Gestational Ages & Numbers of Obstetrics

دليلك بالبصم المفيد

This document was created in the purpose of putting all Gestational ages into one file, but it got bigger, and it was best to put every related information to the gestational ages and their management into the same file for a better usability. Most of the schedules are AI generated for a quick review.

I hope it will be helpful for you as it was for me :)

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لا تنسونا من صالح دعائكم

- **Gestational Ages:**
    1. **Abortion or Miscarriage:** Before age of Viability (24W).
    2. **After 24W:** Pre-Term Labor.
    3. **Pre-Labor:**

    A) Extreme pre-term: <28W.

    B) Very pre-term: 28-32W.

    C) Moderate pre-term: 32 – 34 W.

    D) Late pre-term: 34-37W.

    4. **Term:**

    A) Early term: 37/0 through 38/7.

    B) Full term: 39/0 through 40/7.

    C) Late term: 41/0 through 41/7.

    Post-Term: 42/0 and beyond.

- **Antenatal Fetal Surveillance:**
    1. ACOG, suggest we start monitoring at 26-32 Weeks. If the threshold of viability at 24w and the presentation is severe we might start early. Tests should be repeated weekly according to the test and severity of the condition.
    2. Maximum activity of the fetus is between 28-32 weeks and gradual decrease toward term.

- **Labor:**

Stage	Duration (Primagravida)	Duration (Multigravida)	Cervical Dilation	Cervical Effacement
Early Labor	6-12 hours	4-8 hours	0-3 cm	0-40%
Active Labor	4-8 hours	2-5 hours	4-7 cm	40-80%
Transition	30 min - 2 hours	15 min - 1 hour	8-10 cm	80-100%
Second Stage (Pushing)	1-2 hours	30 min - 1 hour	10 cm	100%
Third Stage (Delivery of Placenta)	5-30 minutes	5-15 minutes	-	-

Both Max 30min

1. Vaginal exam is every 4 hours unless there is evidence of change or an abnormality.
2. CTG initially is every 30 minutes, if any abnormality has been detected continue till delivery. If no abnormality detected further, every 15 minutes in 2nd stage.
3. Prolonged Labor when the latent phase is more than 20hrs in primi and 14 hrs in multigravida. Or 4hrs from admission in multi & 6hrs in primi (Meaning no cervical dilation beyond 3cm).
4. If after 4-8hrs of syntocinon, the cervix is NOT further dilated -> CS.
5. Primary Dysfunctional Labor: Cervical Dil <1cm/hr before normal active phase has been established. 20% in primi and 8% in multi.
6. In Primary Dysfunctional Labor we do ARM & Syntocinon drip after exclusion of CPD and mal-position. If there was no progress of labor after 4hrs -> CS.
7. Secondary arrest of labor: Active phase started normally (Cervix reached 5-7cm) then dilatation stopped. 6% in multi and 2% in primi.
8. Precipitate Labor: Onset of labor to birth in 1hr in multi and 3hrs in primi.
9. Precipitate labor will often recur in subsequent pregnancies, IOL once term, meaning at 37W will be done.
10. Molding reduces the fetal's skull diameter by 0.5 – 1cm.

- **Malpresentation & Malposition:**
    1. Sub-Occipito-Bregmatic = 9.5cm
    2. Occipito-Posterior = Occipito-Frontal = 11.5cm
    3. Mento-Vertex in Brow = 13.5cm
    4. Submento-Bregmatic in face anterior = 9.5cm
    5. Breech incidence before 28W would be 20-30% and drop to 3% at term.
    6. 4% of breech deliveries are fetuses with congenital anomalies (Ancephaly, Hydroceph, cystic hygromas).
    7. ECV is done at 36-37 weeks.

- **Hypertension in Pregnancy:**
    1. Defined as >140/>90 on 2 occasions 4 hours apart or a HTN Emergency readings.
    2. Chronic HTN: HTN known before pregnancy or present in the first 20 weeks.
    3. Gestational HTN: HTN arising de novo at or after 20 weeks. Without proteinuria.
    4. Pre-eclampsia is HTN after 20w & Proteinuria or end organ damage.
    5. Pre-eclampsia occurs in 50% with those of chronic HTN.

