Brighton and Sussex University Hospitals NHS Trust

Shoulder Dystocia

Maternity Protocol: MP048
Date agreed: August 2014

Update process

Prior to the review of this guideline a structured search and appraisal of the evidence was undertaken by the lead author (TK) with the library services in the Trust (in May 2014, available on request). The most recent national guidance from the RCOG is still current at the time of this update and no additional evidence was found that added to the recommendations in this document.

Guideline Reviewer:	Tony Kelly
Manager responsible:	Heather Brown
Version:	3
Approval Committee:	Women's Safety and Quality Committee
Date agreed:	August 2014
Review date:	August 2017
Cross reference:	**MP035** Care of Women in Labour **MP066** Neonatal Resuscitation (term and pre-term) **MP069** Care of the Newborn Immediately after Birth

Contents

Key Principles

A protocol is a set of measurable, objective standards to determine a course of action. Professional judgement may be used in the application of a protocol

Scope

♦This protocol applies to:
- Obstetric Emergency Shoulder Dystocia.

Responsibilities

- Midwives & Obstetricians:
  - To access, read, understand and follow this guidance
  - To use their professional judgement in application of this protocol

- Management:
  - To ensure the protocol is reviewed as required in line with Trust and National recommendations
  - To ensure the protocol is accessible to all relevant staff

1.0 Shoulder Dystocia

1.1 Definition

Shoulder dystocia is defined as a delivery that requires additional obstetric manoeuvres to release the shoulders after gentle downward traction has failed.
Shoulder dystocia occurs when either the anterior or, less commonly, the posterior fetal shoulder impacts on the maternal symphysis or sacral promontory.
This is often an unpredictable event and an obstetric emergency.

1.2 Identification of risk factors associated with Shoulder dystocia

A risk assessment should be undertaken at booking, throughout pregnancy, at the onset of labour and during labour. If any of the following risk factors are identified then they should be documented and a referral made to an obstetrician. An individual plan of care should be agreed and document in the maternal notes.

1.2.1 Previous shoulder dystocia
1.2.2 Macrosomia
1.2.3 Maternal diabetes - IDDM & Gestational
1.2.4 Maternal BMI > 30
1.2.5 Induction of labour
1.2.6 Prolonged labour
1.2.7 Prolonged second stage
1.2.8 Oxytocin augmentation
1.2.9 Assisted vaginal delivery

2.0 Prevention

2.1 There is no evidence to support early induction of labour or elective caesarean section to prevent shoulder dystocia for suspected macrosomia in non-diabetic women.

2.2 Induction of labour from 38 weeks may reduce the incidence of shoulder dystocia in pregnancies complicated by gestational diabetes.

2.3 Caesarean section should be considered for suspected macrosomia in pregnancies associated with maternal diabetes mellitus (where EFW is greater than 4.5kg).

2.4 Caesarean section or vaginal delivery is appropriate after a previous shoulder dystocia. An informed choice should be made by the woman and documented in the maternity notes (recurrence rates are between 1-25%)

3.0 Diagnosis:

3.1 Gentle traction in an axial direction may be employed to diagnose shoulder dystocia.

3.2 Other features suggesting shoulder dystocia:

3.1.1 difficulty delivering the face and chin
3.1.2 head remains tightly applied to vulva or even retracts
3.1.3 failure of restitution of fetal head

3.1.4 failure of shoulders to descend

3.3 Lateral and downward traction should be avoided in the management of shoulder dystocia.

4.0 Shoulder Dystocia: Systematic Emergency Management
Shoulder Dystocia should be managed systematically – **see appendix A**

4.1 National guidelines recommend that use of McRoberts Manoeuvre as a prophylactic manoeuvre to attempt to prevent shoulder dystocia is ineffective. It has been noted to be used at the time of instrumental delivery and it use in this setting should be discouraged.

4.2 Immediately after recognition of shoulder dystocia, extra help should be called.
Call 2222 and ask for: 'obstetric & neonatal emergency' teams. Ensure a resuscitaire is in the room - checked and working.

4.3 McRoberts' manoeuvre is the single most effective intervention and should be performed first.
Place woman in supine position, hips hyperflexed and abducted. (its effectiveness is improved with the use of suprapubic pressure (see below)).

