Shoulder Dystocia

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Contents

1. Purpose of guideline

This guideline establishes the importance of recognition of the risk factors associated with shoulder dystocia, and its emergency management, when it occurs within Te Whatu Ora | Te Tokai Tumai. It does not cover assessment or management of the neonate.

2. Definitions

Term	Definition
Shoulder Dystocia	Shoulder dystocia is defined as failure of delivery of the anterior, posterior, or both fetal shoulders following the vaginal birth of the fetal head and additional obstetric manoeuvres are required to deliver the fetus after gentle downward traction has failed.
Types of Shoulder Dystocia	**Unilateral shoulder dystocia** occurs when the anterior shoulder becomes impacted behind the maternal symphysis and the posterior shoulder descends below the sacral promontory to lie in the hollow of the sacrum. **Bilateral shoulder dystocia** occurs when the posterior fetal shoulder becomes impacted on the maternal sacral promontory and the anterior shoulder remains behind the maternal symphysis

3. Classification

For the purposes of audit against this guideline the following classifications are used:

- Mild shoulder dystocia - external manoeuvres only used and no neonatal injury.
- Significant shoulder dystocia - any internal manoeuvres used; or any neonatal injury, and/or the need for CPR following the dystocia, regardless of manoeuvres used.

Note that above classification does not imply any recommendation regarding sequence of manoeuvres, however generally external manoeuvres that result in prompt birth without injury indicate a mild degree of shoulder dystocia.

4. Background

- Although the occurrence of shoulder dystocia is uncommon it is not rare, with an incidence ranging from 0.54 - 1.26% of all births.
- There are predisposing factors but largely it is an unpredictable event.
- Maternal morbidity is increased, particularly post-partum haemorrhage, 3rd and 4th degree tears and post-traumatic stress syndrome.
- Infant morbidity includes brachial plexus injuries around 2.3% to 16%, a minority of these being permanent. Other injuries include fractures of clavicles or humerus, hypoxia, neurological damage or death.

5. Risk factors associated with shoulder dystocia

Pre labour	Intra-partum
Previous shoulder dystocia (10 times higher)	Prolonged first stage of labour
Fetal macrosomia > 4.5kg	Secondary arrest
Diabetes Mellitus	Prolonged second stage of labour

Pre labour	Intra-partum
High maternal body mass index > 30	Oxytocin augmentation
Induction of labour	Assisted vaginal birth

5.1 Key points

- The majority of cases of shoulder dystocia occur in women with no risk factors
- Shoulder dystocia is therefore unpredictable and largely unpreventable
- All clinicians should be aware of the methods for diagnosing shoulder dystocia and the techniques required to facilitate birth
- Clinicians should be aware of existing risk factors but must always be alert to the possibility of shoulder dystocia with any birth
- Simulation training with models is recommended for all midwives and obstetric staff on a regular basis given the rarity of this event.

6. Antenatal considerations

- Induction of labour at term can reduce the incidence of shoulder dystocia in women with gestational diabetes.
- Elective caesarean section should be considered to reduce the potential morbidity for pregnancies complicated by pre-existing or gestational diabetes, regardless of treatment, with an estimated fetal weight of greater than 4.5 kg.
- For suspected macrosomia in pregnancies not complicated by diabetes, please refer to the Te Toka Tumai document “Induction of Labour – Clinical Guidance” and the RANZCOG Clinical Guidance Statement “Diagnosis and management of suspected fetal macrosomia”

7. Intrapartum: high risk cases

If shoulder dystocia is anticipated, then pre-emptive preparation may help:

- An obstetric SMO (Senior Medical Officer) should be in the labour and birthing suite or operating room for the second stage.
- All practitioners attending births must be conversant with the techniques required to facilitate births complicated by shoulder dystocia.

8. Recognition / diagnosis

Timely management of shoulder dystocia requires prompt recognition:

- Prolonged second stage
- Difficulty with birth of the face and chin/head ‘bobbing’
- Failure of restitution of the head
- The head remains tightly applied to the vulva and may even retract (“turtle-neck”) sign
- Failure of the shoulders to birth with normal traction

9. Management of shoulder dystocia

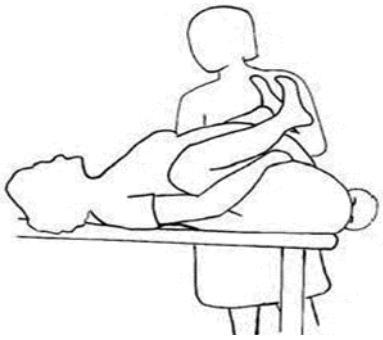
9.1 Call for help

- Push emergency bell
- Call an obstetric emergency
- Call a neonatal code blue

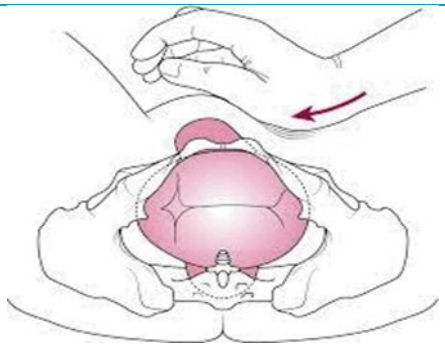
9.2 External manoeuvres

- Do not apply more than usual traction, stop and use additional manoeuvres
- Try successive manoeuvres, each for no more than 30 seconds
- The order of manoeuvres is not as important as the above advice.

