Dr Bosire Alex
Lecturer

PRETERM LABOUR

DEFINITION

- contractions that cause cervical change/appreciable cervical dilatation or effacment before 37 weeks of gestation but after age of viability.
- Labor is the process of coordinated uterine contractions leading to progressive cervical effacement and dilatation by which the fetus and placenta are expelled.

- cervical incompetence (cervical change in the absence of uterine contractions) and preterm uterine contractions (regular contractions in the absence of cervical change)

INCIDENCE

- 9% to 11% of all live births
- accounts for 40% to 50% of preterm births
- number 1 cause of neonatal morbidity and mortality and causes 75% of neonatal deaths that are not due to congenital anomalies.
- Approximately 30% of premature births are due to miscalculation of gestational age or to medical intervention required by the mother or fetus.

- Increased incidence also due to increase in fertility methods/drugs and assisted reproduction – high order pregnancies

RISK FACTORS

- Previous Preterm Delivery.
- Infection – chorioamnionitis, UTI . Cytokines to Prostaglandins – labour
- Uterine Malformations – bicornuate, myomas
- Uterine Overdistention – multiple gestation,polyhydramnios
- Vaginal Bleeding - abruptio

PSYCHOSOCIAL

- Anxiety
- Stress
- Depression
- Negative life events
- Excessive alcohol intake
- smoking

OTHERS

- Nonwhite race, low socioeconomic status, low body mass index, poor and excessive weight gain, diethylstilbestrol exposure, smoking, cocaine use, history of preterm delivery, cervical insufficiency, maternal abdominal surgery in late second and third trimesters, PROM, and maternal medical problems (i.e., severe hypertension or diabetes mellitus) are associated with increased risk of preterm births.

NEONATAL CONSEQUENCES.

- include respiratory distress syndrome (RDS), hypothermia, hypoglycemia, jaundice, intraventricular hemorrhage, necrotizing enterocolitis, bronchopulmonary dysplasia, sepsis, and patent ductus arteriosus. Long-term morbidities include cerebral palsy, mental retardation, and retinopathy of prematurity.

PREVENTION

- Reduction in risk factors
- Education and detection of signs
- Progesterones
- No role of
  - Home uterine monitoring, bed rest, and oral tocolytic therapy have shown no beneficial effect in reducing rate of preterm delivery.

EVALUATION

- History and examination
- Sterile speculum examination (SSE) should include
  - Nitrazine and fern test to rule out spontaneous rupture of membranes.
  - DNA vaginitis – chlamydia,yeast,bacterial vaginosis,gonorrhea, group B strep
  - Visual inspection assessment of cervical dilation and bleeding
  - Fetal fibronectin (FFN) test. FFN can be done between 24 to 34 weeks gestation. The value of the test is its negative predictive value of 99% in predicting no risk of delivery within 7 days.

OTHER INVESTIGATIONS

- Total blood count
- Urine m/c/s
- Ultrasonography – fetal weight,presentation,cervical length

