# KHOWLEGDE HUB WEBINAR: PROBLEMS IN PREGNANCY

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# Problems in pregnancy



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# Problems in pregnancy:

This chapter discusses common problems in pregnancy, including:

- SGA babies (Intrauterine growth restriction)
- Antepartum haemorrhage (details in separate chapter)
- Multiple pregnancy (details in Obstetric emergencies )
- Breech presentation and transverse lie (details in Obstetric emergencies)
- Prolonged pregnancy
- Vaginal birth after previous caesarean section (moved to Caesarean Delivery)
- Rhesus incompatibility
- Poor obstetric history
- Preterm labour
- Prelabour rupture of the membranes
- Chorioamnionitis
- Recurrent miscarriages (added)

# NB:

- If any of the above conditions  cause demise of the fetus, please refer to compassionate care approaches for managing pregnancy loss in the mental health chapter.
- Purpose: -Highlight the main changes

# Small for gestational age babies

- Previously -Intrauterine growth restriction chapter

# #Definition

- Failure of a fetus to achieve its growth potential.
- A measurement less than the 10th centile for gestational age (as noted on the antenatal SFH graph), or failure of SFH to increase on serial measurements should raise suspicion of a small-for-gestational age fetus (SGA),

and the mother should be referred for Doppler or ultrasound assessment of the fetus.

# Identifying pregnant women at risk

- **hypertensive disorders**
- **Hx of prev. IUGR or low birth weight babies**
- **Hx of prev. abruptio placentae**
- **Substance abuse - smoking, alcohol, cocaine**
- **Vascular disease, e.g. lupus**
- **Poor nutrition/underweight**
- **Chronic infections including STIs**

**Serial measurement of SFH:**

- A measurement less than the 10th centile for gestational age (as noted on the antenatal SFH graph), or failure of SFH to increase on serial measurements

**Palpation**

- a relatively large hard fetal head with a small body, engagement of the head before 37 weeks, reduced liquor volume, and an irritable uterus before 37 weeks.

Such findings should raise suspicion of IUGR and should lead to referral for ultrasound to exclude IUGR.,


SMALL FOR GESTATIONAL AGE (SGA)
Weight plots < 10th centile
CONSTITUTIONALLY SMALL BABIES
SGA does **not** equal intra-uterine growth restriction (IUGR).
**"Small parents will have small babies."**
Related to genetic potential.
**Not necessarily pathological.**
Reassure parents if baby clinically well.
INTRA-UTERINE GROWTH RESTRICTION
Always pathological.
Utero-placental insult → deviation & reduction in fetal growth → fetus unable to achieve genetically determined size.
Babies with IUGR may be SGA or appropriate for gestational age (AGA).
IUGR not a diagnosis – many causes depending on timing of insult & examination findings.
There may not always be a cause.
Not every baby needs a work-up if history suggestive of cause (maternal smoking) or baby clinically well.
**Associated with increased mortality & morbidity.**

# IUGR

**Symmetrical**

- ✓ Head and body both show growth failure.
- ✓ May result from genetic or chromosomal defects, intrauterine infection or exposure to teratogenic substances. Liquor volume is usually normal.

**Asymmetrical**

- ✓ Head grows, but the body shows growth failure.
- ✓ usually associated with placental insufficiency.
- ✓ may result from pre-eclampsia or vascular disease (as in diabetes or lupus). Liquor volume may be reduced.

**Some fetuses may appear symmetrically growth impaired, but are normal small babies, or may be suspected to be small because of wrong pregnancy dates**.

# IUGR

## SYMMETRICAL

- Weight, length and head circumference plot < 10th centile.
- Utero-placental insult early in pregnancy - first trimester.

- **CAUSES**
- **Genetic:** Chromosomal/Syndromes, e.g. Down syndrome, Trisomy 13 and 18.
- **Teratogens**: Alcohol, smoking & recreational drugs.
- **Congenital infection:** Cytomegalovirus (CMV), rubella
- **Multiple gestation**

## ASYMMETRICAL

- Weight followed by length plot < 10th centile & head circumference is preserved.
- Utero-placental insult later in pregnancy: late 2nd or 3rd trimesters.

