Review Article

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Management of Shoulder Dystocia: Critical Thinking in Clinical Decision Making

Prasuna Jelly

Author Affiliation: College of Nursing, All India Institute Of Medical Sciences,Virbhadra Road, Rishikesh Uttarakhand-249 201

Abstract

Shoulder dystocia refers to difficulty in delivery of the fetal shoulders. It occurs in 0.2 to 2 % of births and can be a distressingemergencyin obstetrics. The goal of management is to prevent fetal asphyxia, while avoiding physical injury (eg, Erb's palsy, bone fractures). The overall incidence of shoulder dystocia varies based on fetal weight. The incidence of shoulder dystocia is generally reported to be between 0.5 % and 1.5% with scattered reports listing values both higher and lower. Management of shoulder dystocia commonly includes Recognition of shoulder dystocia, Call for help, McRobert's maneuver, Suprapubicpressure, Evaluate the need for an episiotomy, Internal maneuvers, Gaining internal vaginal access, Delivery of the posterior arm, Internal rotational maneuvers, All fours position, Documentation. It is important to remember to avoid traction and fundal pressure while attempting to deliver the shoulder dystocia.

Keywords: Shoulder dystocia; Suprapubicpressure; Episiotomy; Internal maneuvers.

Definitions

Shoulder dystocia can be defined as failure of the shoulders to spontaneously traverse the pelvis after delivery of the fetal head. Shoulder dystocia occurs when either the anterior or the posterior fetal shoulder impacts on the maternal symphysis or on the sacral promontory.

Just after the baby's head has emerged, the neck suddenly retracts back against the mother's perineum causing the baby's cheeks to puff out.

Categories of Risk Factors

A. Pre-conceptual risk factors for shoulder dystocia

1. Previous shoulder dystocia
2. Maternal obesity
3. Maternal age
4. Abnormal pelvis
5. Multiparity

B. Antepartum factors risk factors for shoulder dystocia

1. Macrosomia: Increased Shoulder/chest/

Reprint Request: Prasuna Jelly, Assistant Professor, College of Nursing, All India Institute Of Medical Sciences,Virbhadra Road, Rishikesh Uttarakhand-249 201
E-mail: prasunajelly@gmail.com

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abdomen ratios

2. Diabetes

3. Maternal weight gain

4. Fetal sex

5. Multiparity

6. Post-dates

C. Intrapartum Risk Factors

1. Instrumental delivery
2. Experience of the deliverer
3. Labor abnormalities
4. Oxytocin and anesthesia
5. Episiotomy
6. Brachial plexus injury

Diagnosis

1. Inadequate spontaneous restitution.
2. Fetal face becomes plethoric.
3. Definite recoiling of the head back against the perineum (turtle - neck sign)

Management of Shoulder Dystocia

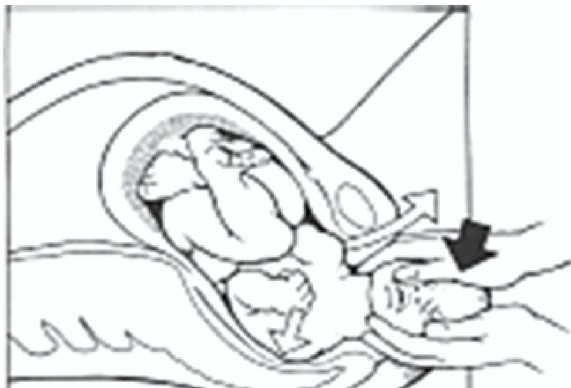
A common treatment mnemonic is **HELPERR**

H – Help: Call for additional assistance

E – Evaluate for episiotomy

L – Legs hyper flexion (McRobert's Maneuver)

P – Pressure (Suprapubic)



E – Enter internal rotation

R – Remove the posterior arm

R – Roll the patient (To hands and knees)

Initial Measures

GentlePressure

Pressure on fetal vertex in a dorsal direction will move the posterior fetal shoulder deeper into the pelvic hollow, resulting in easy delivery of the anterior shoulder.

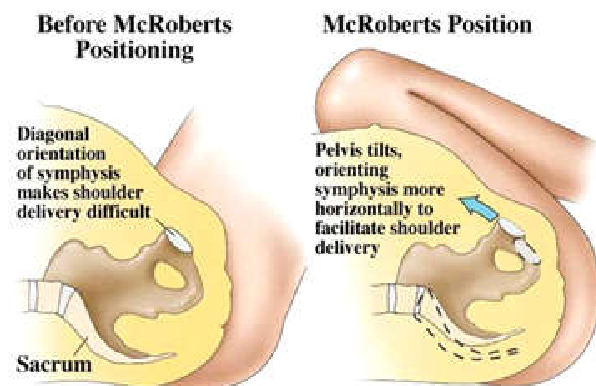
- Excession angulation (>45 degrees) is to be avoided.

