

Management of second trimester pregnancy loss

Including Manual removal of placenta

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What does it encompass?

- 2nd Trimester loss = 14-24 weeks
- Late Miscarriage
- FDIU
- TOP
 - Medical
 - Surgical
 - >20 weeks

Causes

- Fetal abnormality
- Infection
- Hormone imbalance
- Placentation problems
- Cervical incompetence
- Uterine anomaly
- Immunologic
- Thrombophilia

Presentation

- Clinical
 - Abdo pain
 - PV bleeding
 - ROMs
 - Spontaneous Miscarriage
 - Subtle; discharge, pressure symptoms
- Ultrasound

History

- POH
- Previous miscarriage?
- Cervical surgery / Cx suture?

Examination

- General exam, vital signs
- Abdo exam
- Uterine tenderness?
- Speculum
- Infection screen

Late miscarriage

- GA <21-22 weeks, local hospital if inevitable
- Signs of life at birth, record:
 - live birth
 - Neonatal death
- Deliveries at viability threshold, fetal heart present at onset:
 - Best delivering in tertiary centre

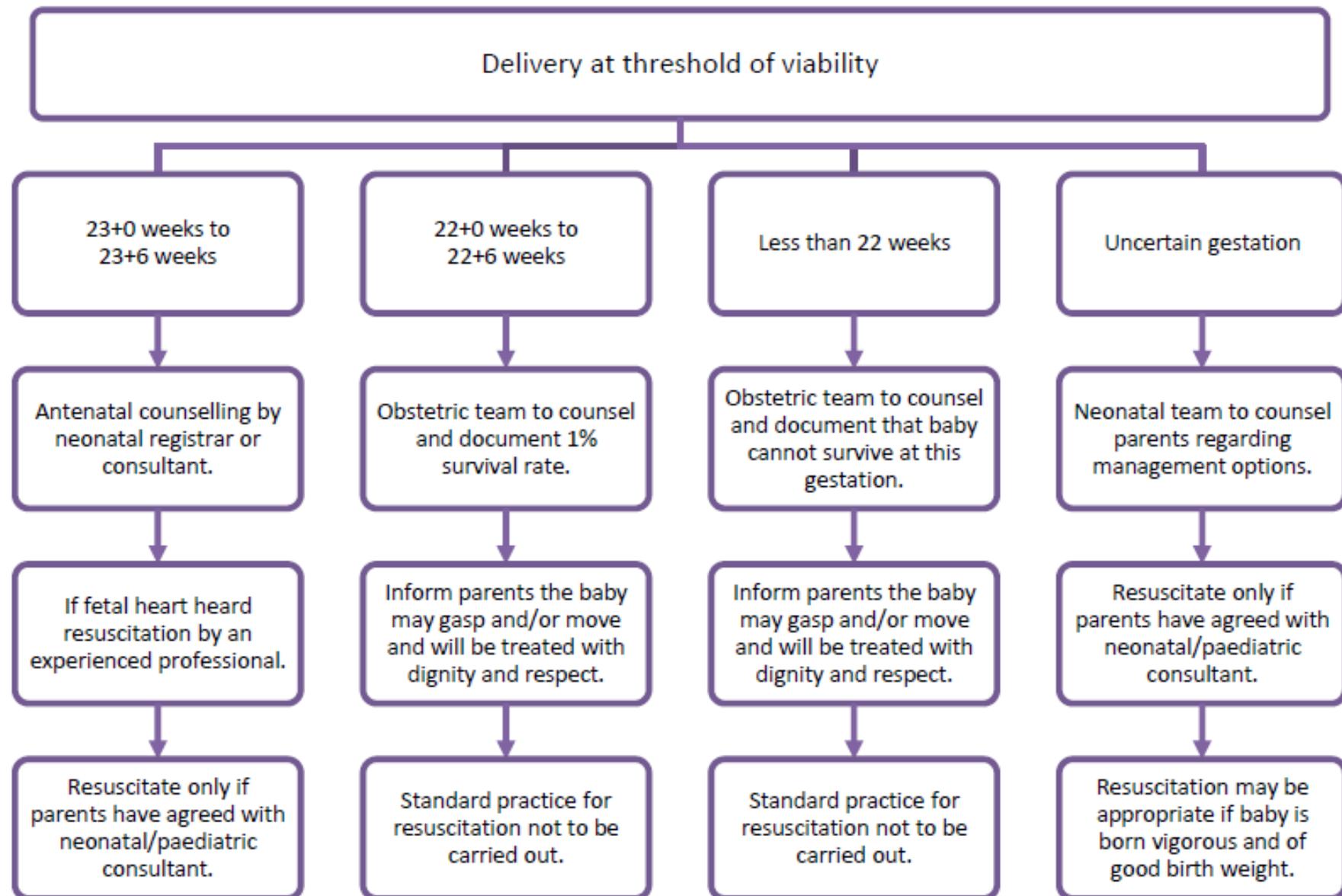


Figure 1: Care During Induction and Delivery

FDIU

- Diagnosis needs confirmation by experienced ultrasonographer
- 4 chamber view of heart
- Explanation, support, spiritual care
- Aim for vaginal birth
- Arrange induction
- Mifepristone followed by ½ dose misoprostol (200mg 6 hourly 14-18, 100mg 18-20 weeks)

Investigations pre-induction

- FBC, clotting screen. Group & Save
- Kleihauer?
- Infection screen
- If delivery delayed, repeat weekly

Second Trimester TOP for fetal abnormality

- Parents treated with same compassion as unexpected fetal loss
- Feticide if GA >21+6
- Mifepristone 200mg followed 48 hrs later by
- Misoprostol 400mcg 3 hrly, max x5 doses
- Half dose if previous CS / uterine scar

Dose of Misoprostol

Induction Regime table

	13+0 – 17+6 weeks	18+0 - 23+6 weeks	Termination of pregnancy, any gestation	
	Unscarred & scarred uterus	Unscarred & scarred uterus	Unscarred uterus	Scarred uterus
Pre-Induction	Mifepristone 200 milligrams once only	Mifepristone 200 milligrams once only	Mifepristone 200 milligrams once only	
<i>Normal interval between mifepristone and misoprostol is 24 hours to 48 hours though this can be shortened if clinically needed.</i>				
Induction	Misoprostol 200 micrograms, 6 hourly, for 4 doses	Misoprostol 100 micrograms, 6 hourly, for 4 doses	Misoprostol 400 micrograms, 3 hourly, for 5 doses	Misoprostol 200 micrograms, 3 hourly, for 5 doses