6. PET superimposed on chronic HTN: Hx of HTN before conception & proteinuria or end organ damage after 20 weeks.
7. 2/3 of PET cases occur during term.
8. PET and Eclampsia implicated 25% of stillbirth and neonatal deaths, and 15% of IUGR.
9. At the 8th week of gestation, the first wave of trophoblastic invasion the spiral arteries of the decidua.
10. At the 14th-18th weeks, the second wave occurs in the inner third of myometrium.
11. After 12 weeks of gestation, you shouldn't see diastolic notches in doppler, if you saw them this would be an indication of possible PET during the pregnancy.
12. Prevention of PET would be giving the patient Aspirin of 162mg (2 pills of 81mg) started before 16th weeks of gestation. Optimally during the 12th week of gestation.
13. Screening of PET starts at 11th – 13th weeks of gestation by:
    - **A)** Placental Growth Factor (PIGF): peaks at 26th – 30th week. Early pregnancy decreased values would suggest placental dysfunction.
    - **B)** Soluble FMS-like Tyrosine kinase-1 (SFlt-1): High levels in early pregnancy suggest higher risk of developing PET.
    - **C)** PAPP-A: Increased values in early pregnancy suggests higher risk of developing PET, also used to assess trisomies.

Weeks	High Risk	Intermediate Risk	Low Risk
11-14	History of preeclampsia, chronic hypertension, autoimmune disorders	Family history of preeclampsia, obesity, multiple gestation	No known risk factors
15-20	Severe headaches, visual disturbances, elevated blood pressure	Mild headaches, edema, elevated blood pressure	No symptoms, normal blood pressure
21-28	Proteinuria, severe edema, rapid weight gain	Mild proteinuria, moderate edema, stable weight	No proteinuria, no edema, stable weight
29-36	Persistent high blood pressure, severe headaches, visual disturbances	Occasional high blood pressure, mild headaches	Normal blood pressure, no symptoms
37-40	Severe symptoms requiring immediate medical attention	Moderate symptoms monitored closely	No symptoms, regular monitoring

14. Stop ARBs & ACEI in pregnant woman with HTN, replace them with methyldopa which needs 48 hours to work and cover this period with nifidepine. Give them aspirin too.
15. Antenatal Appointments are weekly of poor HTN control may require admission, and every 2-4 weeks if well controlled.
16. The delivery in Chronic HTN, no IOD before 37 weeks, keep BP less than 160/110 and after 37th week the decision depends on senior physician.
17. If early delivery is expected, offer Corticosteroid & MgSO4.

- **IUGR:**
  1. The phase of Cellular hyperplasia occurs during the first 16 weeks of gestation.
  2. The phase of Concomitant hyperplasia and hypertrophy occurring between 16th and 32nd week.
  3. The phase of cellular hypertrophy occurs after the 32nd week.
  4. Quantitatively:
     A) 5g/day at 14-15 weeks to 10g/day at 20 weeks.
     B) 30-35g/day at 32 to 34 weeks, then the rate declines.
  5. FGR infants suffer hypoglycemia after birth and it's a common complication.
  6. Screening for low risk: symphysial fundal height is enough.
  7. Screening for high risk: US. AC is the most sensitive single morphometric indicator for FGR. EFW is the single best morphometric test to screen and dx FGR.
  8. Serial US every 2 weeks is appropriate for assessing FGR.
  9. Approximately 10% of FGR is accompanied by congenital anomalies. Like: omphalocele, diaphragmatic hernia, skeletal dysplasia and heart anomalies.
  10. Timing of Del:
      A) Deliver any fetus past 32 weeks with reversed umbilical artery flow
      B) Deliver any fetus past 34 weeks with absent umbilical artery flow.
      C) One course of antenatal corticosteroids is given between 24 and 34 weeks of gestation in the week before delivery is expected.

- **RH Isoimmunization:**
  1. RhD is localized in the short arm of Chromosome 1.
  2. 40% have DD, the remaining have Dd locus.
  3. By the 30th day of gestation, the fetal's RBC RhD antigen is expressed.
  4. Tiny 0.1 ml of fetal's RBC gain access to maternal circulation nearly in all pregnancies but it isn't sufficient to cause an immune reaction.

