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: postterm 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:
- Perineal and vaginal lacerations
- Postpartum haemorrhage
- Ruptured uterus

Complications of Shoulder Dystocia (cont'd)

Fetal/Neonatal:

- Transient brachial plexus palsy, or permanent brachial plexus injury (Erb's palsy)
- Fracture of clavicle or humerus
- Hypoxia /asphyxia with permanent brain injury
- Fetal death

Management

Avoid the three AP-s@

1. **P**anic
   - 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. **P**ulling on head / neck – lateral traction in particular increases the risk of brachial plexus injury

3. **P**ushing on fundus – will not help when the shoulder is impacted and increases risk of uterine rupture. Pressure is applied suprapubically for anterior shoulder disimpaction.

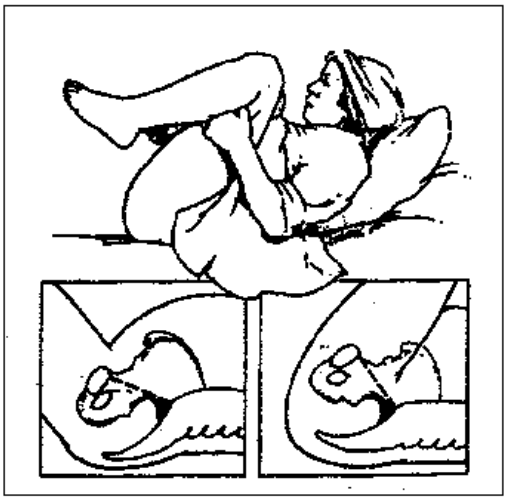
The ALARMER mnemonic can be a helpful guide to appropriate and consistent management:

Ask for help
Legs hyperflexed (McRobert's 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. **A**sk for help
   - additional personnel are needed with the McRoberts and suprapubic pressure manoeuvers
   - gather personnel ready for possible advanced resuscitation of the neonate

2. **L**egs hyperflexed (McRoberts manoeuvre)
   - one caregiver on each side of mother helps hyperflex and abduct her hips
   - straightens the maternal sacrum relative to the lumbar spine

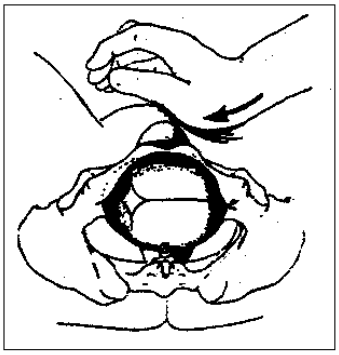
Lift - McRobert's Manoeuver



3. **A**nterior shoulder disimpaction (suprapubic pressure)
   - the infant's impacted shoulder is pushed away from the midline, where it is above the maternal pubis symphysis. This is done by pushing suprapubically against the posterior aspect of that shoulder to dislodge it. The heel of the hand is used.

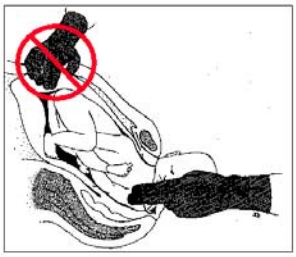
Anterior Disimpaction
1) Suprapubic Pressure

- CPR type motion
- directed from side of fetal back
- NO fundal pressure



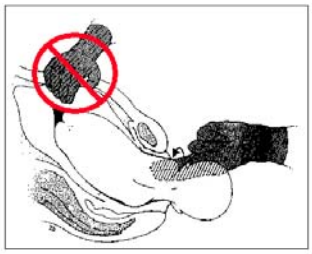
4. **R**otation of the posterior shoulder (Wood's screw manoeuvre)
   - 2 fingers apply pressure to the anterior aspect of either shoulder to rotate it into the oblique or 180^0, repeating as necessary

Rotation of Posterior Shoulder - Step 1



- pressure on anterior aspect of posterior shoulder
- may be combined with anterior disimpaction manoeuvers
- NO fundal pressure

Rotation of Posterior Shoulder - Step 2

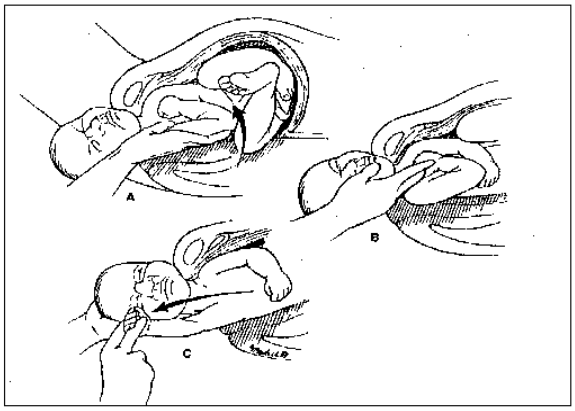


Rotation of Posterior Shoulder - Step 3

- may be repeated if delivery not accomplished by Steps 1 & 2

5. **M**anual delivery of the posterior arm
   - the elbow of the posterior arm is located, flexed by pressure in the antecubital fossa so that the hand can be reached. The hand is then brought across the fetal chest so that the arm can be delivered.

Manual removal of the posterior arm



6. **E**pisiotomy1
   - 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. **R**oll over onto all fours
   - this may allow the fetal position to shift and disimpact the anterior 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 hemorrhage

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

1. Society of Obstetricians and Gynaecologists of Canada (SOGC), **Advances in Labour and Risk Management Course (ALARM)**, 13th ed., 2005.

1 For practical reasons, if shoulder dystocia is anticipated, episiotomy is best performed when the perineum is maximally distended. ie. with the birth of the head.