4.4 Suprapubic pressure. Suprapubic pressure is applied in a downward and lateral direction to push the posterior aspect of the anterior shoulder towards the fetal chest. It is advised that this is applied for 30 seconds. Operator should not apply excessive traction and should avoid excessive lateral flexion to head.

4.5 The woman should be encouraged NOT to push whilst maneuvers are being performed and fundal pressure is not recommended

4.6 The sequential use of McRoberts' manoeuvre followed by the use of suprapubic pressure is associated with increased success in cases of should dystocia compared to the use of the individual manoeuvres.

4.7 Episiotomy is not necessary for all cases. The role of an episiotomy in cases of shoulder dystocia is to allow access of the operators hand into the vagina. It does not itself provide additional room for delivery of the baby.

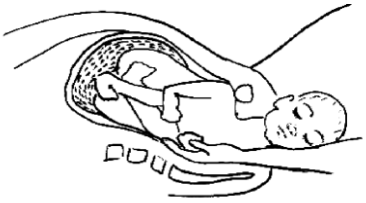
4.8 There is no advantage between delivery of the posterior arm and internal rotation manoeuvres and therefore clinical judgement and experience can be used to decide their order.

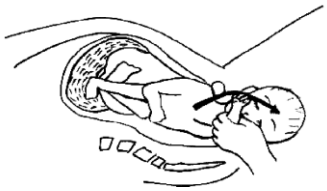
4.9 The majority of cases of shoulder dystocia cases resolve with external manoeuvres alone (70-80% according to local and national data)

4.10 Internal manoeuvres:

4.8.1 Delivery of the fetal shoulders may be facilitated by rotation into an oblique diameter or by a full 180-degree rotation of the fetal trunk.

4.8.2 Pass hand into sacral hollow to identify posterior humerus. This is followed until elbow reached: this is then flexed. Forearm brought into reach and grasp wrist. Traction on wrist will deliver arm over fetal chest. The arm can be used to rotate the fetal trunk to facilitate delivery.





4.11 Persistent failure of first- and second-line manoeuvres

The following have been described for those cases resistant to all simple measures:

4.9.1 cleidotomy (bending the clavicle with a finger or surgical division)

4.9.2 symphysiotomy (dividing the symphyseal ligament)

4.9.3 the Zavanelli manoeuvre

4.12 It is rare that these are required. These interventions should only be considered if the practitioners are appropriately trained. It is likely that the baby may have sustained significant hypoxic injury by the time these are considered and the effect on the mothers wellbeing are significant.

5.0 Documentation

5.1 Standards of record keeping:

The lead clinician for the management of the shoulder dystocia should complete the shoulder dystocia proforma and secure in the maternal notes. This page contains the RCOG minimum dataset and acts as the reporting form which will provide basis for review and audit of management and includes:

5.1.1 the time of delivery of the head

5.1.2 the direction the head is facing after restitution

5.1.3 the manoeuvres performed, their timing and sequence

5.1.4 the time of delivery of the body

5.1.5 the staff in attendance and the time they arrived

5.1.6 the condition of the baby (Apgar score)

5.1.7 umbilical cord blood acid-base measurements

5.2 The shoulder dystocia must be reported through the Datix risk management system and include any injury to the woman or child as a result of the incident.

5.3 Audit information from the Trust over the last 4 years has shown poor levels of documentation. There is a consistent lack of information recorded regarding the direction

the head is facing at the time of the delivery. This information is key to determine which was the anterior shoulder at the time of the delivery.

6.0 Post Delivery Care

6.1 There is an increased risk of post partum haemorrhage (greater than 1 in 10 cases) and there should be a low threshold for the use of intravenous syntocinon infusions in these cases.

6.2 The likelihood of significant vaginal tears is also increased (up to 1 in 25 cases complicated by 3rd or 4th degree tears) and hence careful vaginal examination after delivery to exclude trauma is required

6.3 Actions in the case of any suspected / confirmed injury following shoulder dystocia:

6.3.1 Routine first check of the neonate should be performed in line with normal practice (within 4 hours of birth – see Maternity protocol MP069: Care of the Newborn immediately after birth)

6.3.2 Documentation of any findings, including an suspected or confirmed injuries by the examining midwife

6.3.3 The examining midwife to refer to the Neonatal team to review the baby (timing of the review will depend on clinical condition and suspected/confirmed injury)

6.3.4 Full neonatal examination by neonatologist/ANNP following delivery within 24hours

6.3.5 Discussion with parents and individualised care plan to be made and documented in the neonatal notes following review

6.3.6 The clinicians who refers or examines a baby with suspected or actual injury should complete a DATIX report as soon as possible

6.3.7 Any baby with a suspected/actual injury should have the baby record photocopied prior to discharge and the photocopy given to the mother to take home. The retained baby record should then be made up into proper baby notes and subsequently be sent for coding.

