Shoulder dystocia

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OBJECTIVES :

- Definition .
- Incidence .
- Consequences .
- Risk factors .
- **Management.**

Definition

- A head-to-body delivery time > 60 seconds due to impaction of the shoulder (anterior)against the symphsis pubis.

  Williams Ob

- Use of any of the obstetric maneuvers to release the shoulder after gentle downward traction has failed.

  RCOG ,2005

- Mean time of N delivery ➔ 24 sec.
- Mean time of delivery with dystocia ➔ 79 sec.

Incidence

- 0.6 – 1.4 % (defenition,population and weight).

Why is it important?

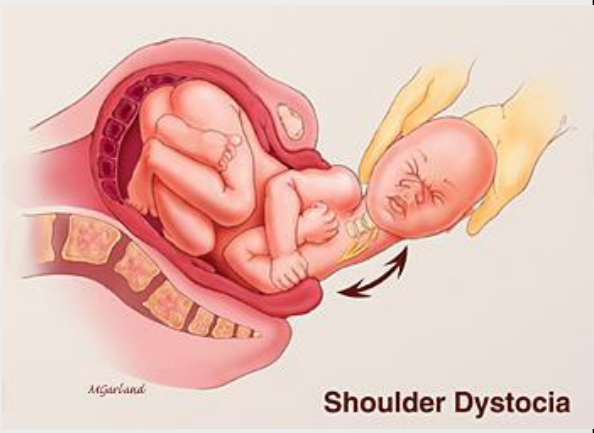
- An obstetric emergency.
- Increased maternal morbidity.
- Increased fetal morbidity & mortality .

Maternal impact :

- PPH ; 11 %
  - atony
  - soft tissue trauma ; 3rd & 4th degree tears 3.8%
- Symphyseal diathesis (rare)
- Uterine rupture (rare)

Fetal impact :

- Fetal injury ;
  - brachial plexus injury 4-16 % .
  - fractures of clavicle and humerus



- Fetal hypoxia ;
  - neurological damage .
  - death .

Brachial plexus injury

4-6 % .

Due to downward traction on the neck .

Most important fetal effect .

Most common cause for litigation in SD .

Independent of operator experience .

GOOD NEWS ➔>80 % of cases have complete resolution by 6-13 months.

Risk Factor :

- Maternal :

previous SD.

Obesity.

Multiparity.

DM.

short stature.

abN pelvic anatomy.

- Fetal :

Macrosomia

postdate.

IUFD

Instrumental delivery

Can it be prevented?

NO *BUT* there is a room

for prediction & anticipation.

Also

- Good glycmic control.
- Control weight gain.
- Identifying risk factors.

>50 % of SD cases occur with average weight

Babies < 4 kg !!!

so always be ready…

unpredictable ..unpreventable

Management :

- ***Prepare :***

- educate/involve the ptn ahead of delivery.
- declutter the room .
- senior person .
- empty the bladder .
- STAY CALM !!!
- HELPERR

HELPERR

for Shoulder Dystocia

H Call for **H**elp!

E **E**valuate for **E**pisiotomy

L **L**egs – McRoberts Maneuver

P Suprapubic **P**ressure

E **E**nter: rotational maneuvers

R **R**emove the posterior arm

R **R**oll the patient to her hands and knees

ALSO

www.aafp.org/also

- Each step ⟶ 30-60 Sec
- For a total ⟶ 3- 5 minutes (All Maneuvers)
- No indication that any of these maneuvers is superior, they represent a valuable tool to help clinicians take effective steps to relieve impacted shoulder (Category C)

ACOG..October 1997

Benefits

1. Increase the size of the bony pelvis
2. Decrease bisacromial diameter
3. Change the relation of bisacromial diameter within the bony pelvis .

How to recognize SD?

- Prolonged 1st & 2nd stage of labor.
- Head bobbing (turtle sign), then retracting back in the birth canal.
- Minimal downward traction does not affect delivery.

Once recognized…

- Do NOT ask the patient to push.
- Do NOT apply fundal pressure. (Grade C)
- Do NOT panic !!

RCOG guidelines..December,2005

Call for help

SD drill..team work.

documentation.

E

Evaluate for

Episiotomy

Not for all cases (Grade B)

Before delivery.

Helps when applying the maneuvers

RCOG guidelines December,2005

L

Legs (*McRobert's*)

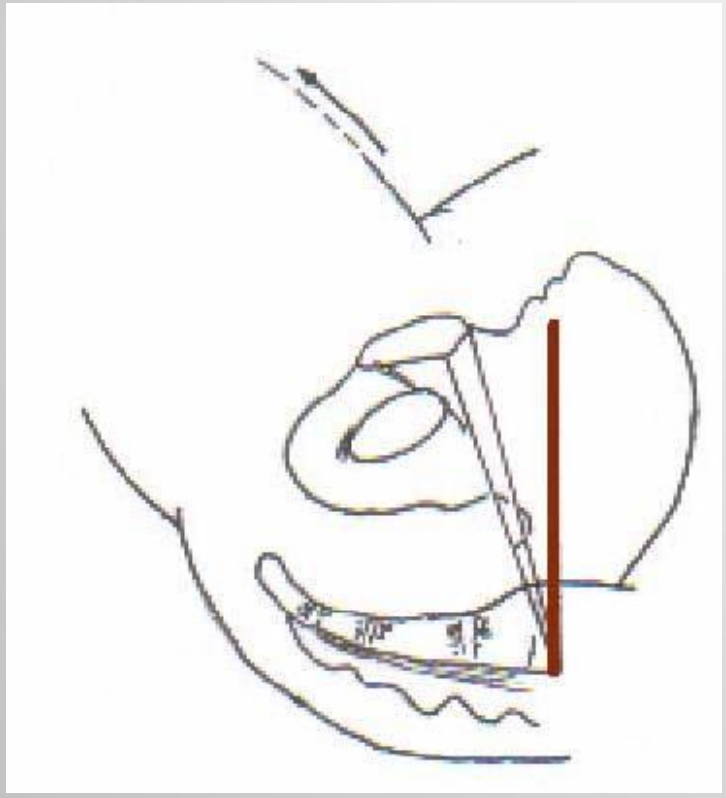
Safe

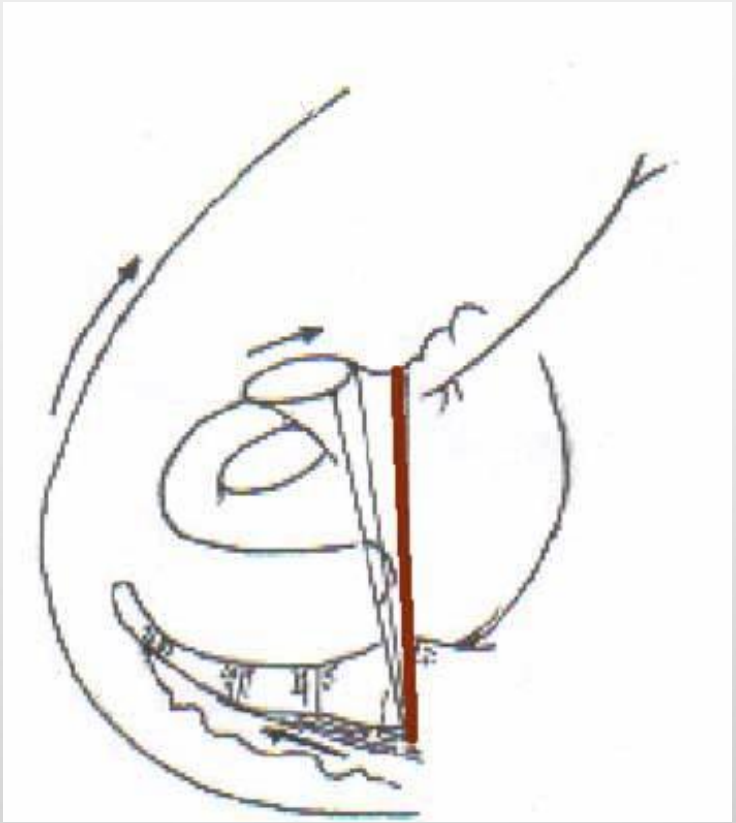
Simple

Effective (used alone resolves 40 % of SD)

•Straighten the sacrum.