5. 30ml of whole blood or 15ml of fetal's RBC are sufficient to cause an immune reaction in the maternal circulation which stimulates IgM formation (can't cross the placenta) and after 4-6 months IgG is formed. And in subsequent exposure in the 2nd pregnancy the IgG would cross the placenta causing extravascular hemolytic anemia to the baby.
6. A human antiglobulin titer can usually be detected by 5-16 weeks after the sensitizing event.
7. Hydrops fetalis (collection of fluid in 2 compartments or more) typically heralds end-stage disease, occurs with hemoglobin deficits of 7g/dl or more for the fetus.
8. Rh(D) typing and an antibody screen should be preformed at the booking visit.
9. If negative AB screen and uncomplicated pregnancy, repeat at 28th week of pregnancy.
10. cffDNA can be detected as early as 38 days of gestation. Used to determine antigen status for C, c, E and K1 antigens.
11. 1st pregnancy with -ve mother and +ve baby, serial antibody titers are determined every 2-4 weeks after 20 weeks.
12. Subsequent pregnancies: severity of fatal's anemia is assessed beginning at 16-18 weeks.
13. MCA-PSV initiated at 16-18 weeks, a threshold of 1.5MoM was used to predict moderate to severe anemia.
14. Severe fetal anemia is defined by less than 30%hct or 2 SDs below.
15. Intrauterine transfusions for severe anemia are generally performed between the window of 18-35 weeks.
16. Maximum given in one setting is 80cc, typically given 60cc. containing 75-85% hct.
17. Perform the final IUT on the 35th week, delivery anticipated at 36-37th week.
18. IUT after 35 weeks is considered riskier, so the administration of oral phenobarbital may be considered 7-10 days before the delivery. (Phenobarbital enhances the fetal's UDP receptor in the liver to enhance bilirubin excretion).
19. Anti-D: 300mg sufficient to suppress the immune response to 30ml whole blood or 15ml of Rh +ve RBCs.
20. Anti-D of 50mg: sufficient to suppress 1.5ml of Rh +ve RBCs. (Used in early pregnancy till 12th week).
21. When to give the 300mg Anti-D? at the 28th week of gestation. If not been taken, then within 72 hours of del. Could be as late as 28 days after del, of course the earlier the better.

- **Miscarriage:**
    1. 80% of miscarriages occur in the first 12 weeks of gestation.
    2. Risk of miscarriage in future pregnancies:
        A) 20% after one
        B) 28% after two
        C) 43% after three

3. The overall risk in the 1st pregnancy is 5%.
4. Chromosomal abnormalities carry 50% of overall miscarriages. (MC is trisomy 16)
5. 90% of threatened miscarriage cases would continue pregnancy as normal.
6. Three or more miscarriages before 10 weeks of gestation, think of APS.
7. To dx APS, 2 positive tests (Anti-Cardiolipin & Anti-Lupus Anticoagulant) two weeks apart.
8. Cervical Cerclage should be offered to women before 24 weeks with proven short cervix of less than 25mm by Transvaginal US (Optimally procedure done at 20 weeks).

- **Ectopic Pregnancy:**
    1. Locations:

Ampulla (70%) > Isthmus (12%) > Fimbria (11%) > Ovarian (3%) > Interstitial (2%) > CS scar (2%)

2. Chronic Salpingitis is observed in 90% of ectopias.
3. Previous Ectopic carries 3-8-fold risk of recurrence.
4. DDX in cases of Sus ectopic should be:

Spontaneous abortion > Ectopic > Molar > Polyps > Hematoma (threatened) > GTD

5. Beta-HCG can be detected in serum as early as 6 days, urine in 8-12 days.
6. The abnormal rise in HCG is defined as less than 50% double in 2 days.
7. Dose of MTX to treat ectopic is 50mg/m2 or 1mg/kg. (IM is MC) (Could try vaginally).
8. MTX is preferred when HCG is less than 5000 & size of sac less than 3.5cm.

- **Pre-Term Labor:**
    1. 25% of Jordan's del are pre-term
    2. Pre-term labor is the 2nd cause of childhood death below the age of 5 years.
    3. Risk factor of future pre-term:
        A) 15% after one
        B) 30% after two
        C) 45% after three
    4. Mean Cervical length of 34mm at 18-22 weeks deliver at term normally.
    5. Cervico-Vaginal fetal Fibronectin is detected by high vaginal swap, used as a screening tool for PTL which has high levels, also used to differentiate between false and true labor (high in true labor).
    6. cffDNA starts to rise in maternal serum at 10 weeks, midtrimester high levels indicate possibility of PTL. Also used for Rh isoimmunization, Chromosomal abnormalities, sex of baby.