6.4 Follow up process for suspected / actual brachial plexus injuries or any other injury associated with the complications of delivery:

6.4.1 Review/referral as above

6.4.2 Chest x-ray may be indicated if clavicular fracture is suspected. This should be ordered and arranged by the examining neonatologist/ANNP and documented in the neonatal notes.

6.4.3 A follow appointment may be indicated (as per individualised care plan) – to be organised by the neonatologist/ANNP performing the examination. Any appointments should be discussed with parents and documented in the neonatal notes (see 6.3.7 regarding notes and photocopying prior to discharge)

7.0 Training

7.1 It is the responsibility of all practitioners to maintain their skills in dealing with shoulder dystocia. There is good evidence that appropriately trained practitioners and teams deliver babies quicker and with fewer complications.

7.2 Please refer to the Training Needs Analysis document for details on staff training in relation to this protocol.

7.3 Effective training of all staff who may be involved in the birth of women whose labour are complicated by shoulder dystocia is associated with a reduction in maternal and neonatal morbidity.

8.0 References

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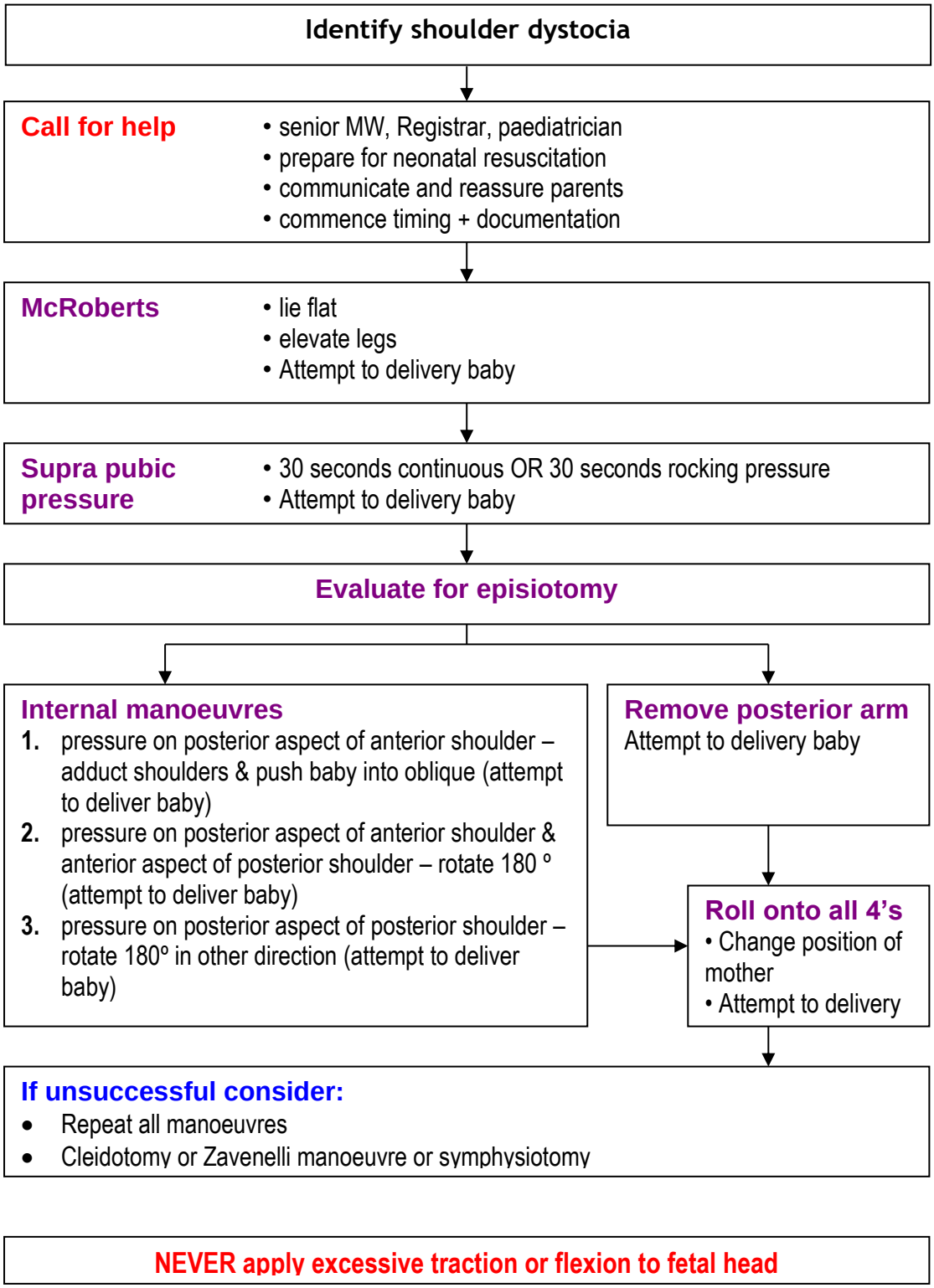
Appendix A: Shoulder Dystocia Flowchart