•Moves the symphsis pubis toward the maternal head→ frees the impacted shoulder





McRobert's

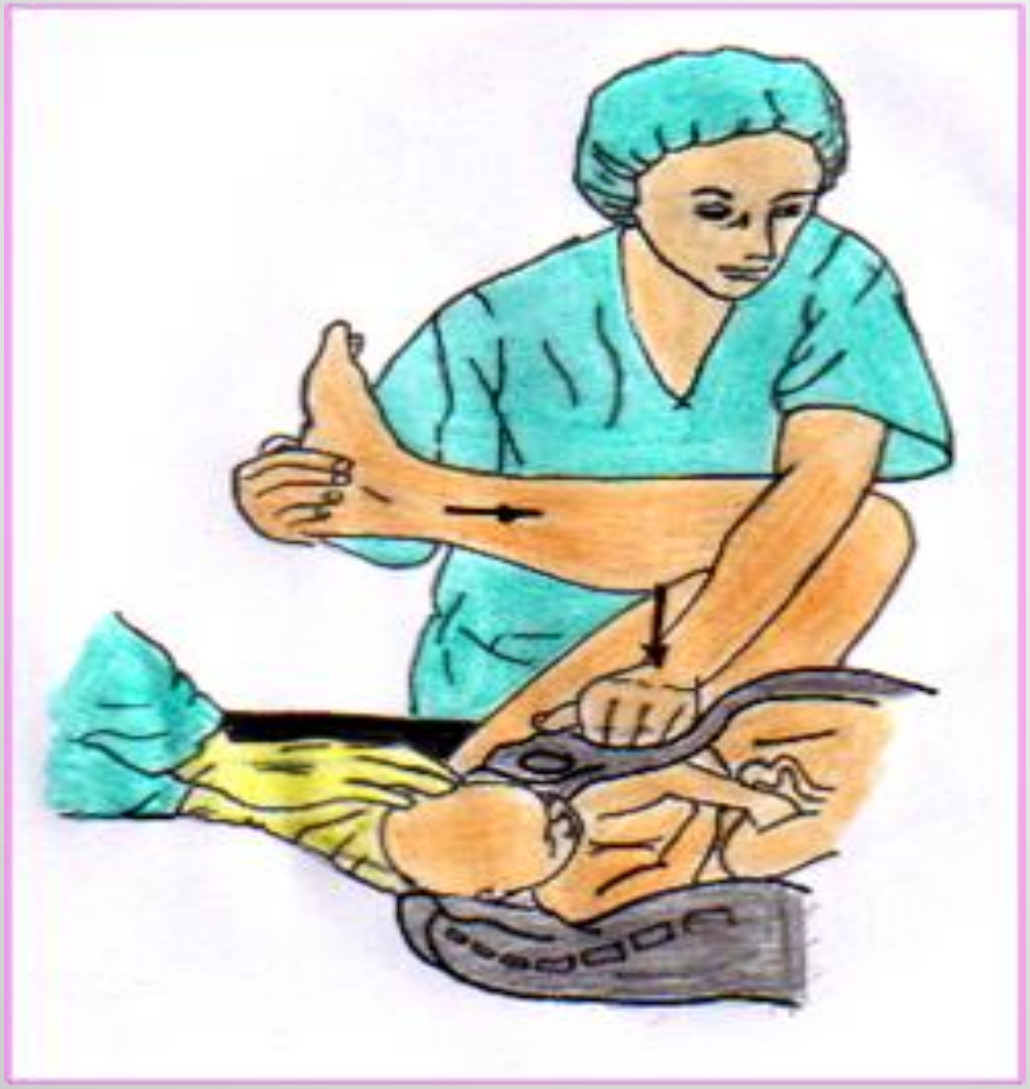
P

Suprapubic Pressure

determine the position of the fetal back

Initially..continuous

Then..in CPR-like rocking motion.



Suprapubic pressure

E

Enter=internal Maneuvers :

- Rubin
- Wood's Screw

Rubin :

- ***Rubin I :***

rocking the fetus shoulder from side to side.

- ***Rubin II :***

reach for the most easily shoulder & push it forward ⟶ decrease the bisacromial diameter .

Rubin II

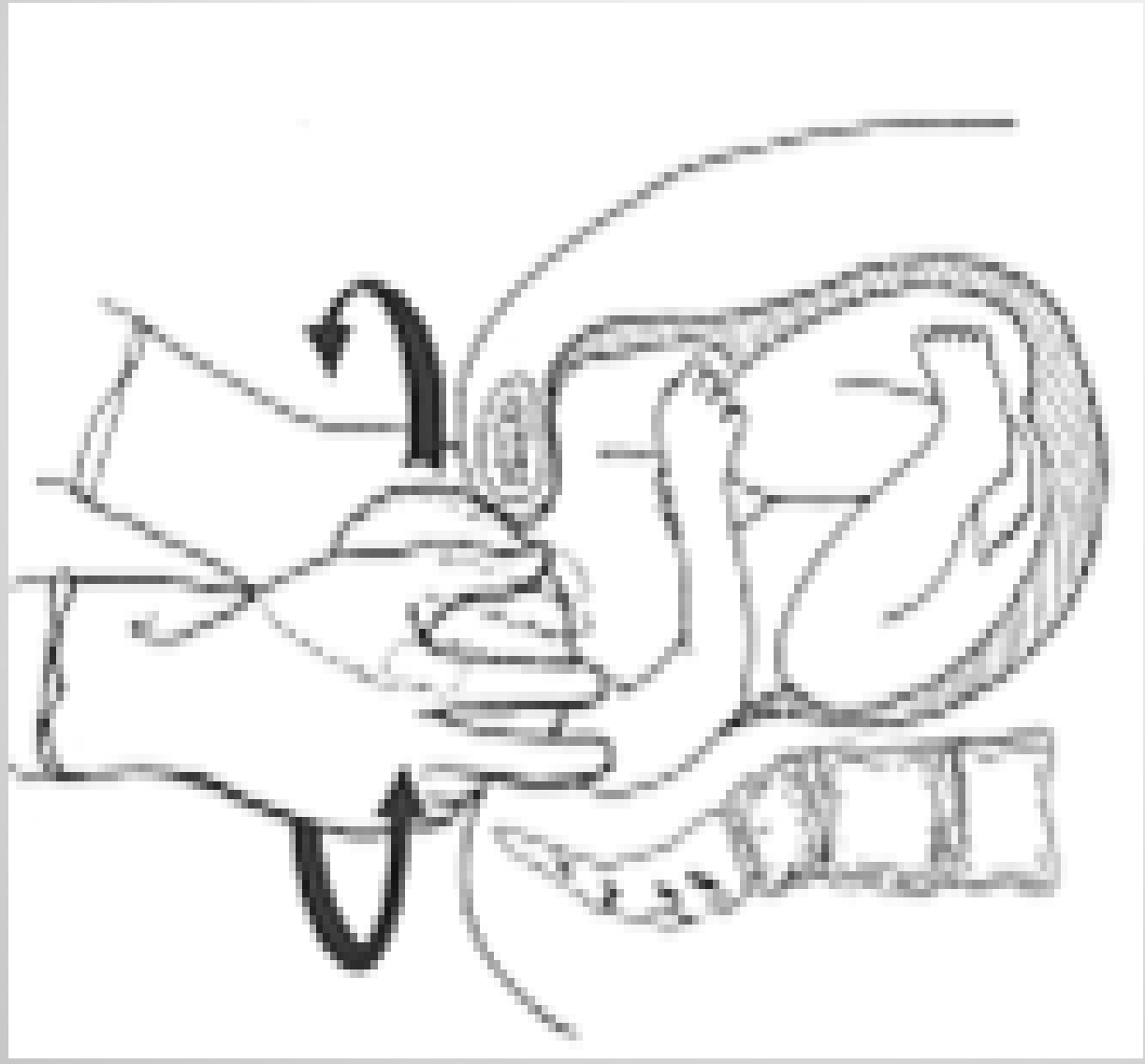
Wood's screw

- Rotate the posterior shoulder 180 degrees

approach

post. Shoulder from front.

ant. Shoulder from behind.



Wood's

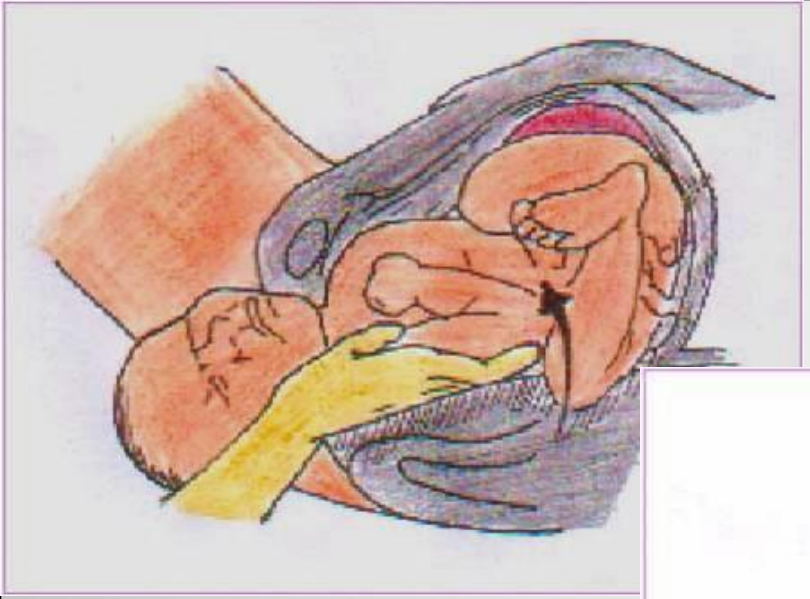
If fails…

- ***Reverse wood's screw***

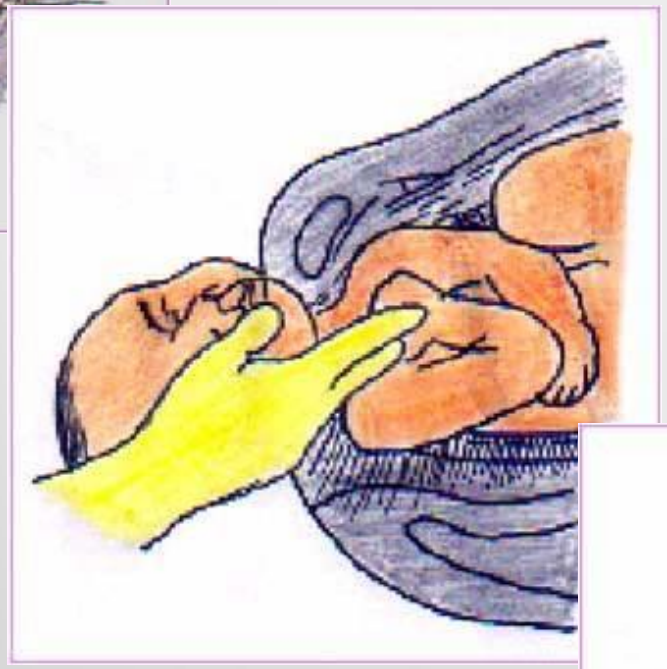
posterior shoulder from behind.