9.2.1 McRoberts Position

Action	
Bed flat, flex the woman's thighs onto abdomen. This increases the effective diameter of the pelvis and may achieve birth. **DO NOT APPLY EXCESSIVE TRACTION TO THE FETAL HEAD**	

9.2.2 Suprapubic Pressure

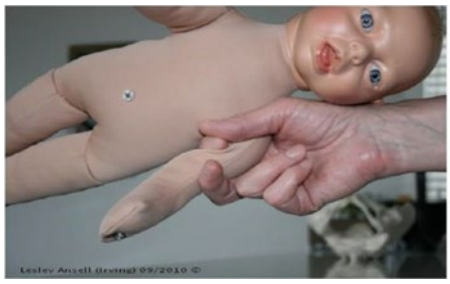
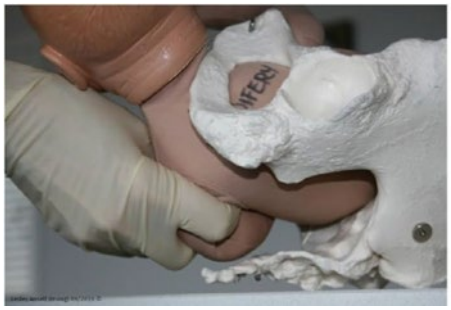
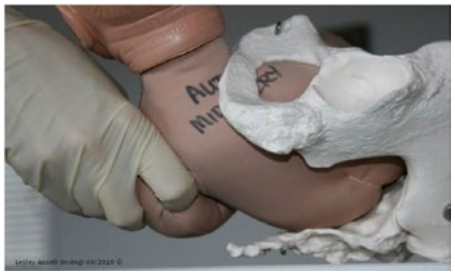
Action	
• Determine the side of the fetal back • Place hands in the 'CPR' position • Continuous or rocking pressure to push the anterior shoulder down and forward to displace shoulder from symphysis pubis.	

9.2.3 All Fours Position

Action	
This increases the pelvic diameter and (with gravity) may help dislodge the impaction. It is only practical with a co-operative, non-obese mother without an epidural.	

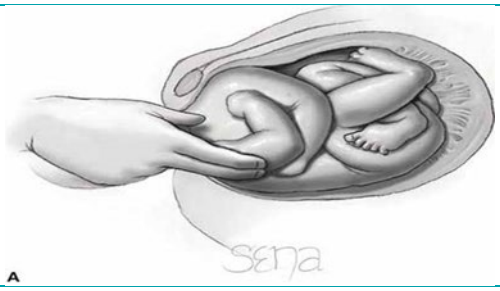
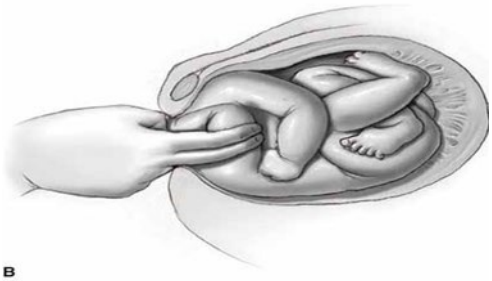
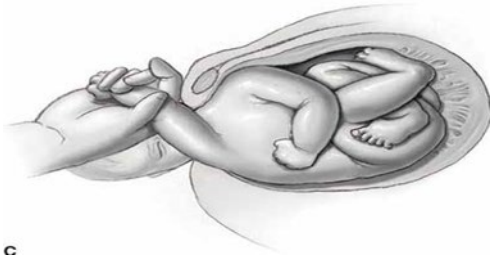
9.3 Internal manoeuvres