H Call for Help

This refers to activating the pre-arranged protocol or requesting the appropriate personnel to respond with necessary equipment to the labor and delivery unit.

E Evaluate for Episiotomy

Episiotomy should be considered throughout the



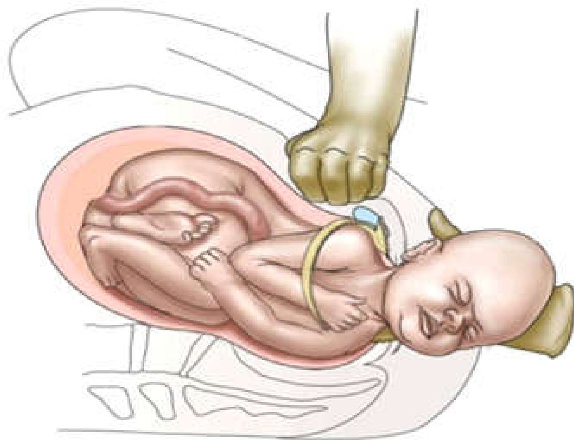
management of shoulder dystocia but is necessary only to make more room if rotation maneuvers are required.

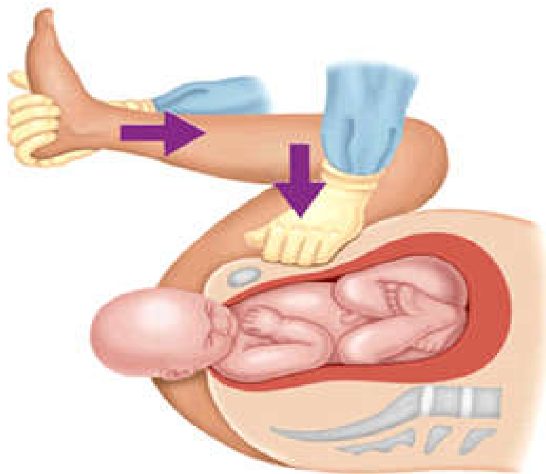
L Legs Hyper Flexion (the McRoberts Maneuver)

- Patient positioned with hips at edge of the bed
- Both hips are sharply flexed with knees remaining flexed ("knees to shoulders")

This Maneuver Assists Delivery by

- Straightening maternal lumbar lordosis
- Rotates symphysis superiorly and anteriorly
- Improving angle between pelvic inlet and direction of maximal expulsive force
- Elevates anterior shoulder allowing posterior shoulder to descend





P Pressure (Suprapubic)

The hand of an assistant should be placed suprapubically over the fetal anterior shoulder, applying pressure downward and lateral motion on the posterior aspect of the fetal shoulder.

E Enter Maneuvers (Internal Rotation)

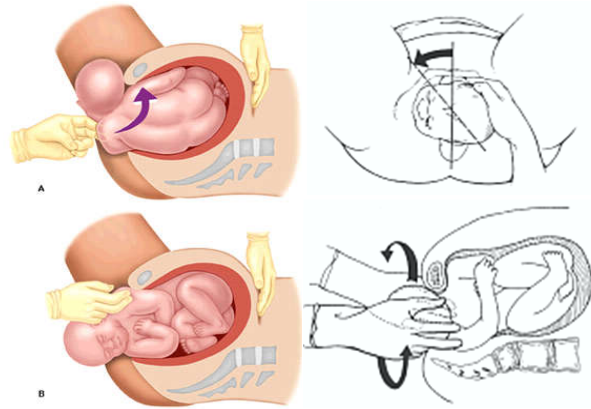
These maneuvers attempt to manipulate the fetus to rotate the anterior shoulder into an oblique plane and under the maternal symphysis.

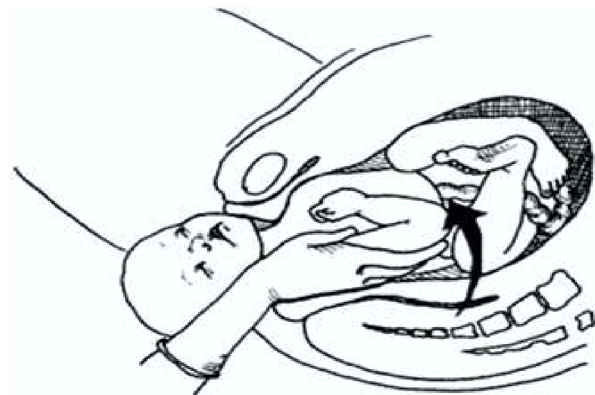
Rubin'Smaneuver

At vaginal examination, apply pressure and push the presenting fetal shoulder toward the chest. If shoulders move into the oblique diameter, attempt delivery.