R

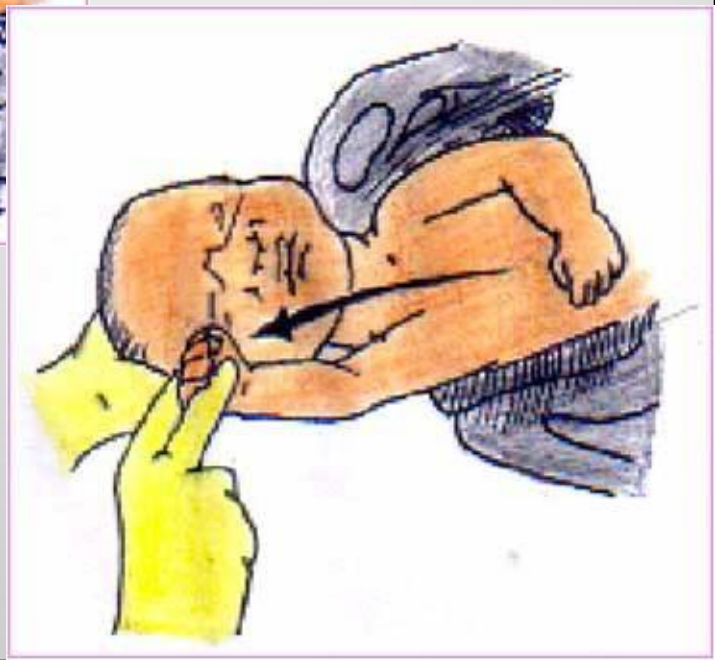
Remove the posterior Arm



Insert a hand in the vagina..flex the elbow



sweep arm over the chest



Deliver the post. arm

Never grasp / pull on the hand →

fractures

R

Roll the patient

- Might be disorienting for the unfamiliar doctor
- Increase the obstetric conjugate by 1.5 cm
- Gravity?? Movement itself??
- Same maneuvers can be applied

All fails!! Last resort;

- Deliberate clavicular fracture.
- Zavenilli maneuver. (tocolysis,replace head->CS)
- Symphysiolotmy. (risk of UT/SP injury)
- Cleidotomy. (with a dead fetus)
- Abdominal surgery + hysterotomy (case reports,same maneuvers)

Take-home messages:

- Always be ready and calm while dealing with SD.
- Know ***your HELPERR***
- Always document (time , manuevers used, duration, involved arm)

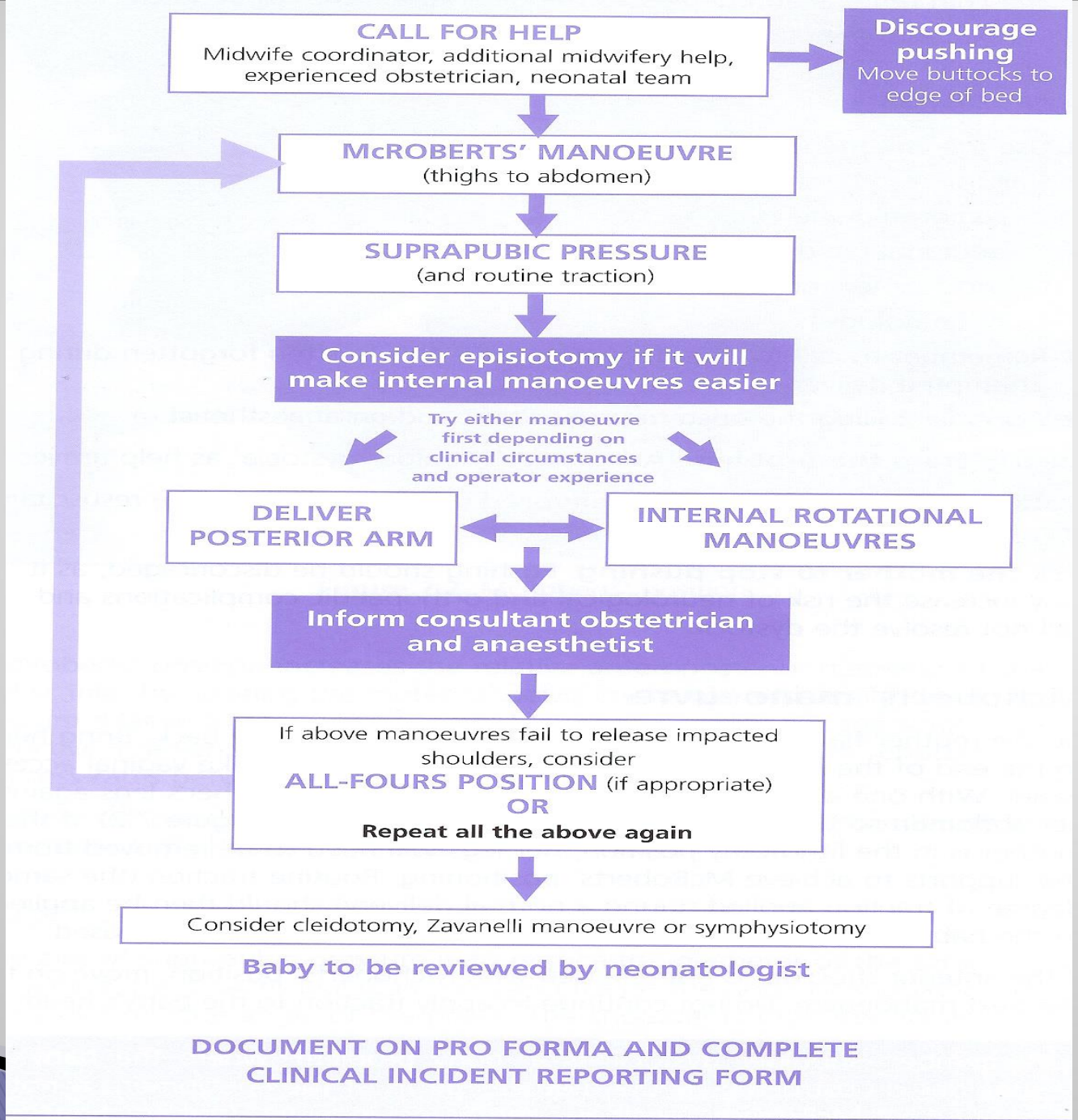


Figure 7.1. Algorithm for the management of shoulder dystocia

Remember: shoulder dystocia is a 'bony problem' where the baby's shoulder is obstructed by the mother's pelvis. If the entrapment is not released by McRoberts' position, another manoeuvre (not traction) is required to free the shoulder and achieve delivery.

Shoulder dystocia is an unpredictable obstetric emergency

Problem	Clearly state the problem
Paediatrician	Immediately call the paediatrician/neonatologist
Pressure	Suprapubic (NOT FUNDAL) pressure
Posterior	Vaginal access gained posteriorly
Pringle®	Get the whole hand in
Pull	Don't keep pulling if a manoeuvre has not worked
Pro forma	Documentation should be clear and concise
Parents	Communication is essential

