Chapter 12

SHOULDER DYSTOCIA

Definition
Inability to deliver shoulders by usual methods (due to impaction of anterior shoulder above the maternal pubic symphysis)

Diagnosis
- Head recoils against perineum
- Spontaneous restitution does not occur
- Failure to deliver with expulsive efforts, episiotomy and gentle downward traction

Incidence
- 1 to 2 per 1000 deliveries
- for babies > 4000 g: 4/1000 for non-diabetic mothers: 16/1000 for diabetic mothers (mostly those associated with obesity or poor control)

Risk Factors
- Fetal macrosomia – and therefore: post term pregnancy, diabetes, maternal obesity, prolonged labour
- Previous shoulder dystocia
- Operative vaginal birth
- Prolonged labour

IN > 50% OF BIRTHS COMPLICATED BY SHOULDER DYSTOCIA, NO RISK FACTORS ARE PRESENT. SO, CAREGIVERS IN OBSTETRICS MUST BE PREPARED AT EVERY BIRTH TO DEAL WITH POSSIBLE SHOULDER DYSTOCIA.
Complications of Shoulder Dystocia

Maternal:
- Postpartum haemorrhage (11%)
  - Uterine atony
  - Maternal lacerations
- Ruptured uterus
- 4th degree tears (2-5.1%)

Fetal/Neonatal:
- Hypoxia/asphyxia and its sequelae
- Birth Injuries
  - Transient brachial plexus palsy, or permanent brachial plexus injury (Erb’s palsy)
  - Fracture of clavicle or humerus
- Fetal death

Management
Avoid the four P’s
1. Panic
   - work through manoeuvres systematically
   - everyone should be quiet so that the delivering practitioner can be heard when asking for help and telling the woman when to push and when not to push
2. Pulling on head/neck – lateral traction in particular increases the risk of brachial plexus injury
3. Pushing on fundus – will not help when the shoulder is impacted and increases risk of uterine rupture. Pressure is applied suprapubically for anterior shoulder disimpaction.
4. Pivot (i.e., severe angulation of the head, using the coccyx as a fulcrum

The ALARMER mnemonic can be a helpful guide to appropriate and consistent management:
- Ask for help
- Legs hyperflexed (McRoberts manoeuvre)
- Anterior shoulder disimpaction (suprapubic pressure)
- Rotation of the posterior shoulder (Wood’s screw manoeuvre)
- Manual delivery of the posterior arm
- Episiotomy
- Roll over onto “all fours”
1. **Ask for help**
   - Set up unique paging protocols for obstetric emergencies
   - Additional personnel are needed with the McRoberts and suprapubic pressure manoeuvres
   - Gather personnel ready for possible advanced resuscitation of the neonate
   - Establish and practice an intervention protocol (i.e., emergency drill)

2. **Legs hyperflexed (McRoberts manoeuvre)** successful in 42% of cases
   - Flatten the head of the bed
   - One caregiver on each side of mother helps hyperflex and abduct her hips
   - Straightens the maternal sacrum relative to the lumbar spine

3. **Anterior shoulder disimpaction (suprapubic pressure)** successful in 91% of cases
   - The infant’s impacted shoulder is pushed away from the midline, where it is above the maternal pubis symphysis. Apply suprapubic pressure with the heel of clasped hands from the posterior aspect of the anterior shoulder to dislodge it (Mazzanti manoeuvre). Apply a steady pressure first and, if unsuccessful, apply a rocking pressure.

**Lift - McRobert’s Manoeuvre**

**Anterior Disimpaction**

1) **Suprapubic Pressure**

- CPR type motion
- Directed from side of fetal back
- **NO** fundal pressure
4. **Rotation of the posterior shoulder (Wood’s screw manoeuvre)**
   - 2 fingers apply pressure to the anterior aspect of either shoulder to rotate it into the oblique or 180°, repeating as necessary

**Rotation of Posterior Shoulder - Step 1**
- pressure on anterior aspect of posterior shoulder
- may be combined with anterior disimpaction manoeuvres
- NO fundal pressure

**Rotation of Posterior Shoulder - Step 2**

**Rotation of Posterior Shoulder - Step 3**
- may be repeated if delivery not accomplished by Steps 1 & 2

5. **Manual delivery of the posterior arm**
   - The arm is usually flexed at the elbow. If it is not, pressure in the antecubital fossa can assist with flexion. The hand is then brought across the fetal chest so that the arm can be delivered.

**Manual removal of the posterior arm**
6. **Episiotomy**
   - This does not directly help resolve the shoulder dystocia, but may make it easier for the operator to introduce a hand into the vagina for the other manoeuvres.

7. **Roll over onto all fours**
   - Moving the woman onto “all fours” appears to increase the effective pelvic dimensions, allowing the fetal position to shift. This may free the impacted shoulder. This may also allow easier access to the posterior shoulder to rotate it or deliver it.

If none of these manoeuvres have been successful, some have suggested:
- Deliberate fracture of the clavicle
- Symphysiotomy
- Zavanelli Manoeuvre (reversing cardinal movements to replace the head in the pelvis, and then carrying out Caesarean Section)

**After Shoulder Dystocia**

Assess infant for any trauma
Send cord blood gases
Assess mother for tears of the genital tract
Manage 3rd stage to prevent potential postpartum haemorrhage
Document and describe manoeuvres carried out
Explain all that was done to the mother and others in attendance
KEEP PRACTICING SHOULDER DYSTOCIA DRILLS, USING THE MNEMONIC

**Reference**