and neonatal complications including a 1-2% risk of fetal death. Surviving neonates may develop sequelae such as malpresentation, cord compression, oligohydramnios, necrotizing enterocolitis, neurological impairment, intraventricular hemorrhage, and respiratory distress syndrome. The oligohydramnios causes a characteristic tetrad of facial anomalies, limb position, defects, pulmonary hypoplasia and impaired fetal growth.

Sub-clinical chorioamnionitis complicates 30% of cases. However, neonatal sepsis is seen in only 2-4%. There was no evidence of either in the patient and her baby. Fetal lung hypoplasia occurs in up to 50% at 19 weeks falling to about 10% at 25 weeks, 23 weeks or less is the threshold for the development of lung hypoplasia. Fetal Inflammatory Response Syndrome (FIRS) is initiated by placental inflammation rather than infection. Fetal infections like pneumonia, bacteremia and meningitis are also common in such cases. But in this patient, vigilant antenatal monitoring was done and prophylactic antibiotics were given. Luckily for the patient and her baby, there were no infective complications. There is a relationship between intravuterine infection and the development of neonatal intraventricular hemorrhage, periventricular leukomalacia and cerebral palsy.

Prolonged latency after membrane rupture has not been associated with an increased incidence of fetal neurological damage. This patient had a latent period of 7 weeks between rupture of membranes and delivery of the baby and had no neurological damage up to one year of follow-up.

In developing countries, there are other sub-optimal conditions. Good neonatal intensive care is scarce and surfactant is not easily available. Moreover, for a first child to be handicapped, abnormal, or preterm loss sometimes becomes a family taboo. On the other hand, to continue with such a pregnancy is in accordance with the moral and religious beliefs of most of the people.

The patient and her husband were fully counselled about possible fetal complication, if pregnancy was continued and fetal outcome, if delivered at 23 weeks of gestation. They were told that the EPI-cure study showed that in infants born before 26 weeks gestation approximately half had some disability at 30 months and approximately a quarter had severe disability. They wanted to continue with the pregnancy despite all the risks. They were very happy with the outcome at delivery and at one year follow-up.

In summary, conservative or expectant management in carefully selected cases of PPROM may benefit some babies. Close monitoring, collaboration with the neonatologist and appropriate intervention where needed form the cornerstone of such management, even in those centers of undeveloped countries.

REFERENCES