7. At 18-22 weeks by TVUS, if short cervix identified by less than 25mm, give vaginal progesterone and serial US every 1-2 weeks, if cervical length less than 10mm give cerclage + vaginal progesterone.
8. Vaginal progesterone every night from 20-34 weeks reduces PTL by 25% for women with hx of PTL, if no Hx associated it would be 35-40%.
9. L/S ratio of 2.0 or greater indicates Lung maturity.
10. Lamellar body count of less than 8K indicates immature, 8-32K requires further testing, above 32K indicated mature with no further testing required.
11. Nifedipine (CCB) reduces PTD within 7 days and decreases RDS.
12. Atosiban (Oxytocin-vasopressin antagonist) used in the period of 26-30 weeks to decrease the incidence of PTL.
13. Definitions:
    A) 37 weeks< ROM + Contractions + Cervical Dil → Labor.
    B) 37 weeks < ROM + No contraction or cervical dil → Pre-Labor.
    C) 36 weeks and less ROM + No contraction or cervical dil → Premature Pre-labor.
14. Chorioamnionitis:
    A) If stable, no fever, no sx → see her twice a week, give antibiotics & corticosteroids, CRP test, deliver at 34-36 weeks.
    B) If became symptomatic → Deliver whatsoever.
15. Majority of pregnancies with PPROM deliver within one week of rupture.
16. Amnio-Graft (Platelet ½ unit, 1 unit of cryoprecipitate) can seal membrane defects up to 4mm in diameter.

- **Antepartum Hemorrhage (APH):**
    1. It's any bleeding from the birth canal occurring after 24th week (Age of Viability) until the second stage of labor is completed.
    2. It complicates 3-5% of pregnancies.
    3. Causes of APH:
        A) Placental Abruption 30% (Premature separation of a normally situated placenta)
        B) Placenta Previa 20% (Abnormally located placenta)
    4. Show: Small amount of Blood mixed with mucus that may precede onset of labor by 72 hours.
    5. Placental Abruption incidence: (Overall 2-10 per 1000 births)
        A) 60% at term
        B) 25% between 32-36 weeks
        C) 14% occurred before 32 weeks.
        Remember that the incidence increases with the increase in Gestational Age.
    6. Perinatal deaths (50% overall) are due to intrauterine asphyxia.

Weeks of Gestation	Assessment Frequency	High Risk Factors	Intermediate Risk Factors	Low Risk Factors
11-14	Monthly	History of APH, placenta previa, multiple gestation	Family history of APH, maternal age >35	No known risk factors
15-20	Biweekly	Severe anemia, previous cesarean section	Mild anemia, gestational diabetes	No symptoms, normal blood pressure
21-28	Weekly	Persistent bleeding, abnormal placenta location	Occasional spotting, mild symptoms	No bleeding, stable condition
29-36	Biweekly	Severe symptoms, rapid weight gain	Moderate symptoms, stable weight	No symptoms, regular monitoring
37-40	Weekly	Severe symptoms requiring immediate attention	Moderate symptoms monitored closely	No symptoms, regular monitoring

7. Normal placenta size is 1/5th of the infant's size.
8. The recurrence of abruption is 5-15% after one, 20-25% after 2 incidents.
9. When placental separation exceeds 50%, acute DIC and fetal death are common.
10. In placental Abruption, 20% of them are concealed, suspect them in a pregnant woman with PAIN + signs of shock (Esp. confusion, hypotension, tachycardia).
11. Initial Fibronigen of <200mg/dl reported to have 100% +ve prediction of PPH.
12. Sensitivity of US in dx abruption is only 25-50%.
13. In women with DIC, keep these values:
    A) Platelet >50,000
    B) Fibrinogen >300
    C) PT & PTT less than 1.5 times control
    D) Hct 25-30% and Hb >10mg/dl.
14. Couvelaire Uterus: Blood extravasated into myometrium, substantial risk of uterine atony → PPH
15. Expectant management in Placental abruption:
    A) Admission for at least 48hrs.
    B) Single course of Steroids (26-35 weeks of gestation).
    C) Serial assessment of fetus → NST, biophysical, doppler, US for weight.
    D) Anti-D
    E) Delivery at 37-38 weeks. (So keep her alive till this date lol)

16. Placenta pre(vious)via all related to previous pregnancies, recurrence rate is 4-8%.
17. About 70-80% of woman experience PAINLESS vaginal bleeding, 20% have uterine contractions that is why they experience pain.