<i>Vaginal route preferable due to lower incidence of side effects</i>				
If delivery not achieved after the recommended doses above, discuss with Consultant. A second course of misoprostol can be given after a 12 hour interval.				

If membranes ruptured, oxytocin may be considered but longer time to delivery

Care during delivery

- Place: Gynae ward <20 wks, Birth Suite > 20 wks
- Adequate analgesia
- Active management of 3rd stage
- If placenta not delivered in 1-2 hours or excessive bleeding, consider surgical intervention
- Thromboprophylaxis
- Anti-D
- Care of baby: offer contact
 - Cooling cot
 - Mementos / photos/ foot & hand prints



Retained Placenta

- Active Mx of 3rd stage
- Oxytocic (Syntocinon 10 iu or Syntometrine i.m.)
- Assess for signs of separation & if yes:
 - Encourage more upright position
 - Encourage maternal bearing down effort
 - Gentle controlled cord traction
 - If excessive bleeding or placenta not delivered within 30-60 mins, call GPO
 - VE to determine if removal in theatre is required
 - Repeat oxytocics & wait 1-2 up to 4 hours?

Removal of placenta

- Up to 50% need surgical intervention
- May not be able to insert whole hand to perform manual removal
- Combination of 2 finger digital palpation, polyp/ovum forceps and large curette +/- suction
- Beware of morbidly adherent placenta and excessive bleeding
- Adequate analgesia, best done in theatre

Postnatal Care

- Bereavement support
- Lactation suppression
- Contraception
- Gp & Health visitor notified
- Follow up arrangements
- Results explanation: PLS, Obs provider, Genetic Services
- Subsequent pregnancy planning
- Recurrence risk 27%

Stillbirth Investigations

Stillbirth Investigations Flowchart

Core investigations

Mother

- Maternal history
- Maternal examination
- Kleihauer-Betke or flow cytometry

Findings from core investigations

Personal or family history of thrombosis

Suspected cholestasis

Indicated selective investigations

APS (anticardiolipin, lupus anticoagulant, anti-B2 glycoprotein-1 antibodies)

Bile acids; LFTs

Baby

- Clinical examination at birth
- Full autopsy

Non-consent for full autopsy

LGA

FGR or SGA

MRI; NIA; MIA; Clinical photographs

HbA1c

Infectious diseases (e.g. CMV); HbA1c; APS (anticardiolipin, lupus anticoagulant, anti-B2 glycoprotein-1 antibodies)