- **CAUSES**
- Maternal pre-eclampsia
- Abruptio placenta
- Maternal chronic hypertension
- Maternal chronic kidney disease
- Maternal systemic lupus erythematosus
- Late placental & cord abnormalities
- Multiple gestation

# DIAGNOSIS

- Ultrasound scanning, including Doppler flow studies.
- If not available, clinical assessment must be used, or the mother must be referred to a specialist health facility.
- Stand-alone Doppler machines can also be used to screen for placental insufficiency

# *

- Verify correct dating (correlate with history, first scan)
- Perform growth scan including liquor volume [deepest vertical pool (DVP)] and UAD
- Plot US biometry, EFW and UAD on graphs for correct gestation

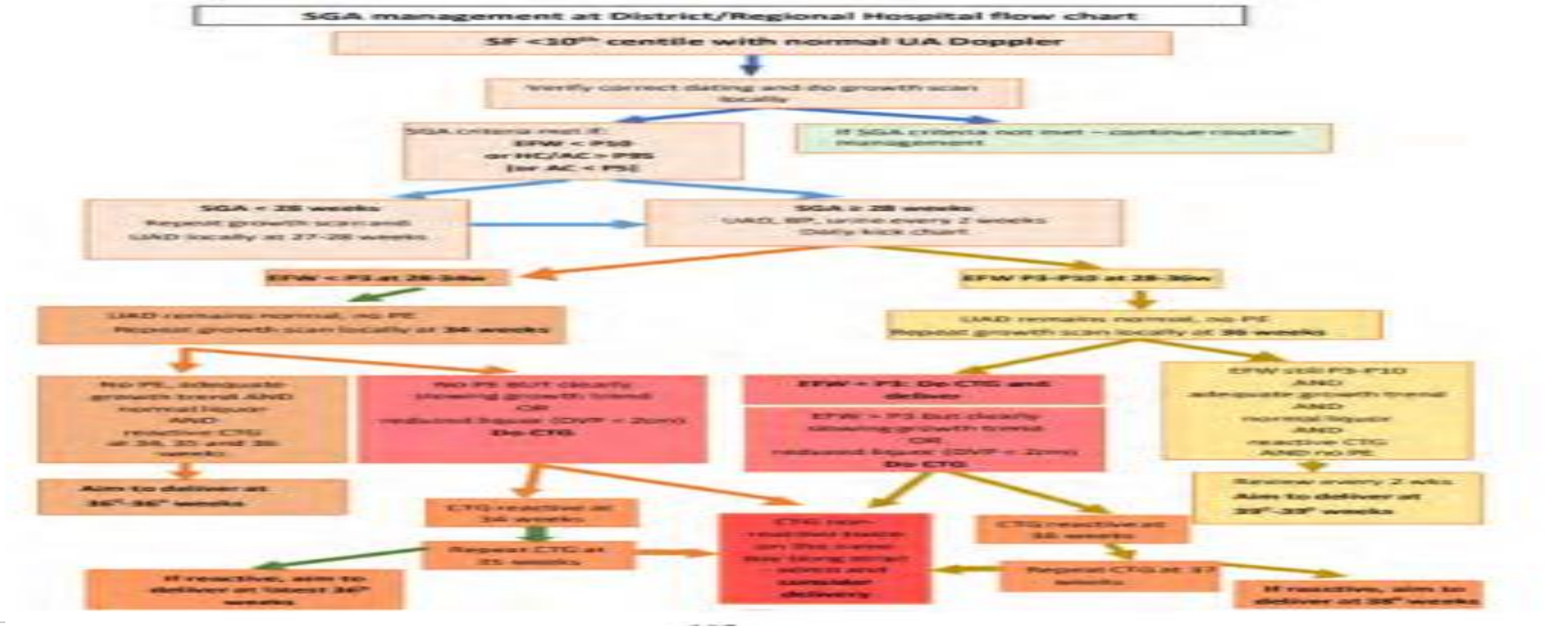
✓ If the findings are in keeping with an SGA baby further Mx can remain at a DH

✓ If not SGA and the Doppler is normal, the pt can be referred back to her clinic.

✓ If the UAD is abn. (> 95th centile) see section on abn. Doppler.

NB:SGA pregnancies are at risk of term (rarely preterm) IUFD, FD in labour and PET - These are not contra-indications to vaginal delivery, but requires continuous CTG monitoring throughout labour.