18. The timing of bleeding in previa:
    A) 33% Experience it before 30 weeks of gesation. may require blood transfusion.
    B) 33% become symptomatic between 30-36 weeks.
    C) 34% First bleed after 36 weeks.
    D) Overall, 10% of them reach term without a bleeding episode.
19. **PV is CONTRAINDICATED beyond 20 weeks in cases of VB until previa ruled out.**
20. **US finding of placenta being <u>2cm or less</u> from the OS → Previa.**
21. About 1-6% of women display on US features of previa in the early pregnancy, 90% resolved at term due to the development of lower uterine segment which pulls the placenta upward toward the fundus, this phenomenon called Trophotropism. That's why US between 32-36 weeks is recommended.
22. Placenta accreta (Adhered superficially to myometrium) complicates 1-5% of previa cases.
23. At 32 weeks, if the placenta away >2cm, regarded normal and continue with the pregnancy as normal.
24. At 32 weeks, if the placenta away <2cm, then this:
    A) Admission
    B) Avoid Sex
    C) Single course of steroids
    D) TVS is preformed at 36 weeks, if previa persisted schedule CS at 37 weeks.
25. So, the rule says: Mild bleeding + Reassuring FHR + GA<37 weeks → Expectant Mg.
26. Expectant management:
    A) Admission (Esp. Symptomatic)
    B) Correction of Anemia
    C) 4 units of PRBCs should be available.
    D) Anti-D (Notice every bleeder case we give Anti-D, normally it's in the 28th week).
    E) Schedule CS at 37 weeks.
    F) Deliver Emergency if:
        1. Any VB with non-reassuring FHR unresponsive to resuscitation measures.
        2. Life-threatening VB
        3. Labor
27. Morbidly Adherent Placenta (ملزقة ثقيلة هالدم):
    A) Accreta: (79%) chorionic villi attached to myometrium rather than decidua.
    B) Increta: (14%) Chorionic villi penetrate into myometrium.
    C) Percreta: (7%) Chorionic villi penetrate through myometrium to uterine serosa or adjacent organs.
28. About 80% of these cases are associated with previous CS. Also >35 years mother.

29. Women with previa or low anterior placenta & previous uterine surgery should go through US evaluation of the interface between placenta and myometrium between 18-24 weeks of gestation, at this age the dx is suspected or excluded in all cases.

30. Placenta accreta associated with previous CS:

A) NO CS: 3%
B) One CS: 11%
C) Two CS: 40% !
D) Three CS: 61%
E) Four or more CS: 67%

31. Optimum del date is 34-36 weeks, with 2 options: CS Hysterectomy or leaving the placenta in situ تزبط ربك ندعي و and this carries many risks.

32. Uterine rupture, Sx:

A) FHR anomalies
B) VB, could be unstable patient.
C) Sudden or worsening abdominal pain.
D) Uterine contraction abnormalities, staircase sign (Progressive decrease), then cessation of contractions on CTG.
E) Loss of station of the fetal presenting part.

33. Dx of vasa previa (Fetal BV are present in the membranes covering internal OS) could be done at the 16th weeks by US color doppler.

34. What if there was no record of vasa previa? Clinical dx by VB + FHR anomalies at the onset of the rupture of membranes.

35. Vasa previa requires early del by 35-36 week.

Type	Causes	Symptoms	Risk Factors	Management	Expected Delivery Week
Placenta Previa (Minor)	**Low implantation of placenta**	**Painless vaginal bleeding, usually after 20 weeks**	**Previous cesarean delivery, multiple gestations, advanced maternal age**	**Bed rest, monitor for bleeding, avoid vaginal exams**	**Term delivery, planned cesarean if necessary**
Placenta Previa (Major)	**Placenta covers cervical os**	**Heavy, painless vaginal bleeding, usually after 20 weeks**	**Same as minor, plus increased risk if previously had major previa**	**Hospitalization, monitor bleeding, planned cesarean delivery**	**Preterm delivery, usually around 36-37 weeks**
Placental Abruption (Concealed)	**Premature separation of placenta from uterus**	**Sudden, painful bleeding (hidden), uterine tenderness**	**Hypertension, trauma, smoking, previous abruption**	**Immediate medical attention, possibly delivery**	**Depends on severity, can be preterm if severe**
Placental Abruption (Apparent)	**Same as concealed**	**Visible, painful vaginal bleeding, uterine tenderness**	**Same as concealed**	**Immediate medical attention, possibly delivery**	**Depends on severity, can be preterm if severe**
Morbidly Adherent Placenta (Accreta, Increta, Percreta)	**Abnormal attachment of placenta to uterine wall**	**Severe bleeding during delivery, difficulty in placental removal**	**Previous cesarean delivery, placenta previa, advanced maternal age**	**Planned cesarean delivery, possible hysterectomy**	**Usually term delivery with planned cesarean, may require early delivery if complications arise**

Prenatal screening and diagnosis of congenital anomalies:

1. Malformation: Defects of organs or body parts due to an intrinsically abnormal developmental process. Divided into major and minor.
2. Deformations: Abnormalities of the position of body parts due to extrinsic intrauterine mechanical forces that modify a normally formed structure.
3. Disruptions: Defect of organs or body parts that result from destruction or interference with normal development.
4. Dysplasias: Anomalies that result from abnormal organization of cells into tissues.
5. According to ACOG: all women should be offered aneuploidy screening before 20W.