Placenta

- Macroscopic examination
- Histopathology studies
- Cytogenetic analysis

Placental abruption or infarction

Infection

APS (anticardiolipin, lupus anticoagulant, anti-B2 glycoprotein-1 antibodies)

Further testing as directed by pathologist

APS: Antiphospholipid syndrome; CMA: Chromosomal microarray; CMV: Cytomegalovirus; FGR: Fetal growth restriction; LFTs: Liver Function Tests; LGA: Large-for-gestational-age; HbA1c: Haemoglobin A1c; MIA: Minimally-invasive autopsy; MRI: Magnetic Resonance Imaging; NIA: Non-invasive autopsy; SGA: Small for gestational age

1: Flanady V, Dats J, Gardener G, Mason Vicki, McCowan Lesley, Kent A, Tudhope David, Middleton P, Donnelly N, Boyle F, Horley D, Ellwood D, Gordon A, Sinclair L, Humphrey M, Zucello J, Dahlstrom J, Hery S, Khong Y for the PSANZ Care around the time of stillbirth and neonatal death guidelines group. Clinical Practice Guideline for Care Around Stillbirth and Neonatal Death. Version 3, NHMRC Centre of Research Excellence in Stillbirth, Brisbane, Australia, March 2018

Baptism and Pastoral Care

- Inform religious representative early
- Baptism or alternative arrangements
- If stillborn, Naming and Blessing can be offered

Funeral arrangements

- Option of Memorial service, KEMH Chapel
- Cremation option for SB & <28 weeks
- Babies born alive >20 wks, external funeral providers
- SB Babies >28 wks, ext funeral providers

Legal requirements

- >20weeks: Refer to ministerial Panel (KEMH) for approval
 - Delivery KEMH or Broome
- Mandatory Notification of all TOPs

Cervical Insufficiency

- previous cervical damage,
- LEEP/LLETZ, laser ablation and cold knife conization.
- It can also occur in women with congenital uterine malformations, such as bicornuate uterus or unicornuate uterus,
- DES.
- Multiple D & C procedures