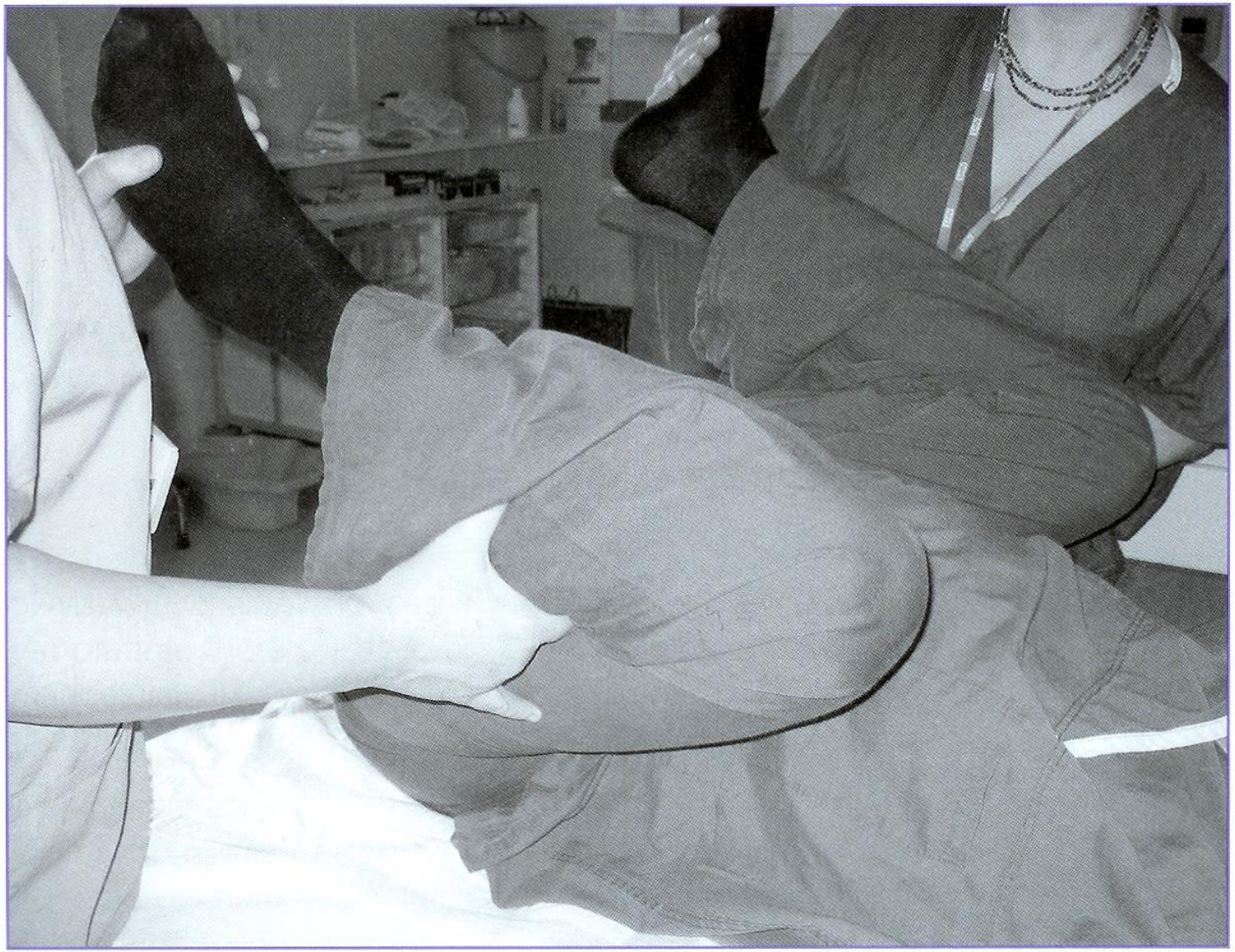
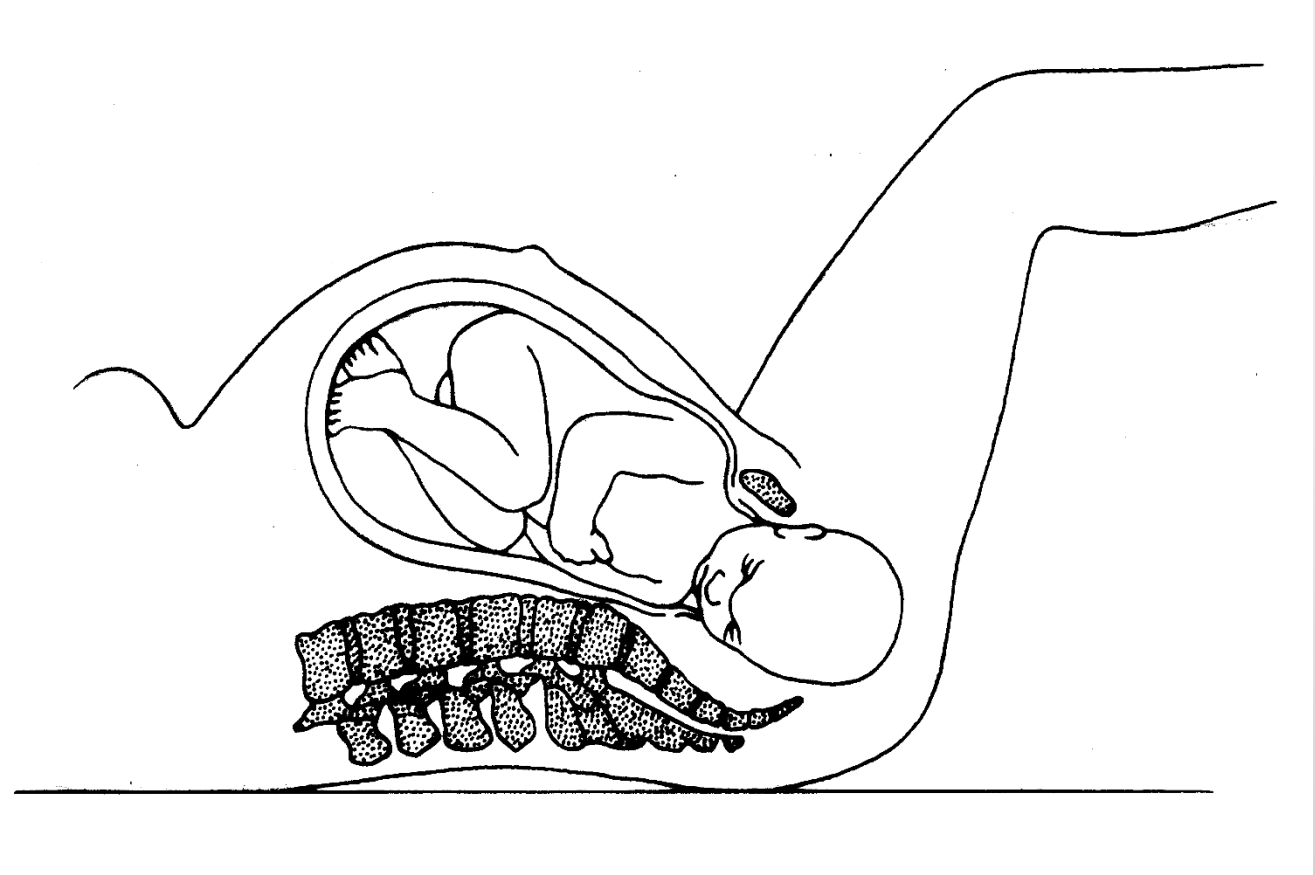


Figure 7.2. McRoberts' position

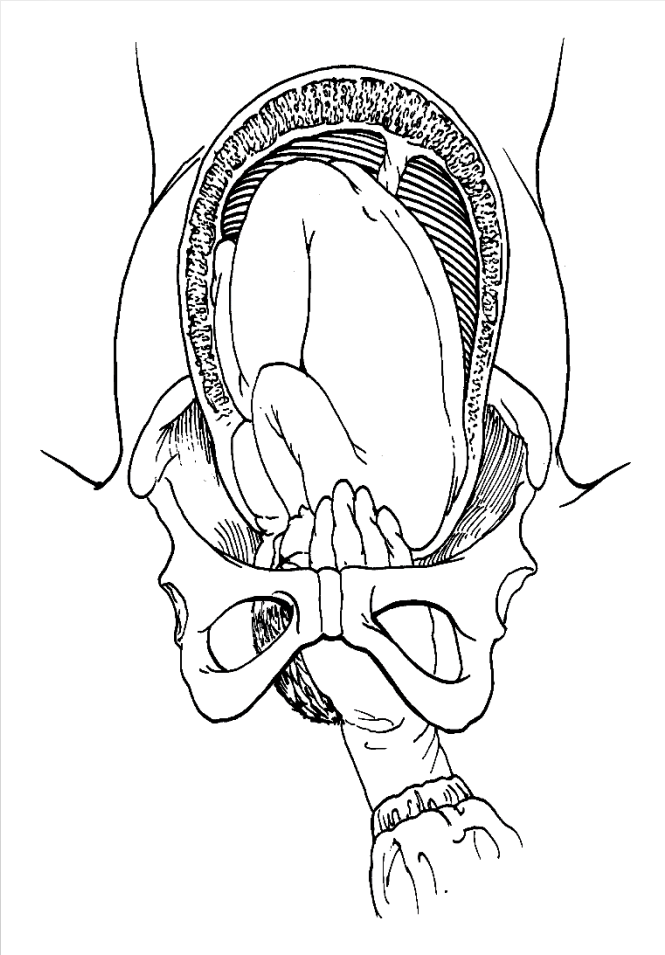
McRobert's Maneuver (Before)