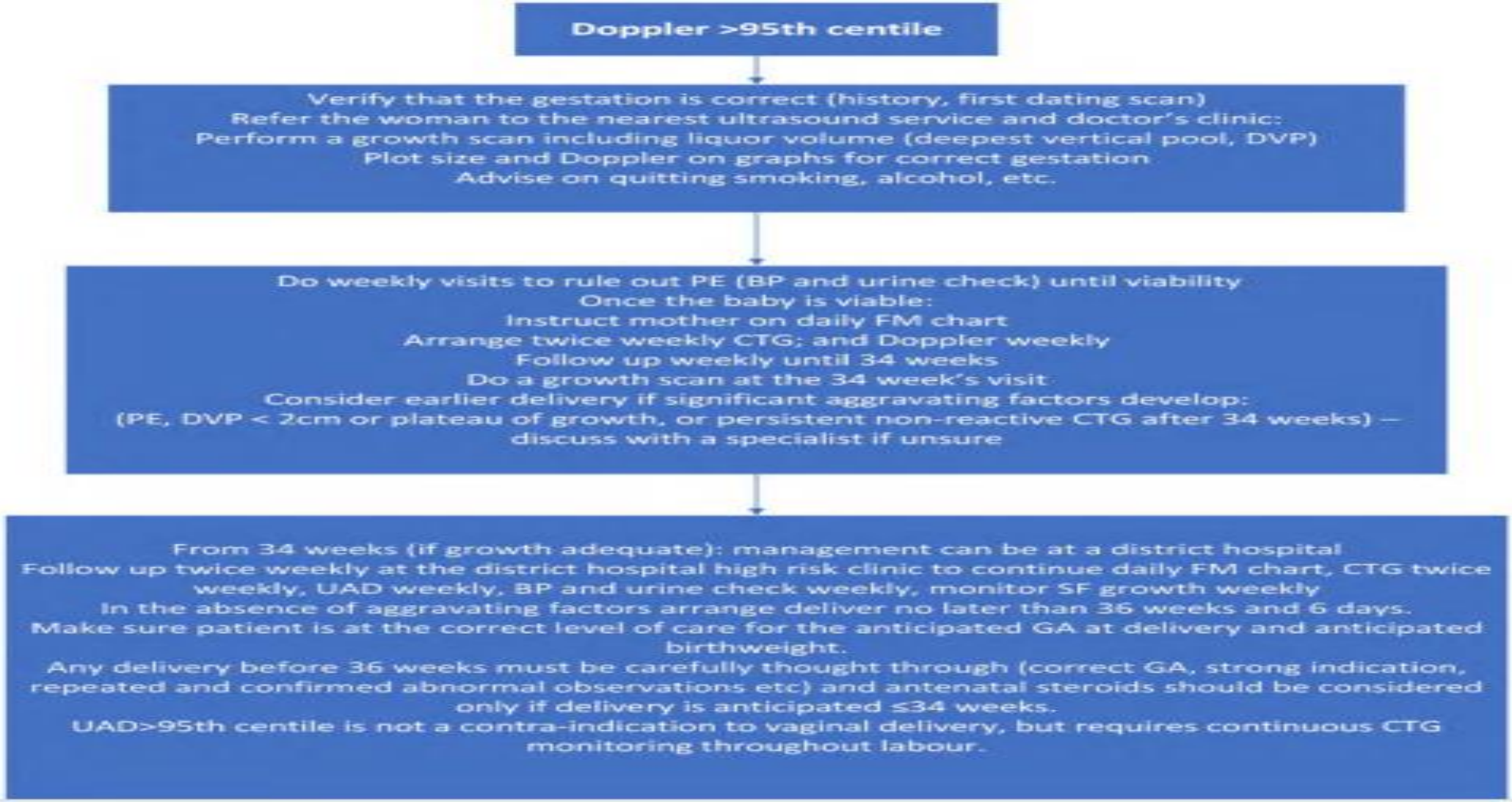
# Management of SGA babies at hospital



# Abnormal umbilical artery doppler

- Advice on Mx of modifiable factors eg. Smoking, alcohol etc
- Plan follow up with close monitoring (For PE (BP, Urine dipstix etc), weekly us, viable fetus (daily FKCC), CTG….
- Absent or reversed end diastolic flow on Doppler: Refer for specialist care within 24 hours (if baby already viable)

# Abnormal umbilical artery doppler



# Summary

- SGA≠IUGR
- Ultrasound mandatory
- Plot on graph
- Identify cause
- Follow-up plan and specialist referral for high risk babies

NB: flow diagrams for quick reference

# #MULTIPLE PREGNANCIES

- Diagnosed most accurately by ultrasound examination.
- Where this is not routinely offered to all pregnant women, multiple pregnancy needs to be suspected on history and clinical examination.
- A family history of multiple pregnancies and history of ovulation induction should raise suspicion.

