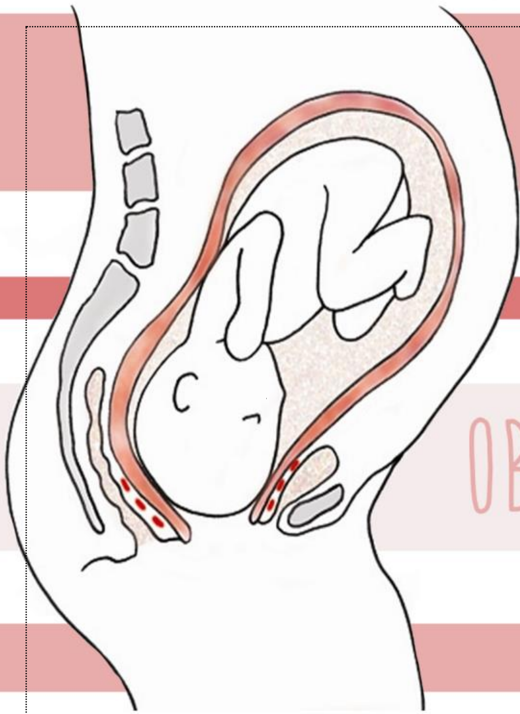

OBSTETRICS AND GYNECOLOGY

POST TERM PREGNANCY & IOL

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Doctor's note Team's note Not important Important 431 teamwork

Objectives:

- Definition of post term pregnancy
- Incidence
- Diagnosis
- Complications
- Managemnt
- Induction of labour
- Indications/ contraindications
- Methods of induction
- Complications

POST TERM PREGNANCY & IOLY

POST TERM PREGNANCY

- Definition
- Epidimiology
- DIAGNOSIS
- COMPLICATIONS
- MANAGEMENT

INDUCTION OF LABOR

- Definition
- indications
- CONTRAINDICATIONS
- ASSESSMENT BEFORE IOL
- METHODS OF IOL
- COMPLICATIONs of :
  A) Amniotomy
  B)OXYTOCIN

POST TERM PREGNANCY

❖ Definition

Pregnancy that extends beyond 294 days /42 wks from first day of LMP

❖ Epidimiology

- Incidence 7-11%

- 4%>43 wks

- Recurrence 50%

- Increased perinatal morbidity(2-3 folds) and mortality

- Increased congenital anomalies: anecephaly, absent piutary,adrenal hyperplasia

❖ DIAGNOSIS

Best estimate based on as many criteria as possible

- Accurate LMP (last menstrual period)(the most important step is to have accurate dating of gestation)

- Positive urine pregnancy test 5-6 wks

- Pelvic examination :uterine size consistent with gestational age by LMP

- Fetal heart detected by doppler by 13 wks

- Fundal height at umbilicus at 20 wks gestation

- Ultrasound CRL measurement in first trimester(6-12wks) or BPD before 26 wks (the most accurate)

-usually we do both LMP and ultrasound

❖ COMPLICATIONS of post term pregnancy

1) Postmature neonate features (10-20%) :

Wasting of subcutaneous tissue, failure of intrauterine growth, meconium staining, dehydration, absence of vernix serosa, lanugo hair, oligohydramnious and peeling of skin

2) Macrosomia

- Twice as common post-term fetuses weigh more than 4000 gm

- Birth injuries due to difficult deliveries, instrumental deliveries , CS and shoulder dystocia are increased

-shoulder dystocia is when the head is delivered and the body trapped, this can end by brachial plexus injury.