Shoulder Dystocia



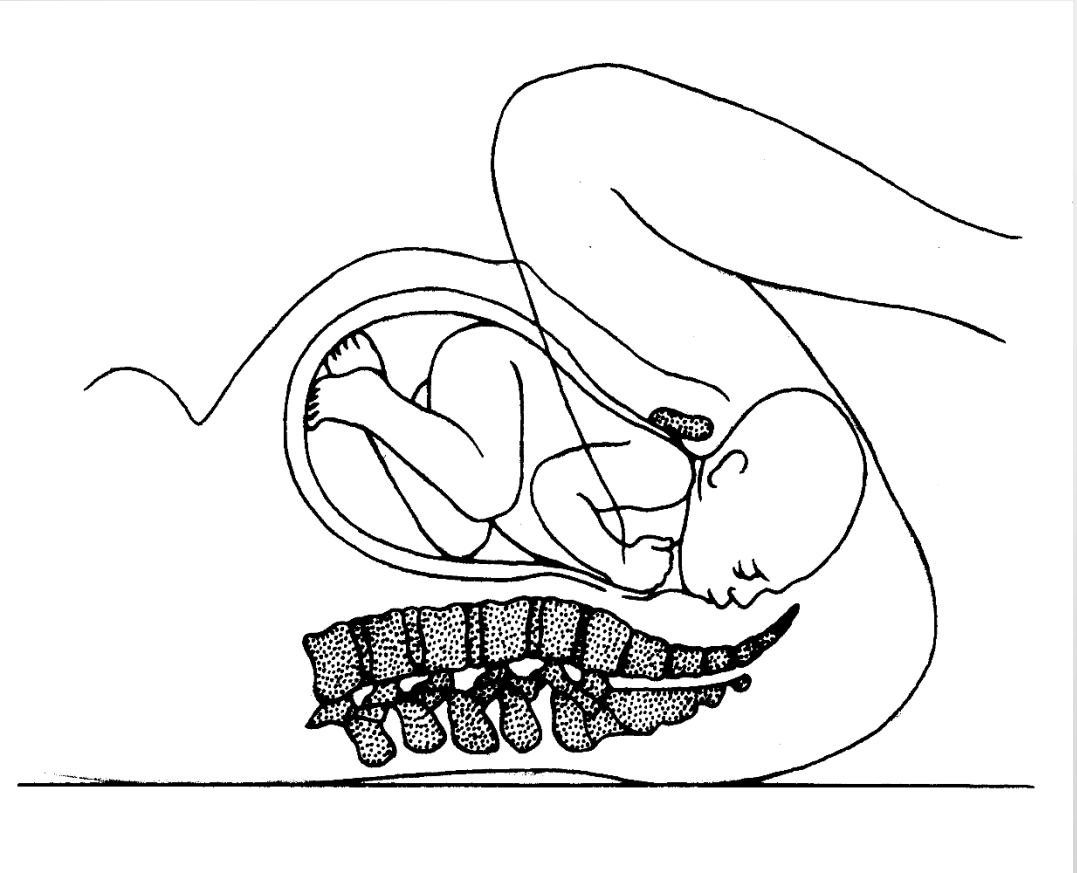
Anterior Rubin's Maneuver

Shoulder Dystocia



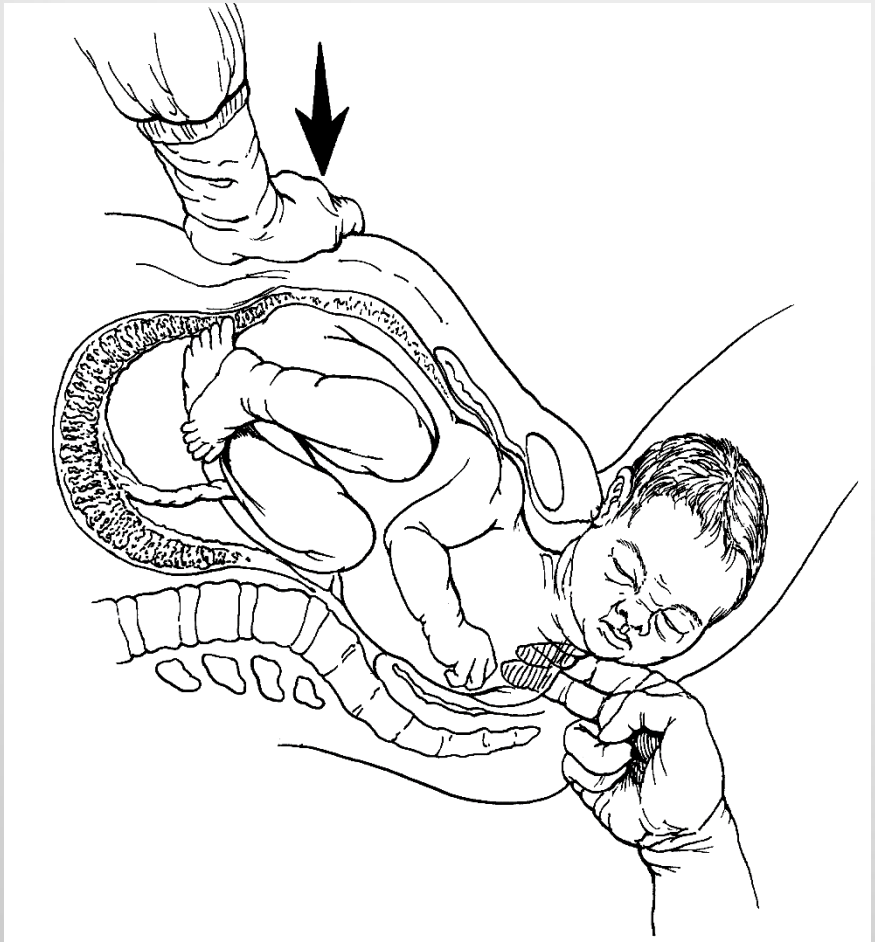
McRobert's Maneuver (After)

Shoulder Dystocia



Avoid Fundal Pressure

Shoulder Dystocia



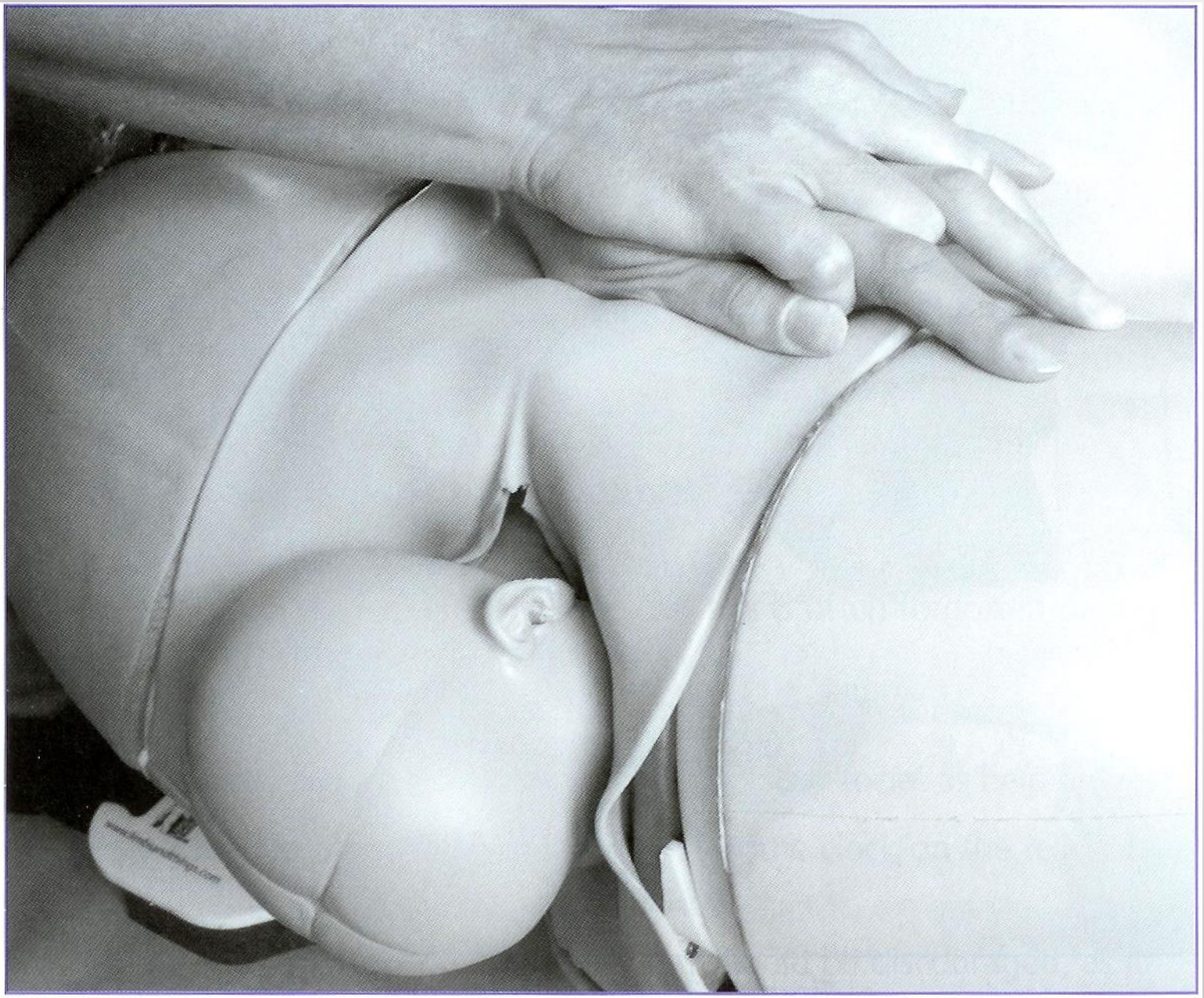
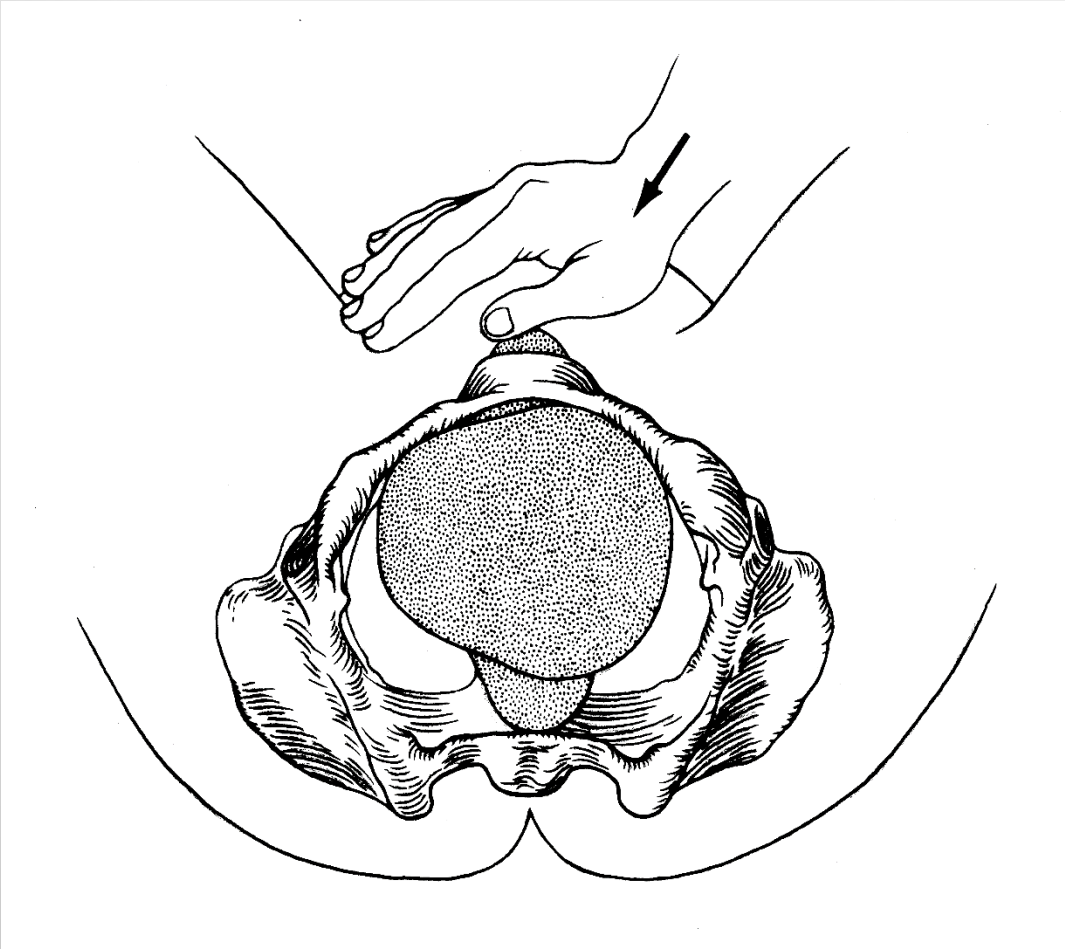