# #MULTIPLE PREGNANCIES

- Antenatal care must take place at a hospital with access to an ultrasound, it can be shared with BANC plus clinic.
- Refer twins as early as possible to make a correct ultrasound diagnosis of chorionicity.
- Monochorionic pregnancies must be referred to a foetal medicine unit for further follow up

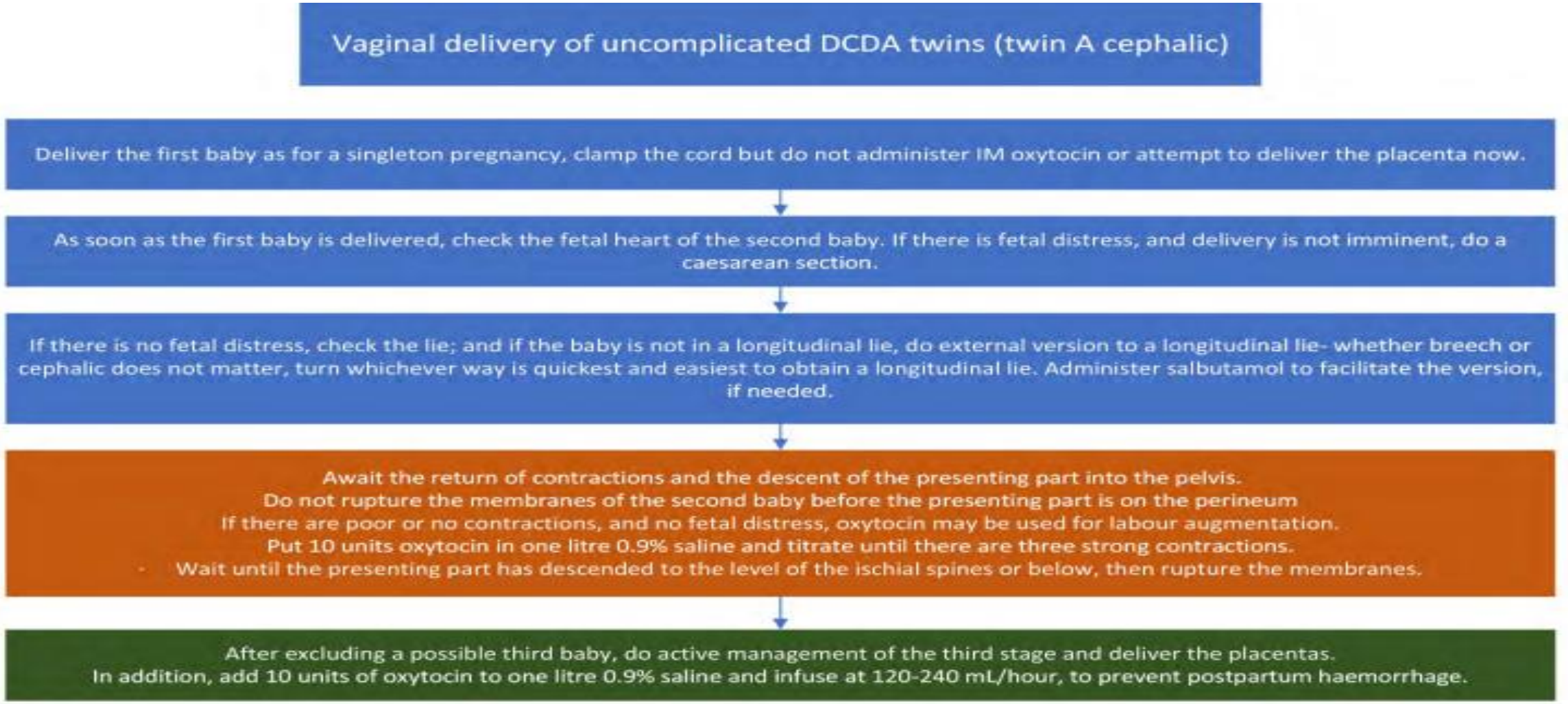
# Clinic checklist: schedule of visits for uncomplicated DCDA