6. First trimester combined test is done at 11-14 weeks of gestation, consist of Beta HCG, PAPPA-A, US of NT. Has a high false +ve rate of 5%.
7. Combined test: in trisomy 21 HCG is doubled (2MoM), PAPPA-A is reduced to half (0.5MoM).
8. Nuchal Translucency: >95th centiles means more than 3mm, >99th centiles means more than 3.5mm.
9. Second Trimester Quadruple test: Done at 15 to 18 weeks. Has false +ve rate of 5%.
10. The Quadruple test consists of: AFP + uE3 and HCG + Inhibin A.
11. Integrated test: uses both 1st and 2nd trimester tests. Has substantially lower FPR.
12. Chorionic villous sampling done at 10-14 weeks. By TA-CVS or TC-CVA. At least 5mg of villous tissue is generally required. Rapid Karyotyping can be acquired within 24-48hrs, while final results obtained after 7-10 days.
13. Amniocentesis done 15-17 weeks because it is technically easier and more comfortable for the patient. Not before, why? Higher rate of fetal loss.
14. CVS if done before the 9th week may cause Limb reduction defects and oromandibular hypogenesis.
15. FISH provides a limited karyotype within 24-48hrs but only detects aneuploidy of chromosomes 13, 18, 21, X, Y.
16. Screening NTDs:
    A) US: (Better)
        1. 1st Trimester: >90% for anencephaly, 80% for encephalocele, 44% for spina bifida.
        2. 2nd Trimester: 100% for anencephaly, 95% for spina bifida.
    B) MSAFP:
        1. AFP Peaks in the amniotic fluid between 12-14 weeks of gestation.
        2. AFP Peaks in the maternal serum between 28-32 weeks and then falls.
        3. Measurement of MSAFP ideally done at 16 to 18 weeks, can be preformed early as 15 weeks or late at 20 weeks.
        4. Used primarily for detection of open spina bifida and anencephaly.
        5. A value above 2.0 to 2.5 MoM is abnormal.
17. Detailed Anatomy detection scan is done at 18-24 weeks, should be offered to all pregnant women. -ve result doesn't exclude any anomaly (It's screening NOT dx).
18. Fetal cfDNA could be detected as early as 9th weeks postmenstrual, used for detection of sex of baby (10th week) and fetal autosomal aneuploidies.

- **Gestational Trophoblastic Diseases/Neoplasia:**
  1. Risk factors include Extremes of maternal age, Prior molar (after 1 molar is 1 to 1.5%, while after 2 molars it would increase to 11-25%).
  2. Complete Mole: fertilization of an empty ovum (46XX or 46XY), doesn't stain p57 protein, no fetus develops, mass grape like. Cavities with watery fluid (Snowstorm in US). Early onset pre-eclampsia, hyperthyroidism, Bilateral theca lutein cyst, >100,000 HCG levels.
  3. Partial Mole: Fertilization of Ovum by 2 sperms (69XXX, 69XXY, 69XYY), fetus identified, stain p57, 2 population of villi where one is normal and the other is enlarged and irregular. Marked scalloping of chorionic villi and trophoblastic inclusions.
  4. Cause of Hyperemesis gravidarum? Insane amount of HCG elevation, and more commonly with complete mole due to harsher HCG levels like >100,000.
  5. Pre-Eclampsia <20 weeks? Molar pregnancy until proven otherwise.
  6. Tx is either uterine evacuation or hysterectomy.
  7. HCG follow up done at 2^{nd}, 5^{th}, 7^{th} day, then weekly until undetected, finally monthly for 6 months.
  8. Dx of GTN if any:
     A) Increasing HCG >10% across three values in at least two-week period, day 1, 7, 14.
     B) Plateaued HCG levels, meaning as 4 measurements that remain with 10% over at least in a three-week period, days 1, 7, 14, 21.
     C) Persistent detectable serum HCG for more than 6 months after evaluation.
  9. Regarding subsequent pregnancies, Serial measurements of HCG for 6 weeks to exclude choriocarcinoma.
  10. Common sites for MITS in GTN:
      A) Pulmonary (80%) B) Vagina (30%) C) CNS (10%) D) Hepatic (10%)