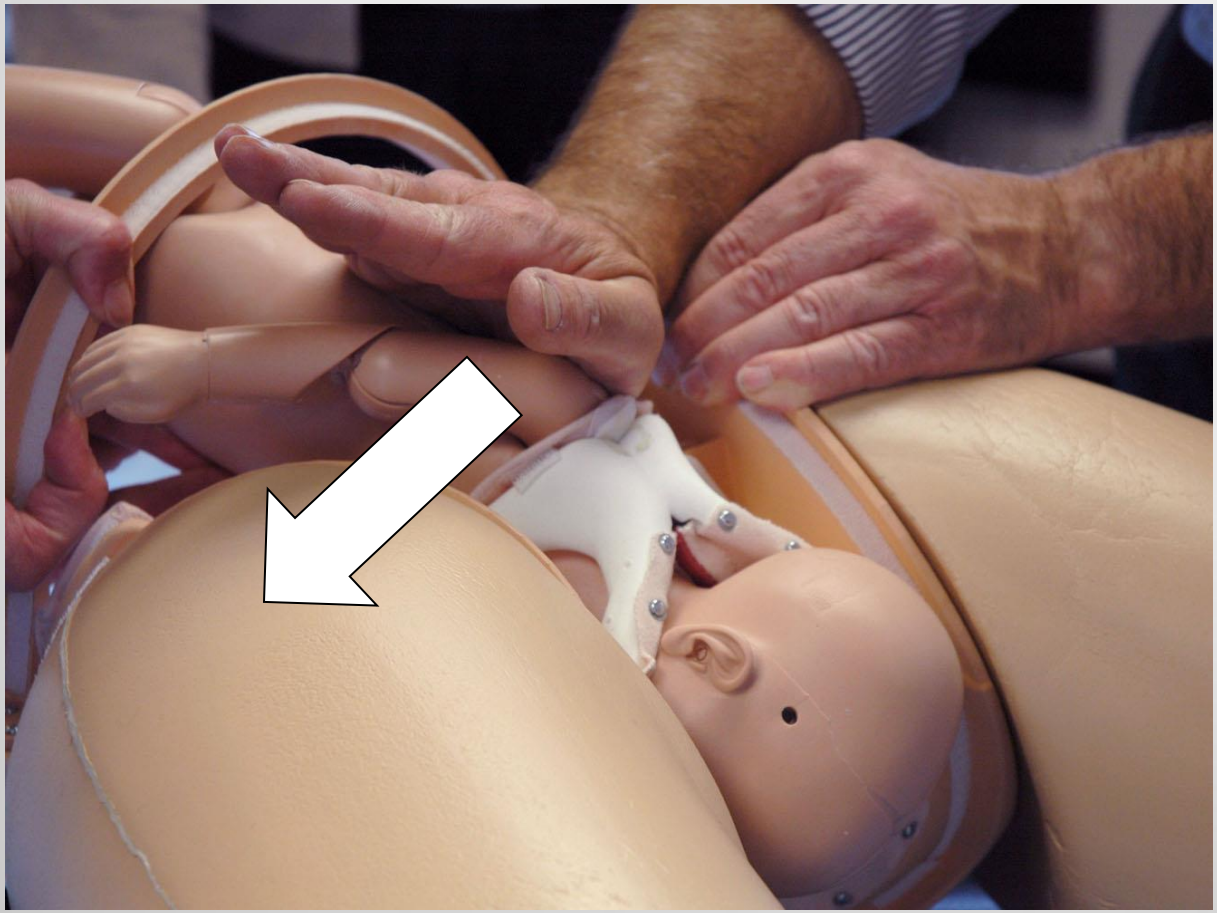
Figure 7.3. Applying suprapubic pressure

