INTRODUCTION

Premature rupture of the fetal membranes **(PROM)** is defined as the rupture of the amniotic membranes with the release of the amniotic fluid more than 1 hour prior to the onset of labour. PROM is subdivided into term PROM (**TPROM**, i.e. PROM after 37 weeks of gestation) and preterm PROM (**PPROM**, i.e. PROM prior to 37 weeks of gestation) ***(Simhan and Canavan, 2005).***

The incidence of at term PROM is about 8-10% of all pregnancies; however preterm PROM incidence is 2-3% only ***(Smith, 2004).***

Preterm PROM is responsible for approximately one third of all preterm births ***(Martin et al., 2003).***

It is more common in low socio-economic groups, teenagers, single women, smokers and those having sexually transmitted organisms cultured from cervix or vagina in the first half of pregnancy**.**Premature rupture of membranes can result from a wide array of mechanisms acting individually or jointly ***(Khashoggi,2004).***

Although the exact mechanism is not known but the mounting evidence implicates the inflammation of chorioamnionic membranes ***(Lamont et al., 2003).***

Unfortunately, there are many other contributing factors including inherent weakness of membranes (altered collagen III), urinary tract infections, incompetent cervix, smoking, polyhydramnios, multiple

gestation, antepartum hemorrhage/vaginal bleeding, previous PROM delivery and poor nutrition ***(Khashoggi,2004).***

The etiology of PROM remains the subject of speculation. Intrauterine infection has a role in some cases, but ascending infection from the vagina after membrane rupture is more usual. Damage may be caused to the membranes by substances produced by bacteria in the genital tract or by the inflammatory response of the mother to these bacteria. Because the amnion is an avascular structure which depends on the amniotic fluid for its maintainance, nutritional status may also be involved in the pathogenesis of PROM ***(Mathews and Neil, 2005).***

The diagnosis of PROM is made by clinical suspicions, patient history and simple testing. Patient history has an accuracy of 90% for the diagnosis of PROM and should not be ignored. Numerous tests have been recommended for the evaluation of PROM but two tests have withstood the test of time: nitrazine paper testing and ferning of the vaginal pool. If a combination of patient history, nitrazine testing and ferning were used to evaluate a patient for PROM, the accuracy of at least two positive tests was 93.1% ***(Simhan and Canavan, 2005).***

There are significant risks of infant morbidity and mortality after birth. Because of the association between PROM and intrauterine infection, oligohydramnios, and placental abruption, the fetus is also at risk before delivery, particularly if conservative management is attempted to prolong the pregnancy ***(Mercer, 2005).***

The management of patients with PROM remains controversial. Immediate delivery entails the risks of prematurity in the infant, whereas

conservative observation raises the concern of placing the mother and fetus both at risk of sepsis. Such patients should be counseled regarding the potential neonatal risks involved and they must be observed and managed at a tertiary care hospital with adequate neonatal intensive care unit facilities ***(Khashoggi, 2004).***

Multiple options are available for management of at term PROM in absence of fetal distress, overt intrauterine infection and maternal indications for delivery. Unlike the PROM at term, management of preterm PROM is considerably more complicated and requires a thorough evaluation of gestational age, fetal position, presence of infection and feto-maternal well-being ***(Mercer, 1998).***

Antenatal antibiotics and corticosteroids therapies have clear benefits and should be offered to all women without contraindications ***(Simhan and Canavan, 2005).***