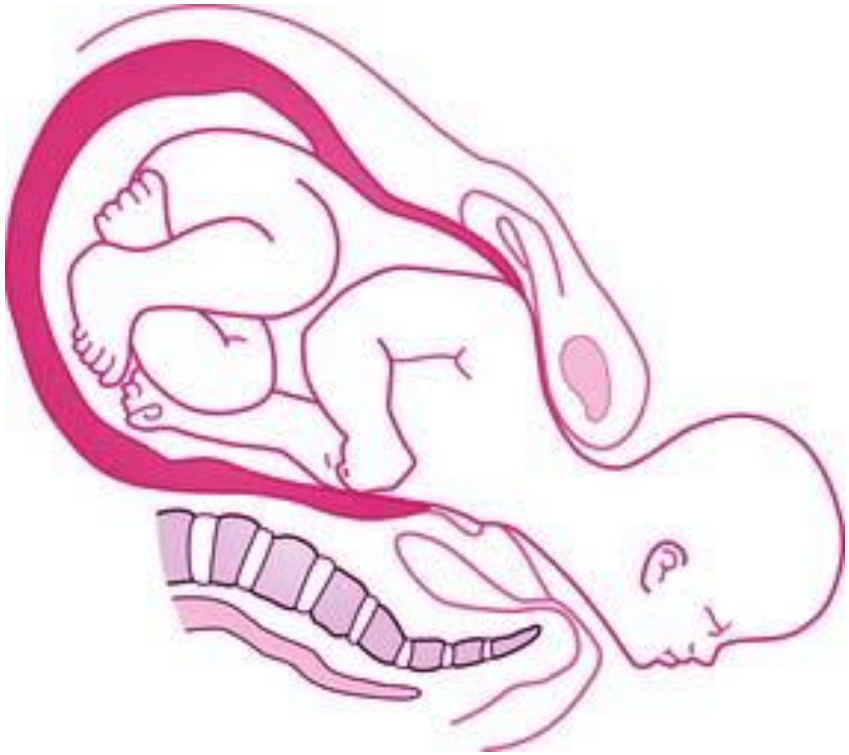
Shoulder Dystocia



Shoulder Dystocia

Defined as any delivery that requires additional obstetric maneuvers after gentle downward traction on the head has failed to deliver shoulders.

Complicates about 1:200 deliveries, and has potential for serious fetal complications.

Complications of Shoulder Dystocia

Fetal

- Hypoxia and neurological injury (cerebral palsy)
- Brachial plexus palsy
- Fracture of clavicle or humerus
- Intracranial haemorrhage
- Cervical spine injury

Maternal

- Post partum hemorrhage
- Genital tract trauma including 3rd and 4th degree perineal tears

Mechanism

Usually the anterior shoulder is impacted against the symphysis pubis, often due to the failure of internal rotation of the shoulders.

Rarely, the posterior shoulder may be impacted against the sacral promontory, resulting in bilateral impaction, causing problems at delivery.

Fetal deterioration is rapid, often without cord acidosis, largely due to cord compression and trauma.

Risk factors for Shoulder Dystocia

Antenatal

- Previous history of shoulder dystocia.
- Fetal macrosomia.
- BMI >30 and excessive weight gain in pregnancy.
- Diabetes mellitus.
- Post-term pregnancy.

Intrapartum

- Lack of progress in late first or second stage of labour.
- Instrumental vaginal delivery (especially rotational deliveries).

Shoulder Dystocia: Management

H Call for **H**elp (midwife, senior obstetrician, neonatologist, anaesthetist)

E **E**pisiotomy—may help with internal manoeuvres

L **L**egs into mcroberts' (hyperflexed at hips with thighs abducted and externally rotated)

P Suprapubic **P**ressure applied to posterior aspect of anterior shoulder

E **E**nter pelvis for internal manoeuvres, which include:

- Pressure exerted on the posterior aspect of anterior shoulder to adduct and rotate the shoulders to the larger oblique diameter (Rubin II)
- If this fails combine it with pressure on the anterior aspect of the posterior shoulder (Woods' screw)
- If this fails, reversing manoeuvre may be tried with pressure on the anterior aspect of anterior shoulder and posterior aspect of posterior shoulder in opposite direction (Reverse Woods' screw)

R **R**elease of posterior arm by flexing elbow, getting hold of fetal hand, and sweeping fetal arm across chest and face to release posterior shoulder

R **R**oll over to 'all fours' may help aid delivery by the changes brought about in the pelvic dimensions (Gaskin manoeuvre)

Other maneuvers

Zanvanelli: replacement of head into the vagina by reversing the mechanism of labour (i.e. flexion and 'de-restitution') and performing a cesarean section may be a last resort. Tocolysis may be required to facilitate this procedure.

Symphysiotomy: may be performed to 'open up' pelvic girdle, but can
result in severe maternal morbidity (urethral injury, incontinence, altered gait, and chronic pelvic pain). Urethral injury should be avoided by displacing urethra with a metal catheter at time of symphysiotomy.

Other considerations in the event of a Shoulder Dystocia

- **Essential not to exert traction on head without disimpaction of shoulders as this increases risk of brachial plexus injury.**
- Time-keeping is essential and it is good practice to allocate a member of the team to document the timeline of events.
- Pediatric team must be called urgently as a need for neonatal resuscitation should be anticipated.
- Post partum hemorrhage should also be anticipated and prophylactic measures considered, such as a 40 IU oxytocin infusion.
- The genital tract should be carefully examined for trauma.
- Carefully document the timing and sequence of events, who was involved, and what each person did, as soon as possible afterwards.
- Important to explain delivery and discuss outcome with parents after the event.
- An incident report form should be filled for risk management.
- **If an injury has occurred, it may become a medico-legal issue, making documentation even more important.**