Suprapubic Pressure

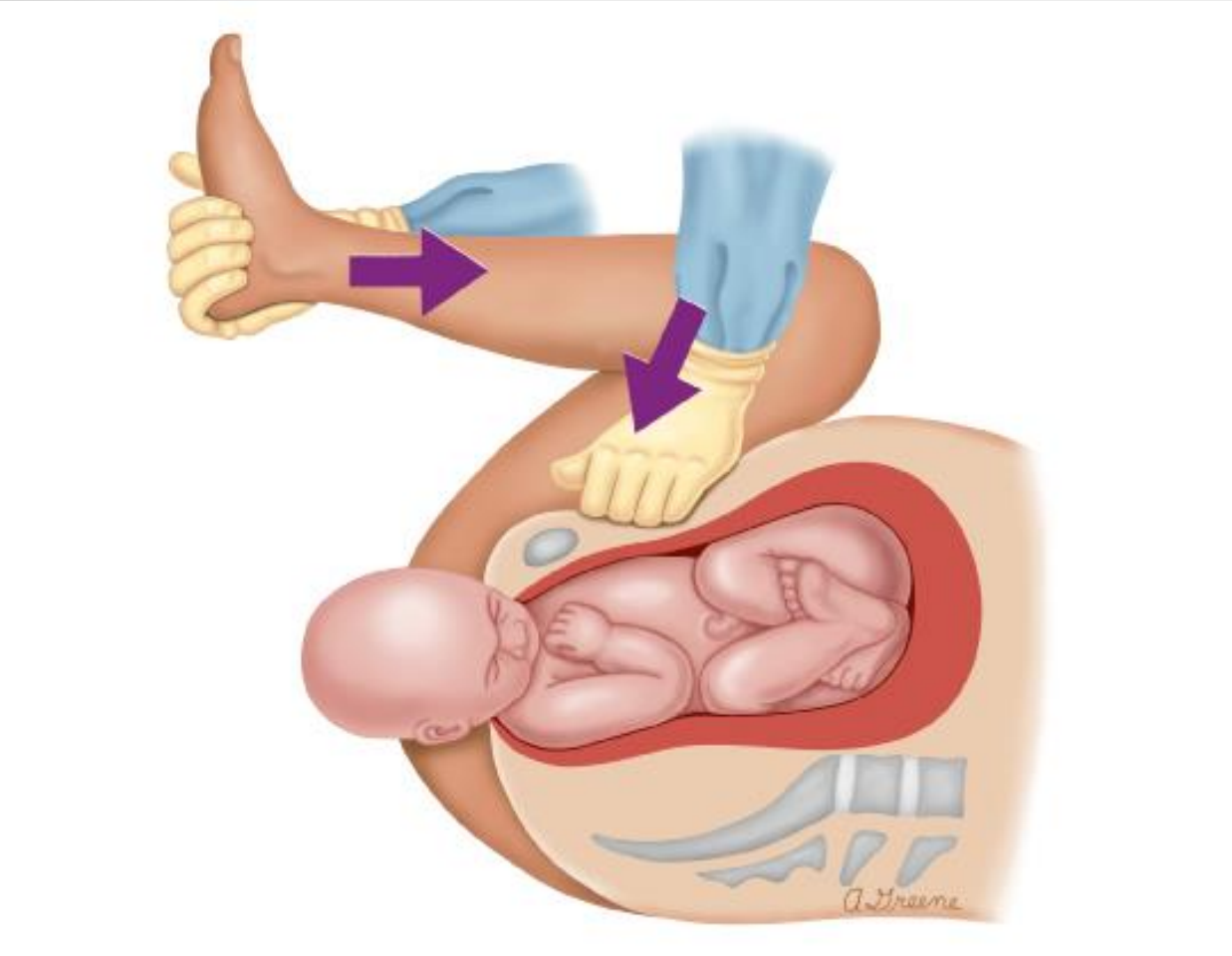
Shoulder Dystocia

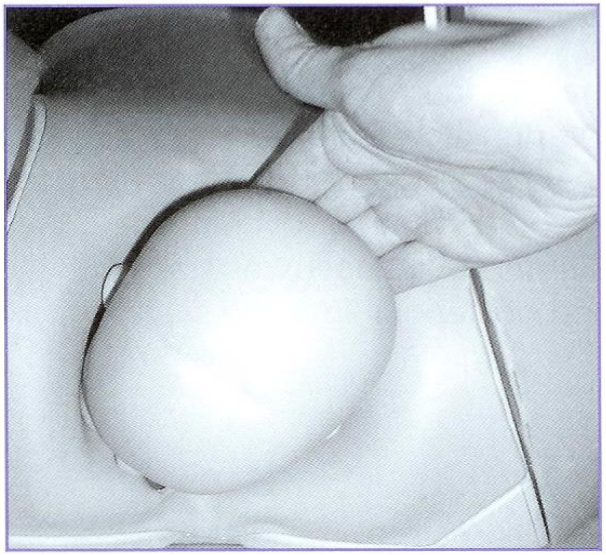


Suprapubic Pressure

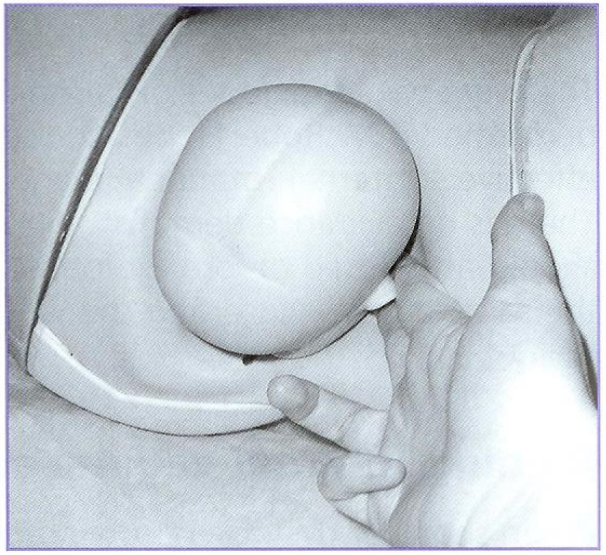


McRoberts maneuver and suprapubic pressure

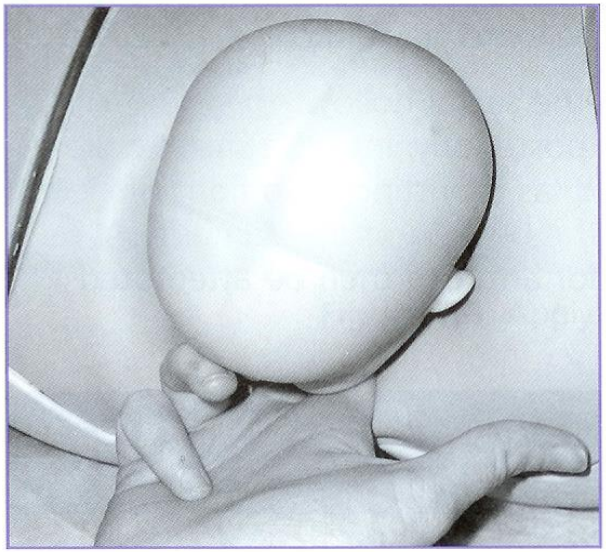




a. Attempting to gain anterior access



b. Attempting to gain lateral access



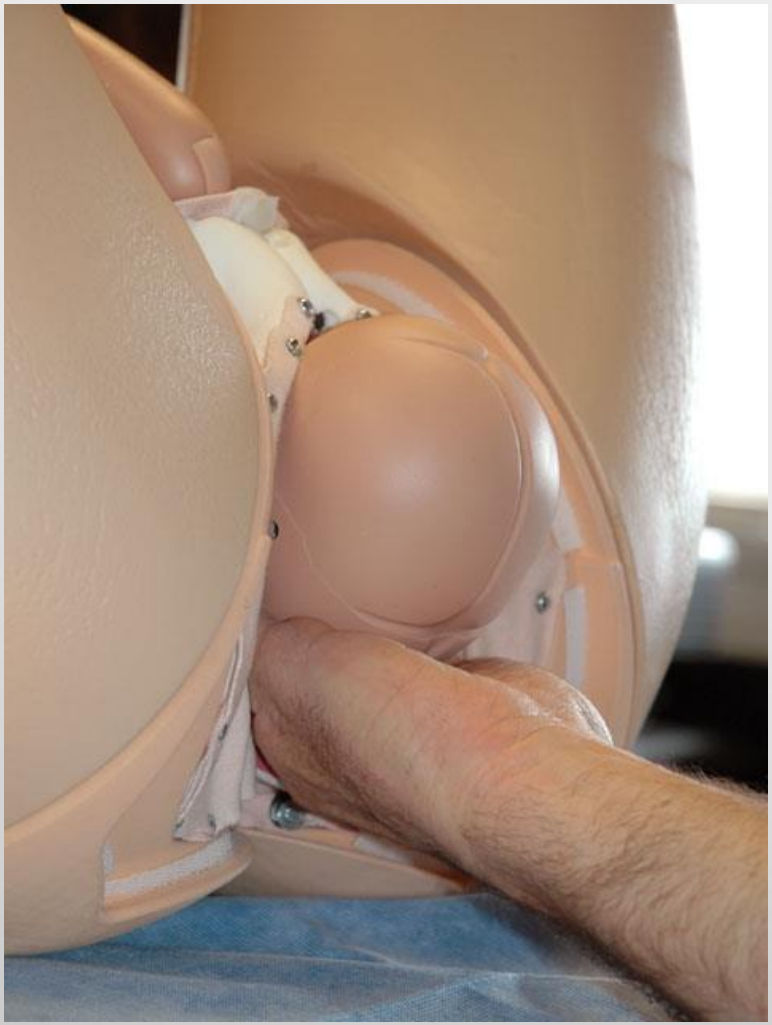
c. Entering the vagina with two fingers as if performing a routine vaginal examination

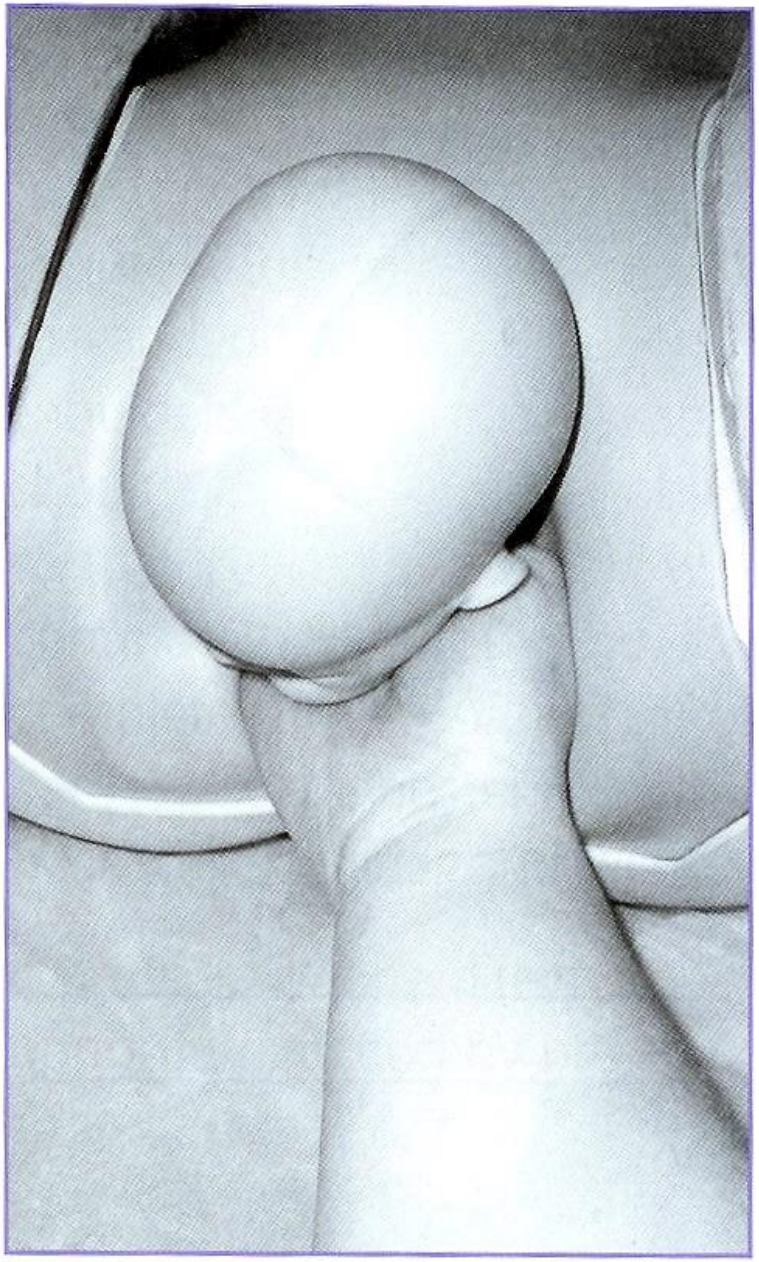
d. Leaving the thumb out of the vagina

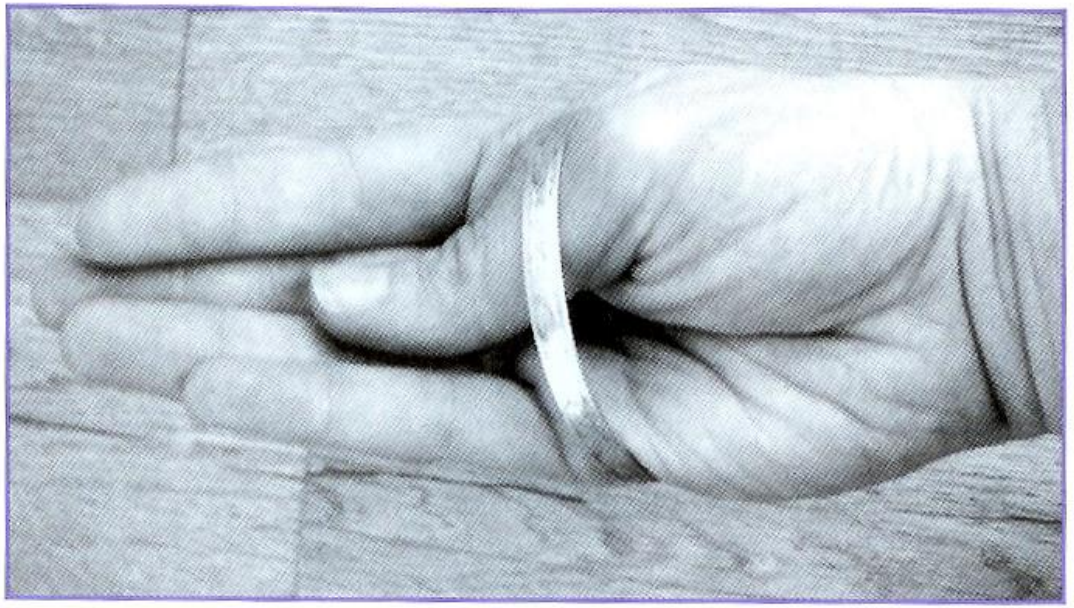
Figure 7.4. Incorrect attempts at gaining vaginal access

