Summary

Preterm birth is defined as any delivery of a pregnancy at less than 37 completed weeks (< 259 days) and more than 23 completed weeks of gestation. It is a heterogeneous condition where 30–40% of all cases of preterm births are the result of elective delivery for a maternal or a fetal complication. The remaining 60–70% of preterm births occur spontaneously. Preterm birth complicates about 3% of pregnancies before 34 weeks' gestation and between 7 and 12% before 37 weeks' gestation.**(Honest , et al., 2009).**

Despite significant advances in perinatal medicine, Preterm delivery remains a major cause of neonatal morbidity and mortality. Approximately 75% of infant deaths in the first month of life occur in preterm infants. Therefore, prediction and prevention of Preterm delivery is very important for improvement in neonatal outcome**(Sunagawa, et al.,2008).**

Only about 20% of women presenting with suspected preterm labour would actually deliver preterm. In order to institute specific therapy more appropriately, it is important to have adjuvant tests to help predict who is most likely to deliver preterm **(Sieng, et al., 2007).**

Fetal fibronectin is an isoform of a family of glycoproteins termed fibronectins. Fetal fibronectin is uniquely produced in fetal tissues as well as in certain malignant tumors, and mainly found in amniotic fluid, the placenta, and in the basement membranes near the choriodecidual interface.

It is an adhesive binding the placenta and membranes to decidua. It is present in high quantities in amniotic fluid, and in lesser quantities in maternal serum and cervicovaginal secretions. After 20 weeks of gestation, about 4% of pregnant women have detectable fetal fibronectin levels in cervicovaginal secretions. This may reflect leakage of amniotic fluid through microruptures in the fetal membranes or disruption of the choriodecidual interface often caused by occult intrauterine infection **(Sunagawa, et al.,2008).**

The detection of fetal fibronectin concentrations of more than 50 ng/mL in the cervical or vaginal secretions after this gestational age has been associated with an increased risk of spontaneous preterm delivery. Assay of fetal fibronectin in cervico-vaginal secretions has proven to be a valuable asset in the prediction of spontaneous preterm delivery and the test was first described by Lockwood and colleagues in 1991 **(Sieng, et al., 2007).**

This study was performed on 80 pregnant women attending the Outpatient Clinics and Inpatient Department of Obstetrics and Gynecology of _Damanhour Teaching hospital. All have a singleton pregnancy between 28 – 34 weeks gestation with no medical problem . They were divided into two groups. The first was threatened preterm labor with intact membranes (40 patients), the second (40 patients) is control group . All of them were exposed to history taking, general local examination in addition to special investigations, which include cervical secretions sampling in order to measure fibronectin levels and ultrasonographic examination to determine number, viability, presentation and gestational age. Then patient with preterm labor were treated by beta mimetics . Crticosteroids for patints presented before 34 weeks. the

results showed that only about 32.5 % of patients presented with threanted preterm labor delivered preterm. The presence of fetal fibronectin in the cervical secretions predicted preterm birth in the studied period of pregnancy as there was significant correlation between duration of pregnancy and fibronectin levels. There was significant correlation between FFN and body weight of the newborn that when fibronectin was negative the body weight of the newborn increased and sampling delivery interval increased and the presence of FFN in cervical discharge does not necessarily indicate the onset of labor and a negative result indicates a low likelihood of delivery but a positive test should not be interpreted as an indication of labor or a reason for admission .