MANAGEMENT

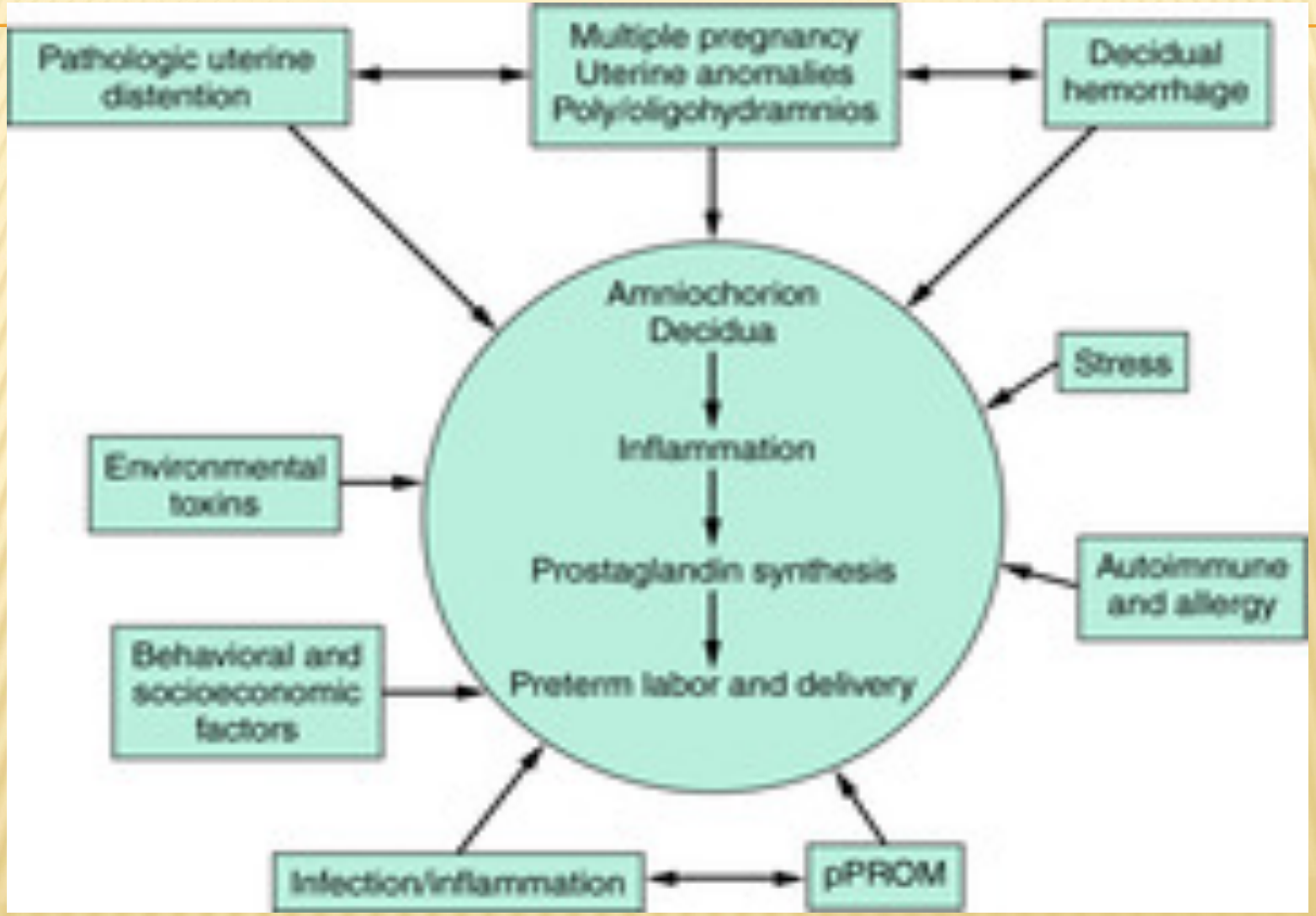
- main goals are to reduce or stop the contractions to delay delivery and to optimize fetal well-being with administration of steroids and antibiotics

PTL AFTER 34 WEEKS

- Once confirmed gestational age – let labour progress

PTL BETWEEN 26 AND 34 WEEKS' GESTATION/EFW 600–2500 G.

- Hydration.
- Bed rest
- Antibiotics – to treat infection or/& GBS prophylaxis
- Corticosteroids
- Tocolysis
- Delivery when & if appropriate – Normal or CS


Pathologic uterine distention
Multiple pregnancy
Uterine anomalies
Poly/oligohydramnios
Decidual hemorrhage
Amniochorion
Decidua
Inflammation
Prostaglandin synthesis
Preterm labor and delivery
Stress
Environmental toxins
Autoimmune and allergy
Behavioral and socioeconomic factors
Infection/inflammation
pPROM

CORTICOSTEROIDS

- Two doses of betamethasone (12 mg IM) 24 hours apart or four doses of dexamethasone (6 mg IM) 12 hours apart are recommended for acceleration of fetal lung maturity.
- Administration of corticosteroids is associated with a decreased risk for RDS, intraventricular hemorrhage, necrotizing enterocolitis, and neonatal death

- The optimal benefits of antenatal corticosteroids are seen 24 hours after administration, peak at 48 hours, and continue for at least 7 days.

TOCOLYSIS

- helpful in providing time to administer betamethasone and enable transport to a tertiary medical center.
- Tocolytic therapy should be considered in the patient with cervical dilatation less than 5 cm. Successful tocolysis is generally considered fewer than 4–6 uterine contractions per hour without further cervical change

- Contraindications include fetal distress, chorioamnionitis, eclampsia or severe pre-eclampsia, fetal demise, fetal maturity, and maternal hemodynamic instability

TOCOLYTIC AGENTS

- Beta sympathomimetic Agents – terbutaline, ventolin, ritrodrine
- Magnesium sulfate
- Nifedipine
- Indomethacin
- Atociban – oxytocin antagonist
- Nitric acid donors - nitroglycerine

CASES IN WHICH PRETERM LABOR SHOULD NOT BE SUPPRESSED

- Severe hypertensive disease (eg, acute exacerbation of chronic hypertension, eclampsia, severe preeclampsia)
- Pulmonary or cardiac disease (eg, pulmonary edema, adult respiratory distress syndrome, valvular disease, tachyarrhythmias)
- Advanced cervical dilatation (> 4 cm)
- Maternal hemorrhage (eg, abruptio placentae, placenta previa, disseminated intravascular coagulation)

FETAL FACTORS

- Fetal death or lethal anomaly/ Erythroblastosis fetalis
- Fetal distress
- Intrauterine infection (chorioamnionitis)
- Therapy adversely affecting the fetus (eg, fetal distress due to attempted suppression of labor)
- Estimated fetal weight 2500 g
- Severe intrauterine growth retardation

Merci beacoup