3) Oligohydramnious **due to placental insufficiency (because of ageing of placenta)**

- Oligo---leads to fetal distress in labor (due to cord compression)and increased CS rate

- Oligohydramnios can cause cord compression>asphyxia>decrease heart rate > end with caesarean section

4) Meconium stained amniotic fluid

- 10-15% at term 25-30% at 42 wks

- Meconium aspiration syndrome

-meconium that enter to the lung of fetus ,the treatment is trying to do suction very early after delivery of the head and before the first breath

5) Increased CS rate 4 folds

❖ MANAGEMENT

1) Careful fetal monitoring can reduce the risk of perinatal mortality

- Monitering should start at 40 wks (fetal kick chart to record the fetus movement , the normal is 10 moves during 12 hours)

- After 40 wks patients should keep daily movement chart

- Weekly Nonstress test (CTG) plus Amniotic fluid index can reduce perinatal mortality. (Sress test old fashion, not used nowadays)

- BPP/Doppler (measure blood flow in umbilical artery and middle cerebral artery)

- if there is decrease in movement >do CTG,if the result is not reassuring do 1- biophysical profile (which measure tone,movement, amniotic fluid,breath)2- doppler , if the result is abnormal in this case we need to deliver the fetus by induction. And If the result is reassuring, wait tell 42 weeks MAXIMUM.

2) Induction of labour

- The timing of IOL is controversial if fetal monitoring is normal

- Most obstetrician start IOL at 41 + wks (maximum gestational age is 42 w)

INDUCTION OF LABOR

❖ INDUCTION:

when benefits of delivery to the mother or fetus outweighs the benefit of continuing pregnancy (post term >after 42 w, post date >after expected day for delivery)

- Maternal indications

- medical disease worsening with pregnancy (cardiac disease, renal disease, Hypertension)

- **preeclampsia(the only treatment is to induce delivery , after giving the fetus steroid for lung maturation)**

- **Premature rupture of membranes (wait for spontaneous " 12-24 h" if the natural labor doesn't start give her oxytocin, to induce labor to prevent infections) .**

-prolonged pregnancy

- **Fetal indications**

-post-term/ post-date most common

-Fetal distress/ nonreassuring NST

-IUGR

-oligohydramnions

-chorioamnionitis

❖ CONTRAINDICATIONS

Any contraindications to vaginal delivery

- **Placenta previa**
- **Vasa previa**
- **Transverse lie**
- **Breech**
- **Classical uterine scar (especially in fundus because of previous caesarean section or myomectomy > they are at risk of uterine rupture)**
- **Umbilical cord prolapse → (deliver the baby immediately)**

-The optimal obstetrical management of cord prolapse is prompt delivery to avoid fetal compromise or death

- Although immediate cesarean birth is generally the optimal mode of delivery, vaginal delivery may be considered in select situations.

-But there are general approaches , the initial and important one is Initiate intrauterine resuscitation (manually elevate presenting part, place mother in knee-chest or steep Trendelenburg position, retrofill maternal bladder) – Uptodate

-uterine surgery

- absolute contraindication is contracted pelvis (external information)

❖ ASSESSMENT BEFORE IOL

- Confirmation of gestational age by dates and early scan to avoid iatrogenic prematurity
- Cervical assessment / Bishop score (explaned more in P:15) is very important as the success of induction depends on it
  - If score > 8 likelihood of vaginal delivery is same as spontaneous labor(if the Bishop score>8 ,lead to successful induction an easy delivery)
  - For Pt with low Bishop score>> CERVICAL RIPENING prostaglandin E2 tablet , gel or slow release form with 10 mg of (dinoprostone)>(gradual release of prostaglandins which placed in posterior fornix of vagina)

  Complication---uterine hyperstimulation (can stop it by salbutamol to prevent fetal distress)

- if the Bishop score is low : we can give the mother prostaglandin for CERVICAL RIPENING and induction of labour , but if the contraction is week we can give her oxytocin for augmentation of labour)

❖ METHODS OF IOL

- Prostaglandin E2
- Mechanical methods

  - laminaria tent (absorb water and swell gradually to dilate cervix ,we do not use it because of its side effect such as infection)

  - foley's catheter (we use it when there is previous caesarean section because of (scars) , so we can not give prostaglandin, the mechanism of action we insert the foley catheter in the cervix >inflate balloon >release endogenous prostaglandin as in normal physiology)
- Oxytocin (after amniotomy when the cervix is favorable = high Bishop score.)
- Amniotomy (worried about cord prolapse)(after that wait for one hour if the natural labour doesn't start give her oxytocin to induce labor to prevent infections) .