Woods (Corks Crew) Maneuver

The shoulders must be rotated utilizing pressure on the scapula and clavicle. Continue rotation 180 degrees and deliver.





R Remove the Posterior Arm

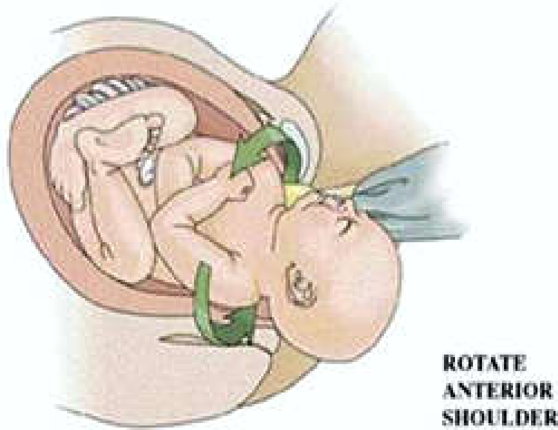
Removing the posterior arm from the birth canal also shortens the bisacromial diameter, allowing the

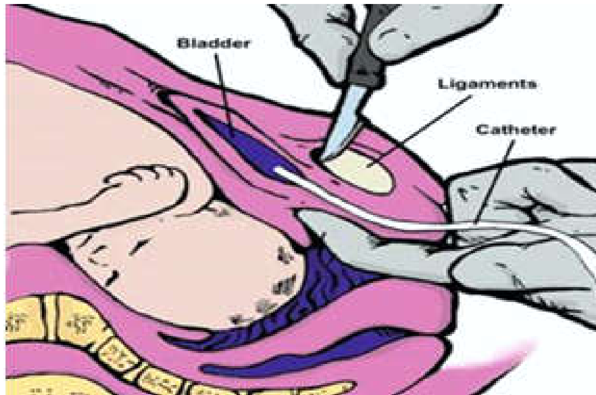
fetus to drop into the sacral hollow, freeing the impaction.

R Roll the Patient (Gaskin Maneuver)

The patient rolls to the all-fours position. Often, the shoulder will dislodge during the act of turning, so that this movement alone may be sufficient to dislodge the impaction.

With all these efforts, stillfailed to deliver?



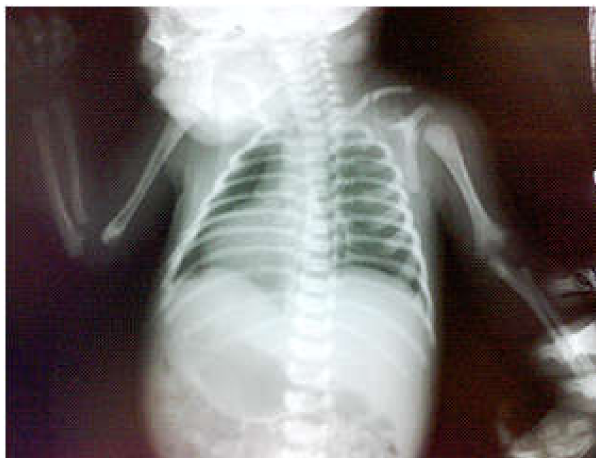


Final Steps

Zavanelli maneuver(cephalic replacement)

- Relax uterus with terbutaline
- Rotate head back to Occipito Anterior ("reverse restitution")
- Flex neck
- Upward pressure and shift to Operation Theater

Symphysiotomy



- Not common since cesarean is available
- Last effort
- Insert Foley catheter
- Use vaginal hand to laterally displace urethra to avoid injury
- Incise symphysis through mons pubis

Intentional Clavicular Fracture (Cleidotomy)

- Apply pressure over mid-clavicle AWAY from the lung
- May be difficult to perform
- If successful, may reduce the diameter of the shoulder girdle
- Applicable commonly in anencephaly, dead fetus

Complications of Shoulder Dystocia

Maternal

- Postpartum hemorrhage
- Recto-vaginal fistula
- Symphyseal separation
- 3rd - 4th degree episiotomy or tear
- Uterine rupture

Fetal

- Brachial plexus palsy
- Clavicle fracture
- Fetal death
- Fetal hypoxia
- Fracture of the humerus

Conclusion

Shoulder Dystocia, a hectic birthing process come across number of complications at each stage of the management. After the birth of baby need to observe birth of baby need to observe for: A baby that is slow to start and may require assistance with breathing, Fractures of the baby's collar bone (clavicle) or humerus, Fetal Brachial Plexus injury, Repair of episiotomy, Maternal hemorrhage, Uterine rupture.

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