| Clinic checklist: Schedule of visits for Uncomplicated DCDA twins | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| The first (booking) visit for all women are done at first contact with the BANC/MOU clinc regardless of gestational age. If twins are diagnosed at booking, refer to a specialist Clinic as soon as possible. | VISITS | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **Approximate gestational age in weeks** | < 20 weeks | 20 weeks | 22 weeks | 24 weeks | 27 weeks | 29 weeks | 31 weeks | 33 weeks | 35 weeks | 37 weeks |
| **Level of care for particular visit** | Clinic (as soon as possible after diagnosis). | Clinic and sonar | BANC/ MOU | BANC/ MOU | Clinic and sonar | Clinic | Clinic and sonar | Clinic | Clinic and sonar | Clinic |
| Urine MCS | | | | | | | | | | |
| Blood pressure | | | | | | | | | | |
| Urine tested (dipsticks) for protein and glucose | | | | | | | | | | |
| Haemoglobin test | | | | | | | | | | |
| Do rapid syphilis test | | | | | | | | | | |
| Ultrasound | Confirm chorionicity and book detail @20W | Detail | | | Follow up U/S | | Follow up U/S | | Follow up U/S | |
| Check Rh results | | | | | | | | | | |
| Check HIV result | | | | | | | | | | |
| Retested for HIV if booking test negative or unknown | | | | | | | | | | |
| Iron and folate supplementation provided | | | | | | | | | | |
| Information for emergencies given | | | | | | | | | | |
| Clinical examination for anaemia | | | | | | | | | | |
| Digital examianiton of the cervix to assess risk of preterm labour | | | | | | | | | | |
| Instructions for delivery/transport to institution | | | | | | | | | | |
| Recommendations for lactation and contraception | | | | | | | | | | |
| Complete Case Record and remind woman to bring it when in labour | | | | | | | | | | |
| Plan for admission for elective delivery at 38 weeks | | | | | | | | | | |

# DELIVERY

- All multiple pregnancies should be delivered in a hospital with ultrasound, 24 hour caesarean section and 24 hour neonatal facilities (preferably at specialist level).
- Mx of labour (details in Obs emergency webinar)

# Vaginal delivery of uncomplicated twins



# #BREECH PRESENTATION

- Details in Obstetrics emergency chapter

# ##BREECH PRESENTATION

Exclude fetal abnormality or multiple pregnancies by ultrasound

- Attempt **ECV** if there are no contraindications

https://www.youtube.com/watch?v=fKaNZfUno50 for a video demonstration on ECV

**Labour and delivery**

- Transfer the mother from a clinic or CHC to a DH.
- Determine EFW and cervical dilatation and station of presenting part
- Perform caesarean section unless suitable for vaginal delivery

https://www.youtube.com/watch?v=G5c4GAxmEgE&list=PL68EE6D503647EA2F&index=10

(Further details on Bx in Obs emergency chapter)

# #TRANSVERSE LIE

- Do an US to exclude a cause such as p. praevia, congenital abnormalities, or multiple pregnancy.
- External version may be attempted from 37 weeks' gestation.
- Caesarean delivery is required if version fails to achieve a stable longitudinal lie.
- Any woman presenting in labour with a transverse lie needs delivery by caesarean delivery by a specialist or experienced doctor.
- A classical or low vertical uterine incision should be considered.

# #CHORIOAMNIONITIS

- May be associated with

✓ preterm labour,

✓ pre-labour or prolonged rupture of membranes,

✓ intrauterine death or

✓ antepartum haemorrhage of unknown origin.