❖ COMPLICATIONS OF IOL

- Failed induction
- Increased CS rate
- Rupture uterus
- Hyperstimulation
- Fetal distress

-if we give oxytocin without amniotomy > this can lead to amniotic fluid embolism)

❖ COMPLICATIONs of :

a) Amniotomy

- **Placental abruption**
- **Cord prolapse**
- **Infection**
- **Failure to induce effective contractions**

b) OXYTOCIN

- **Hyperstimulation**
- **Rupture uterus**
- **Water intoxication**
- **Fetal distress**
- **Post-delivery uterine atony**

Try to avoid hyper stimulation of oxytocin because it decrease blood supply to the baby through uterine contractions , we usually give 3-4 in 10 minutes.

Summery :

- **Post term pregnancy :**

-Definition: Pregnancy that extends beyond 294 days /42 wks from first day of LMP .

-Increased perinatal mortality and morbidity (anecephaly)

-diagnosis based on Accurate last menstrual period (LMP)

- COMPLICATIONS :

1)Postmature neonate features (10-20%) :

2)Macrosomia(weigh more than 4000 gm)

3) Oligohydramnious due to placental insufficiency

4) Meconium stained amniotic fluid (Meconium aspiration syndrome)

5) Increased CS rate 4 folds

MANAGEMENT: 1)Careful fetal monitoring: start at 40 weeks , Weekly NST + AFI, BPP/Doppler

2)Induction of labour: Most obstetrician start IOL at 41 + wks

- **Induction of labour : when benefits of delivery to the mother or fetus outweighs the benefit of continuing pregnancy**

- Maternal indications

1-medical disease 2-preeclampsia 3-Premature rupture of membranes

- Fetal indications

1-post-term(most common) 2-Fetal distress 3-IUGR

- CONTRAINDICATIONS: (Any contraindications to vaginal delivery)

Placenta previa, Vasa previa, Transverse lie, BreechUmbilical cord prolapse

Summery :

- **ASSESSMENT BEFORE IOL**

1-Confirmation of gestational date .

2-Cervical assessment (Bishop score)

3-CERVICAL RIPENING (prostaglandine E2) For Pt with low Bishop score

- **Complication:uterine hyperstimulation**

- **METHODS OF IOL:**

1)Prostaglandin E2

2)Mechanical methods(laminaria tent, foley's catheter)

3)Oxytocin 4)Amniotomy

- **COMPLICATIONS OF IOL:**

1)Failed induction 2)Increased CS rate 3)Rupture uterus

4)Hyperstimulation 5) Fetal distress

- **COMPLICATIONs of :**

a) **Amniotomy:**
   - **Placental abruption**
   - **Cord prolapse**
   - **Infection**
   - **Failure to induce effective contractions**

b) **OXYTOCIN**
   - **Hyperstimulation**
   - **Rupture uterus**
   - **Water intoxication**
   - **Fetal distress**
   - **Post-delivery uterine atony**

104. Which of the following clinical conditions is not an indication for induction of labor?

a. Intrauterine fetal demise
b. Severe preeclampsia at 36 weeks
c. Complete placenta previa
d. Chorioamnionitis
e. Postterm pregnancy

The answer is c. *(Cunningham, 21/e, p 470.)* Placenta previa is a contraindication to labor because the placenta is ahead of the presenting part covering the cervix and vaginal deliver would result in hemorrhage. Intrauterine fetal demise, preeclampsia, chorioamnionitis, and postterm pregnancies are all indications to induce labor.

For mistakes or feedback

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EXTRA NOTS FROM ESSENTIALS OF OBSTETRICS AND GYNECOLOGY:

1- POST TERM PREGNANCY

- persists beyond 42 weeks (294 days) from the onset of the last normal menstrual period.