The order in which these manoeuvres are done depends on the individual case & clinical judgement, however McRoberts and Suprapubic pressure are recommended as first line management



Appendix B - Other helpful Training aids:

"HELPERR" acronym

H	Call for **help**
E	Evaluate for **episiotomy**
L	**Legs** (McRobert's manoeuvre)
P	Suprapubic **pressure**
E	**Enter** the vagina
R	**Remove** posterior arm
R	**Rollover** to all fours and repeat if unsuccessful

Appendix C - Shoulder Dystocia Proforma (taken from the approved proof of the new labour notes 2013)

Name: Hospital No: NHS No:

Shoulder Dystocia

Date:		**Time:**		Addressograph or Complete:
Person completing form:	*PRINT NAME:*			Mothers Name:
Designation:				DOB:
Signature:				Hospital ID:
Emergency declared by:	**Time called for help:**	**Time 2222 call made:**		Consultant:

Staff present at delivery of head		**Additional staff attending for delivery of shoulders**			
Name	**Role**	**Name**	**Role**	**Time arrived**	
			Registrar		
			Senior MW		
				Called	**Arrived**
			Cons Obs		
			Neonatologist		
If **Neonatologist** not called, or didn't arrive, please give reason:					

Procedures used to assist delivery	**By whom**	**Time**	**Order**	**Detail**	**Reason if not performed**
McRoberts' position					
Suprapubic pressure				From maternal **left / right** *(circle as appropriate)*	
Episiotomy					
Delivery if posterior arm				Enough access / tear present / already performed *(circle as appropriate)*	
Internal rotational manoeuvre				**Left / right** arm *(circle as appropriate)*	
Rubins 2					
Woodscrew manoeuvre					
Reverse woodscrew					
Description of rotation					
All fours					
Description of traction	Routine axial as in normal vaginal delivery	Other:		Reason if not routine axial:	
Other manoeuvres used					

Mode of delivery of head	Spontaneous		Instrumental - vacuum / forceps	
Time of delivery of the head		**Time of delivery of baby**		**Head-to-body delivery interval**
Fetal position during dystocia	Head facing maternal **left** **Left** fetal shoulder anterior		Head facing maternal **right** **Right** fetal shoulder anterior	
Birth Weight:	**Apgars:** 1 min:		5 min:	10 mins:
Cord gases	Art pH:	Art BE:	Venous pH:	Venous BE:
Explanation to parents:	Yes	**By whom:**	**Datix form must be completed:**	*Insert Datix No:* **W**

Baby assessment after birth (may be done by a Midwife):			
Any sign of arm weakness?	Yes	No	**If yes to any of these questions baby must be referred to consultant Neonatologist for review and follow up**
Any sign of potential bone fracture?	Yes	No	
Baby admitted to Neonatal Intensive Care Unit?	Yes	No	
Assessment carried out by:			

Please copy this proforma: 1 x copy to the Clinical Risk Manager, L13, RSCH

Please complete debrief & follow up / Postnatal instructions in main notes

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