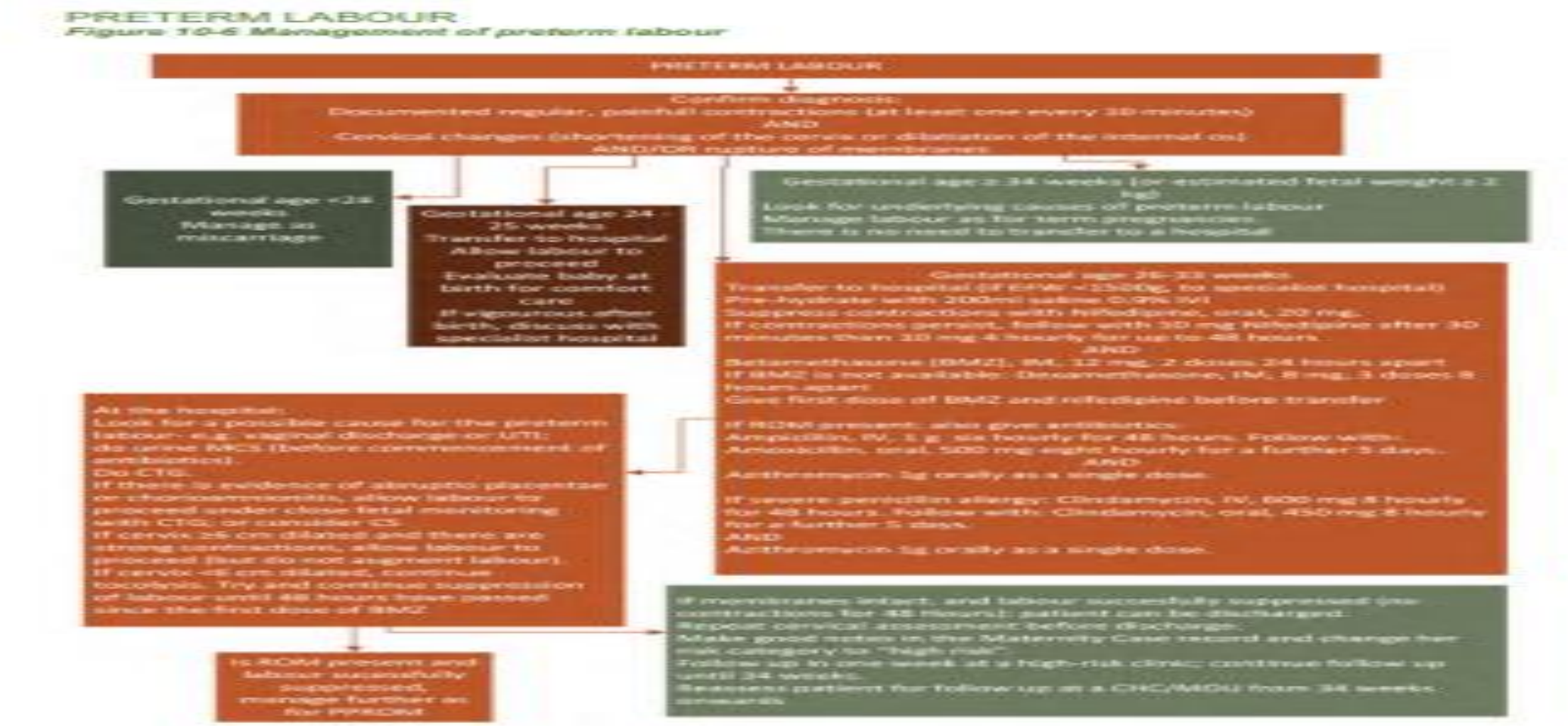
# ##Signs &Mx

| Signs of chorioamnionitis include | Mx |
|---|---|
| • T ≥38 degrees celsius<br>• Maternal HR ≥100/minute<br>• Uterine tenderness and/or irritability<br>• FHR≥160/minute<br>• offensive liquor or meconium stained liquor | • Transfer from a clinic or CHC to a DH (or specialist hospital if the gestation ≤ 32 weeks).<br>• Chorioamnionitis is an indication for delivery.<br>• Antibiotics<br>• Induce labour<br>• CS for the usual indications.<br>• During labour, monitor the foetus closely, with CTG if possible.<br>• • Continue ampicillin (or Clindamycin) and metronidazole for five days after delivery. |

# PRETERM LABOUR & PROM

- No significant changes
- NB: Gestational ages
- Flow diagrams for quick access
- PROM : Approach as PTL after confirmation of ROM.

# PRETERM LABOUR



There is no benefit in continuing suppression of labour for longer than 48 hours.