Type	Description	Common Symptoms	Risk Factors	Treatment
Hydatidiform Mole (HM)	Abnormal growth of trophoblasts forming a mass of cysts instead of a normal placenta	Vaginal bleeding, high hCG levels >100,00 HCG	Advanced maternal age, previous molar pregnancy	Evacuation, monitoring of hCG levels
Invasive Mole	Mole invades the muscle layer of the uterus	Persistent bleeding, high hCG levels	Previous molar pregnancy	Chemotherapy if persistent
Choriocarcinoma	Malignant form of GTD, can spread to other parts of the body	Vaginal bleeding, metastasis	History of molar pregnancy	Chemotherapy
Placental Site Trophoblastic Tumor (PSTT)	Rare tumor arising from placental site	Vaginal bleeding, low hCG levels	Previous pregnancy	Surgery, chemotherapy if needed

- **Induction of Labor & Prolonged Pregnancy:**

1. Lower Uterine segment start to develop at 28th week, it would be fully developed at term.
2. Station: Relation between Ischial Spines & the largest diameter or the presenting part. Evaluated by PV only!

Bishop Score Assessment Schedule

Factor	Score 0	Score 1	Score 2	Score 3
Dilation (cm)	Closed	1-2 cm	3-4 cm	5-6 cm
Effacement (%)	0-30%	40-50%	60-70%	80%
Station	-3	-2	-1, 0	+1, +2
Consistency	Firm	Medium	Soft	-
Position	Posterior	Mid	Anterior	-

3. Bishop score >7 indicates favorable cervix and it's safe to go vaginally.
4. If there was previous non-vaginal delivery, post-date, Nulliparity, PPROM subtract a point.
5. If there was PET add 1 point, if there was a previous vaginal delivery, add 1 point to each one.
6. CRL measurements could be done from 10/0 week till 13/6 week.
7. Measure HC if CDL length is above 84mm, Head could be measured after the 16th week.
8. Macrosomia? Diabetic: >4.5Kg. Non-Diabetic: >5Kg.
9. When to deliver Pregnant woman with GDM?
    A) 36th week if patient's blood sugar couldn't be controlled by Anything.
    B) 37-38/6 weeks if she was controlled on insulin.
    C) 39-40/6 weeks if she was controlled on oral agents.
10. Twin pregnancies are eligible for delivery at the 36-37 weeks.
11. If ROM was 18 hours ago, the fetus would need septic workup.
12. The decision to deliver by Elective CS or IOL in cases of FGR is made on an individual basis. Meaning it depends on the state of mother & fetus.
13. HTN deliveries:
    A) Newly dx PET after 36/6 (37th weeks) → offer IOL.
    B) Controlled Chronic HTN or Gestational HTN → offer IOL after 37 weeks.
    C) When to deliver at 34 weeks? Individualized. Meaning if the case was urgent or couldn't control BP.
14. When to deliver based on the maternal request? NEVER! But in our communities, we can deliver >39/6 weeks (NOT BEFORE 40W).

15. Precipitate labor? Vaginal delivery by 3 hours done in Primi or 1 hour in multi. (Dr. Malik said 3 hours in both conditions).

16. If maternal age >40 years, offer IOL 39-40 weeks, why? Higher stillbirth rates in >40weeks.

17. IOL is C/I where vaginal delivery is C/I.

18. Drugs:

A) PG E2: (Best for ripening)
   1. Tablets: In posterior fornix, whole dose (3mg).
   2. Gel: In posterior fornix, whole dose (0.5mg).
   3. Slow-release pessary: over 24 hours, easily detachable (200mg).

B) Oxytocin: (Multigravida more sensitive)
   1. By infusion: IV, not commonly done nowadays
   2. Titrated: Best, titrated to best contraction, double dose every 30min if it wasn't efficient yet.
   3. Both types cause fluid retention (due to the similarity with ADH). After stopping for 3-5 minutes → Expect polyuria.

C) Misoprostol:
   1. Synthetic E1 analogue.
   2. Orally: Max 50mg
   3. Vaginally: 25mg repeated every 4 hours.
   4. Vaginal slow-release pessary: 200mg over 24 hours.