9.3.1 Axillary Traction (the Ansell maneouvre)

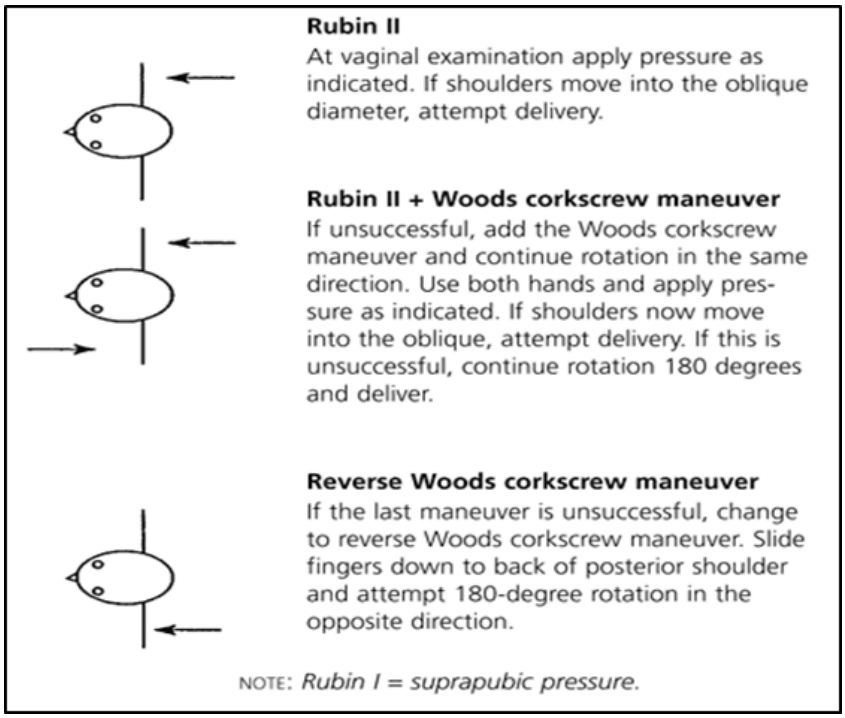
Step	Action	
1.	**Enter posteriorly** Slide hand along fetal head to neck	
2.	**Grasp** posterior shoulder	
3.	**Grasp**: Circle first finger and thumb around axilla 2nd finger placed on top of arm - keep arm firmly against chest and apply traction through axilla **only**	
4.	Apply **axillary traction** to follow the curve of the sacrum. Traction may need to be **very** significant	
5.	Anterior shoulder 'PIVOTS' around symphysis – posterior shoulder delivered first	

(photographs used with permission of the Author)

9.3.2 Delivery of Posterior Arm

Step	Action	
1.	Insert fingers posteriorly.	 A
2.	Slide hand along fetal arm and bend it at the elbow.	 B
3.	Sweep arm across chest, grasp wrist and pull arm out.	 C

9.3.3 Internal Rotation



9.4 Other manoeuvres

9.4.1 Cleidotomy

- Apply upward pressure with finger onto baby's clavicle to cause a fracture and reduce bisacromial diameter

9.4.2 Symphysiotomy

- Local anaesthetic injected over symphysis
- Insert a Foley catheter
- Vaginal hand displaces urethra laterally
- Skin incision down to symphysis
- Scalpel blade to cut ligaments
- Assistant should support the pelvis on either side to prevent excessive traction
- Symphysis will then spread, allowing delivery.

9.4.3 Zavanelli Manoeuvre

- Cephalic replacement followed by emergency caesarean delivery
- Flex fetal head to replace
- Acute tocolysis will be required

10. Postpartum care

- Active management of 3rd stage
- Accurate and comprehensive documentation using the shoulder dystocia proforma.
- Document in Healthware.
- Debrief:
  - Parents – as soon as possible after the birth with an explanation of the birth and prior to discharge home and document discussion
  - Staff members involved as soon as convenient, ideally before the end of the shift (see 'Staff support after critical events' page on Hippo for information and guidance on defusing).

11. Management of subsequent pregnancies

Referral for obstetric review should be advised in subsequent pregnancies for all women who have experienced shoulder dystocia to discuss/plan management of the birth.

Either caesarean section or vaginal delivery can be appropriate after a previous shoulder dystocia. The decision should be made jointly by the woman and her carers.

12. Supporting evidence

- The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. (2021). Diagnosis and management of suspected fetal macrosomia. https://ranzcog.edu.au/wp-content/uploads/2022/05/Diagnosis-and-management-of-suspected-fetal-macrosomia.pdf

13. Associated documents

- Induction of Labour – Clinical Guidance

- Intrapartum Care – Physiological Labour & Birth
- Perineal Tears – Third and Fourth Degree
- Postpartum Haemorrhage (PPH) – Prevention and Management
- Resuscitation of Newborns (Starship Clinical Guideline portal)

14. Disclaimer

No guideline can cover all variations required for specific circumstances. It is the responsibility of the health care practitioners using this Te Toka Tumai Auckland guideline to adapt it for safe use within their own institution, recognise the need for specialist help, and call for it without delay, when an individual patient falls outside of the boundaries of this guideline.

15. Corrections and amendments

The next scheduled review of this document is as per the document classification table (page 1). However, if the reader notices any errors or believes that the document should be reviewed ***before*** the scheduled date, they should contact the owner or Document Control without delay.