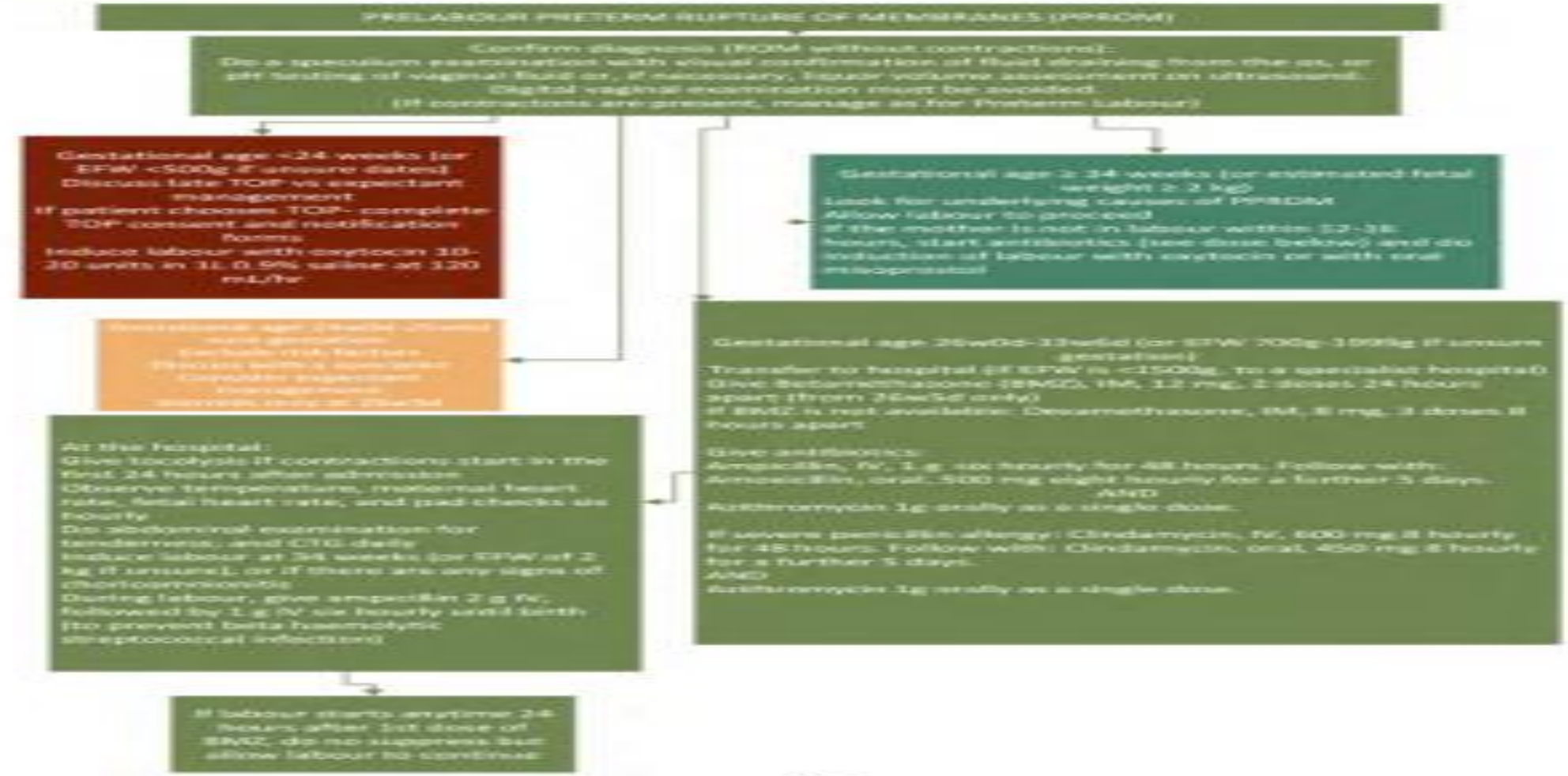
## Contraindications for Tocolysis

- mother does not consent to suppression
- pathological or suspicious fetal heart rate pattern
- lethal fetal anomaly
- intra uterine fetal death
- suspected chorioamnionitis (clinical signs of infection)
- severe hypertensive conditions in pregnancy
- abruptio placentae
- severe IUGR

# PROM

PPROM

*Figure 10-7 Management of PPROM*



# #PROLONGED PREGNANCY

- No significant changes
- NB:

✓ Definitions

✓ Timing of delivery

✓ What to do when unsure of EDD/Gestational age.

# #PROLONGED PREGNANCY

- Pregnancy exceeding 42 weeks (294 days) from the first day of the LNMP.
- **Postdates pregnancy** - Pregnancy exceeding the Estimated Date of Delivery (EDD, which is 280 days from the first day of the LNMP).
- **Clinical (uncertain) prolonged pregnancy -**Where the dates are unsure, and it is clinically estimated (no early US) that the pregnancy exceeds 42 weeks.
- **Post maturity syndrome-**placental insufficiency has developed in a prolonged pregnancy. Only diagnosed after delivery.

The most serious associated problems with prolonged pregnancy are intrapartum related b. asphyxia, meconium aspiration, feto-pelvic disproportion and post-maturity syndrome

# Mx

| **With certain gestation:** | **EDD is unsure,** |
| --- | --- |
| o Pregnancy is induced beyond 41. Ensure that the gestational age has been correctly calculated<br><br>o at 41 certain weeks of gestation, stretch and sweep the membranes and refer the mother from a clinic or CHC to a DH for IOL within the next three days o If IOL was done, monitor the fetus with CTG if possible | induction at a suspected 42 weeks is not advisable but careful fetal surveillance is done. Do a stretch and sweep of the membranes at every visit.<br>o fetal surveillance: check with the mother if the baby is moving well and do a weekly CTG and US amniotic fluid assessment<br>o induce labour only once the DVP of amniotic fluid is ≤3 or the AFI ≤5<br>o if US is not available, assess liquor clinically, check fetal movements and do weekly CTG; and do IOL if clinically reduced liquor. |