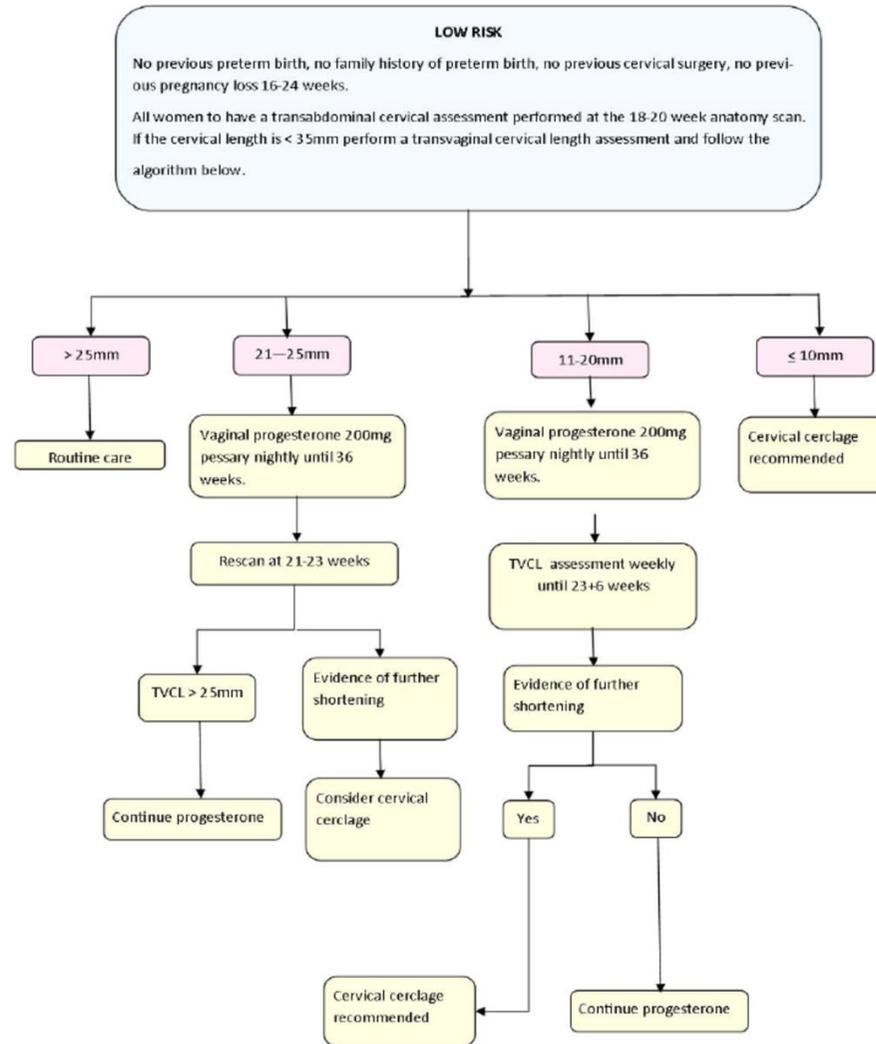
Symptoms

- Unfortunately, cervical insufficiency usually has no symptoms in the first affected pregnancy.
- The cervix dilates without any contractions
- The waters break and the baby is born
- Women may have some spotting or bleeding
- If Cx is found to be open without contractions, Rescue Cerclage gains an additional 5 weeks

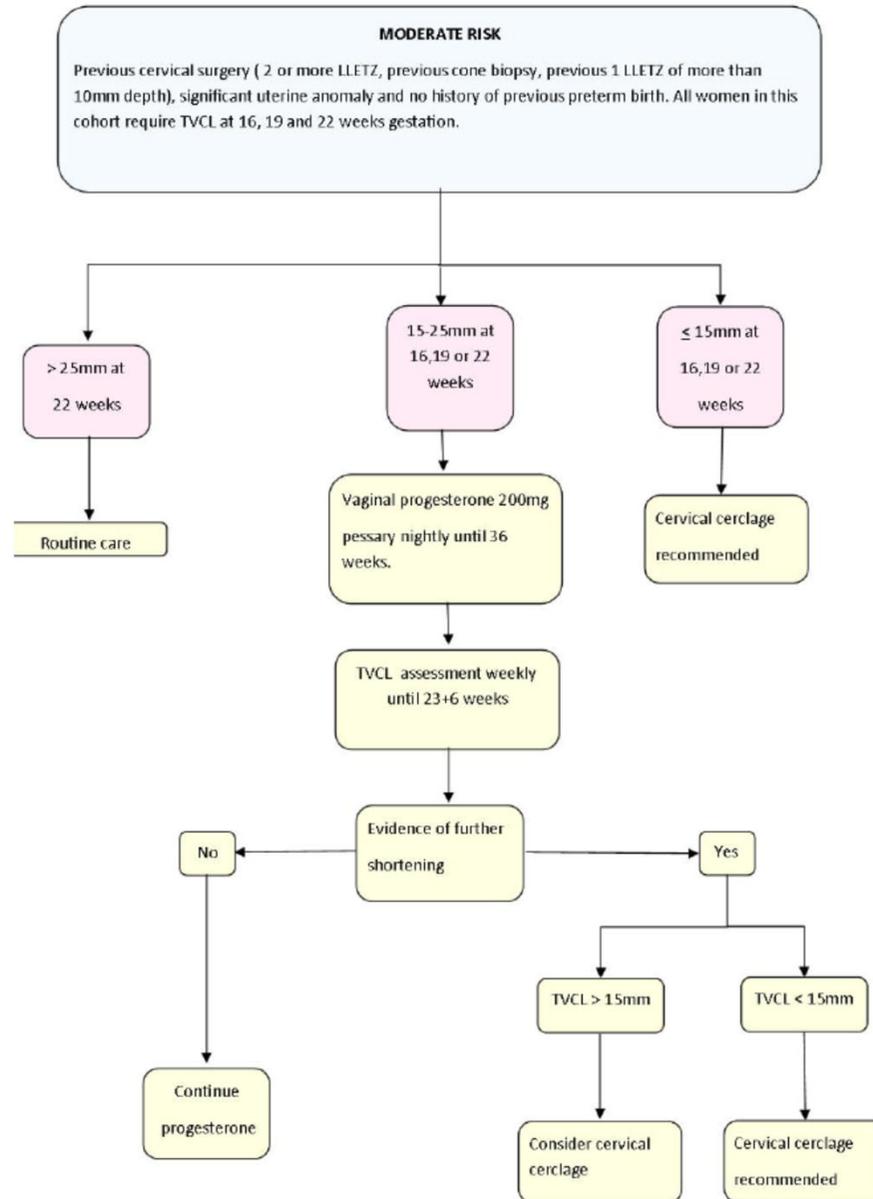
WA Preterm Birth Prevention Initiative

- Screening for Cx length at anatomy U/S
- Preterm Pregnancy Clinic
- Guidelines:
 - Risk stratification
 - Closer monitoring +/- progesterone
 - Cervical Cerclage

Low Risk



Moderate Risk



Thank You

- Questions?

High Risk