- Perinatal mortality is two to three times higher in these prolonged gestations. Much of the increased risk to the fetus and neonate can be attributed to development of the fetal postmaturity (dysmaturity) syndrome.
- fetal postmaturity (dysmaturity) syndrome:
this syndrome is related to the aging and infarction of the placenta, resulting in placental insufficiency with impaired oxygen diffusion (hypoxia - meconium staining of umbilical cord-) and decreased transfer of nutrients to the fetus leading to IUGR .

Symptoms :has loss of subcutaneous fat, long fingernails, dry, peeling skin, and abundant hair. The 70% to 80% of postdate fetuses not affected by placental insufficiency continue to grow in utero, many to the point of macrosomia (birth weight greater than 4000 g). This macrosomia often results in abnormal labor, shoulder dystocia, birth trauma, and an increased incidence of cesarean birth.

- Prolonged gestation is common in association with an anencephalic fetus . Prolonged gestation may also be associated rarely with placental sulfatase deficiency and extrauterine pregnancy.

- successful perinatal management is the accurate dating of gestation.

- The appropriate management of prolonged pregnancy revolves around identification of the low percentage of fetuses with postmaturity syndrome who are truly at risk of intrauterine hypoxia and fetal demise.
- if the gestational age is firmly established at 42 weeks, the fetal head is well fixed in the pelvis, and the condition of the cervix is favorable, labor usually should be induced.

-The two clinical problems that remain are :
(1) patients with good dates at 42 weeks' gestation with an unripe cervix
a) twice-weekly NST
b) biophysical profile should be performed
c) AFI is an important ultrasonic measurement that should also be used in the management of these patients.

(2) patients with uncertain gestational age seen for the first time with a possible or probable diagnosis of prolonged pregnancy.
The risk of intervention with the delivery of a preterm infant must be considered. The woman herself can participate in the fetal assessment by doing fetal kick counts during the post term period

The AFI is the sum of the vertical dimensions (in centimeters) of amniotic fluid pockets in each of the four quadrants of the gestational sac.
- Delivery is indicated if there is any indication of :
a) oligohydramnios (AFI ≤5) or
b) spontaneous fetal heart rate decelerations are found on the NST.
So long as these parameters of fetal well-being are reassuring, labor need not be induced unless the cervical condition becomes favorable.

- At 42 weeks' gestation with firm dates, delivery is initiated by the appropriate route, regardless of other factors, in view of the increasing potential for perinatal morbidity and mortality.
-The fetal membranes should be ruptured as early as is feasible in the intrapartum period so that internal electrodes can be applied and the color of the amniotic fluid assessed.
- Cesarean section is indicated for fetal distress. It should not be delayed because of the decreased capacity of the postterm fetus to tolerate asphyxia and the increased risk of meconium aspiration. If meconium is present, neonatal asphyxia should be anticipated, and a neonatal resuscitative team should be present at delivery.

2- INDUCTION OF LABOR

-Induction : process whereby labor is initiated by artificial methods .

-Augmentation: artificial stimulation of labor that has begun spontaneously

-success of induction is dependent on these necessary changes in the cervix.

-Several mechanical and pharmacologic approaches promote cervical ripening prior to the actual induction of uterine contractions.
1- Local application of prostaglandins may be used.

a) intravaginal application of prostaglandin E_2 using a vaginal insert called cervidil.

b) cytotec a synthetic prostaglandin E_1 analogue, has been approved for cervical ripening

2- placement of catheters

3- osmotic dilators

4- artificial rupture of the membranes may be utilized to increase uterine activity, and perhaps to speed cervical change, when performed in conjunction with administration of oxytocin.

-oxytocin induction and augmentation of labor

-you should do carful pelvic examination to determine the bishop score:

		RATING		
Physical Findings	**0**	**1**	**2**	**3**
CERVIX				
Position	Posterior	Mid	Anterior	-
Consistency	Firm	Medium	Soft	-
Effacement (%)	0-30	40-50	60-70	≥80
Dilatation (cm)	0	1-2	3-4	≥5
FETAL HEAD				
Station	-3	-2	-1	+1

Table 9-4. Bishop score to assess likelihood of successful induction of labor