# #RHESUS INCOMPATIBILITY

- No significant changes

# When and what to test for?

- Rapid rhesus (D) blood group testing must be done on all pregnant women at the 1st antenatal visit, or at delivery in unbooked mothers.
- Rhesus-positive mothers need no further specific mx.
- If a mother is Rh-neg*, send blood for atypical antibody testing at 26, 34 and 40 weeks (six weekly/ align with the BANC plus visits):
- if no antibodies are found, continue with antibody testing every six weeks
- if antibodies are found at a titre of < 1:16, repeat the antibody test every two weeks o if antibodies are found at a titre of ≥ 1:16 send the mother to a unit that specializes in managing Rh incompatibility (usually a specialist referral hospital) within three days

NOTE that different labs may have different reporting values for abnormal titres- check with the lab what value they regard as abnormal

# Anti-D: When to &not to give

- If no antibodies are found, give prophylactic anti-D 100 µg intra-muscularly as follows:

o after delivery to all rhesus-negative mothers, if the baby is rhesus-positive or its rhesus status is unknown, within 72 hours 127

o if amniocentesis or external cephalic version is performed

o if there is significant antepartum haemorrhage

o if the mother suffers any abdominal trauma

o after termination of pregnancy, miscarriage, or ectopic pregnancy.

*If the father of the baby is tested and also found to be rhesus-negative, no further management will be necessary, as the baby will then be Rhesus-negative.

# #POOR OBSTETRIC HISTORY

- No significant changes
- These women may experience distress and symptoms of anxiety or depression.
- Mental health screening and support is very important.
- Compassionate and respectful care throughout the pregnancy, any investigations, procedures, and the labour are essential

# #Poor Obstetric Hx

- This is a history of poor obstetric outcomes (a history of stillbirth or pregnancy-related neonatal death, or severe neonatal morbidity)
- Women with a poor obstetric history should be referred from a clinic or community health centre to a hospital for assessment and further management directly after the first booking visit.
- These women may experience distress and symptoms of anxiety or depression.
- Mental health screening and support is very important.

o Compassionate and respectful care throughout the pregnancy, any investigations, procedures, and the labour are essential.

# RECURRENT MISCARRIAGES

- Addition to this chapter

# RECURRENT MISCARRIAGES

Two or more consecutive previous 2nd trimester miscarriages OR three or more consecutive 1st trimester losses

- Need referral to a specialized unit after booking (if 35 years) woman, consider referral earlier.

Manage the woman according to the plan from the specialist referral unit.

- A cervical cerclage is only done for specific indications and in singleton pregnancies at a specialist referral centre.

It should preferably not be done at district level.

o The specific indications include a history of three or more preterm deliveries and/or second trimester losses; or a short cervix on transvaginal ultrasound scan (≤25mm) before 24 weeks plus a history of one or more spontaneous mid-trimester loss or preterm birth.

o Daily vaginal progesterone can be offered as an alternative to cervical cerclage (Progesterone, PV, 200 mg daily until 34 weeks gestation.

# #PREVIOUS SPONTANEOUS PRETERM DELIVERY

## PREVIOUS SPONTANEOUS PRETERM DELIVERY

This refers to the delivery of a preterm baby (<34 weeks) that died or required special care, in the last previous pregnancy. Patients must be referred to a district hospital for initial work up.

- At the district hospital:
  - do an ultrasound scan at the first antenatal visit, including estimation of the cervical length by transvaginal scan
  - obtain a good history of the preterm birth(s)
  - Evaluate for specialist referral for possible cerclage (cervical length ≤25mm after 16 weeks gestation with prior loss(es) before 34 weeks gestation)

# #VAGINAL BIRTH AFTER PREVIOUS CAESAREAN SECTION (VBAC)

- No significant changes
- Moved to caesarean delivery chapter

# Summary and conclusion

- This chapter discusses common problems in pregnancy, including SGA babies, multiple pregnancy, breech presentation and transverse lie, prolonged pregnancy, Rhesus incompatibility ,Poor obstetric Hx, PTL,Prelabour ROM,Chorioamnionitis and Recurrent miscarriages (added)
- Some subjects moved
- NB changes made to some problems
- Video and flow diagrams for quick access.

# I Thank you all!