19. Efficient uterine contractions are 3 contractions in 10 minutes, if there was 5 or more contractions per 10 minutes → Uterine Hypertonus.

20. Uterine Hyperstimulation is defined as:
Tachysystole (High resting pressure (we know by CTG)) + Hypertonus uterus + CTG FHR changes → Uterine Hyperstimulation. As you know it, remove any stimulator you are providing the patient with. No response? Tocolytics. Even tocolytics don't work? CS بعينك الله

21. Any fetal distress during IOL and it was severe and refractory to conservative measures → Emergency CS.

- **Multiple Gestation:**

1. With the increase # of fetuses = Increased Morbidity & Mortality.
2. Most common maternal complications: تنازليا الترتيب
    A) PTL
    B) PET
    C) pROM
    D) Anemia
    E) GDM
3. Best outcome in twin pregnancy = Diamniotic, Dichorionic.
4. Dizygotic: fertilization of 2 sperms in the same cycle. Always Di Di.
5. Monozygotic: Single fertilized ovum. They are always the same gender & genetic map.
6. MZ twins:
    A) Di Di occurs within 3 days post fertilization.
    B) MCDA occurs with division between 4-8 days post fertilization.
    C) MCMA occurs with division between 8-12 days post fertilization.
    D) Conjoined twins with 13 days post fertilization.
7. All women should be offered US examination between 11-13 weeks of gestation to assess:
    A) Viability
    B) Chorionicity
    C) Major congenital malformations
    D) Nuchal Translucency.
8. Dx of Twins on US? Multiple sacs with yolk sac by 5 weeks, multiple embryos with cardiac activity by 6 weeks.
9. DC twins known by visualization of a triangular projection (Lamba sign)
10. MC twins known by visualization of a "T-sign" at a 90 degree angle.
11. Intrauterine growth of multiple similar to a singleton until 30-32 weeks.
12. Assess cervical length in multiple in 16-24 weeks to identify those with the increased risk of PTL. (Cut off point 20mm) + Cervical fibronectin level.
13. PTL is a common manifestation of Multiple pregnancies. (50% with twins, 75% with triplets).
14. 20% is the cutoff point in discordance between the 2 fetuses. Discrepancy known by an equation: fetus1 (Bigger) – fetus2 (smaller)/ fetus1.
15. Serial US in Multiple:
    A) DC: every 3-4 weeks from 18 weeks or every 2 weeks if FGR (>20% discordance)
    B) MC: Every 2 weeks from 16 weeks of gestation.
16. What to do if you discovered >20% discrepancy?
    Intensive fetal testing twice weekly by preforming: NST, Biophysical profile, Umbilical artery doppler.

17. Optimal timing of delivery for uncomplicated DC twins → 37-38 weeks.

18. Optimal timing of delivery for uncomplicated MC twins → 36-37 weeks.

19. For MA twins, delivery at 32 weeks by CS. Why early? Fear of cord accidents.

20. Delivery is determined by the 1st twin (if isn't cephalic go CS):

All the following are vaginal, otherwise CS:

A) Vertex-vertex
B) Vertex-transverse
C) Vertex-Breech

21. How to know the 1st baby? Fetus would be lower (Goes 1st into cervix).

22. If the 2nd baby is larger than the 1st, go CS.

23. يلا نلخص , when to go CS?

A) 1st baby isn't cephalic
B) 2nd baby is larger
C) None of them is vertex
D) Monoamniotic at 32nd week.
E) Conjoined Twins (منطقية

24. MC + Growth discordance >20%, Sex concordance, Discrepancy in amniotic fluid volume, Fetal hydrops, absent end-diastolic flow (Donor) → TTTS by US.

25. At 24th – 26th week for TTTS: Tx

A) Serial reduction amniocentesis.
B) Amniotic Septostomy.
C) Selective Fetoscopic Laser Coagulation of placental anastomoses. (Definitive Tx). الإسم أطول من حياتي

26. Vanishing twin occurs with 21% of twin pregnancies.

27. The risk of significant neurologic morbidity is increased after intrauterine death of one fetus in a MC, but not in a DC gestation. When to deliver? At the 36th week. Discovered earlier? Expectant management + weekly coagulation profile).

28. Multi-fetal pregnancy reduction done at 10-13th week. Why not before? Possibility of 1 of them to die on its own.

29. MFPR in triplets? Keep 2 fetuses take 1, In quadruplets? Keep 2 and take 2.