Move Thumb to Palm of Hand Prior to Vaginal Insertion

Shoulder Dystocia







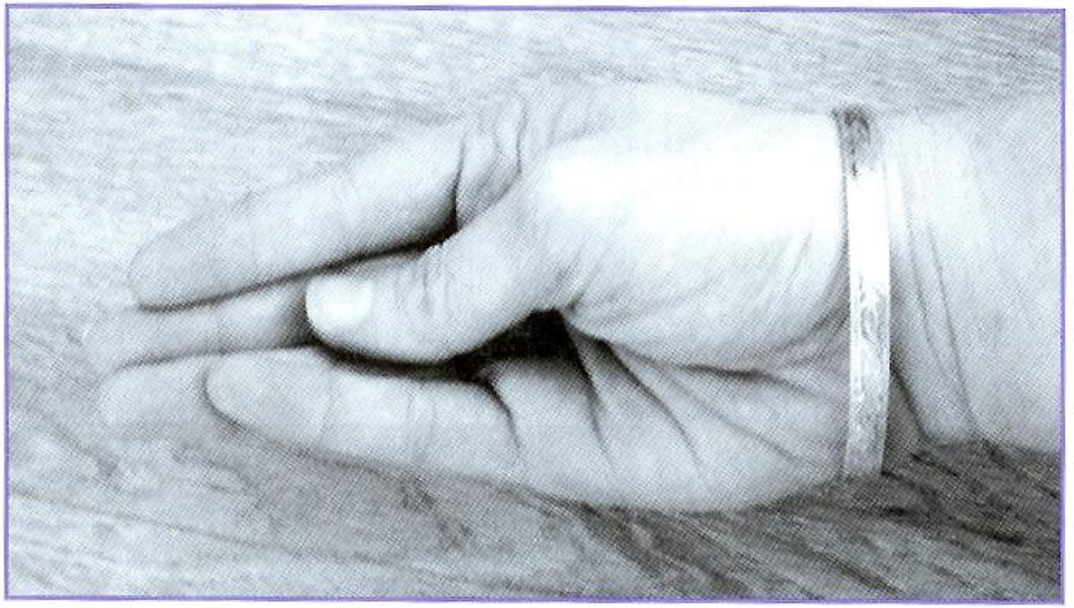
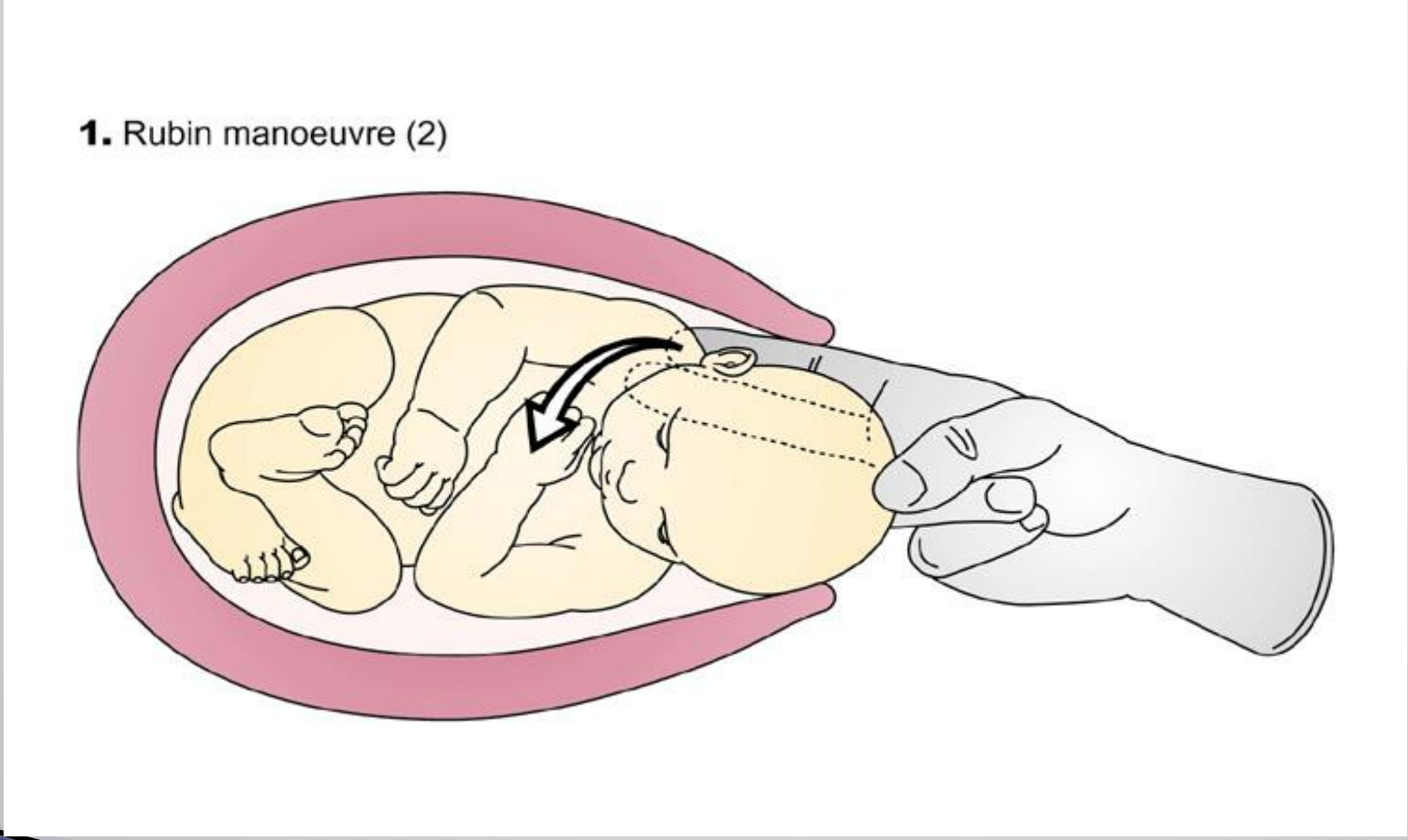


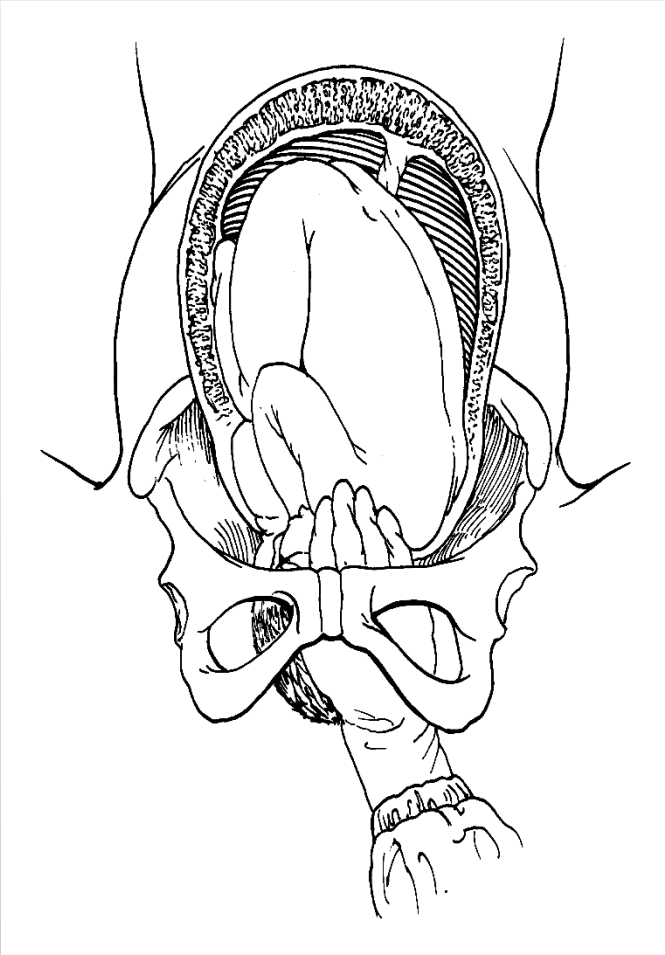
Figure 7.5. Correct vaginal access

Rubin manoeuvre



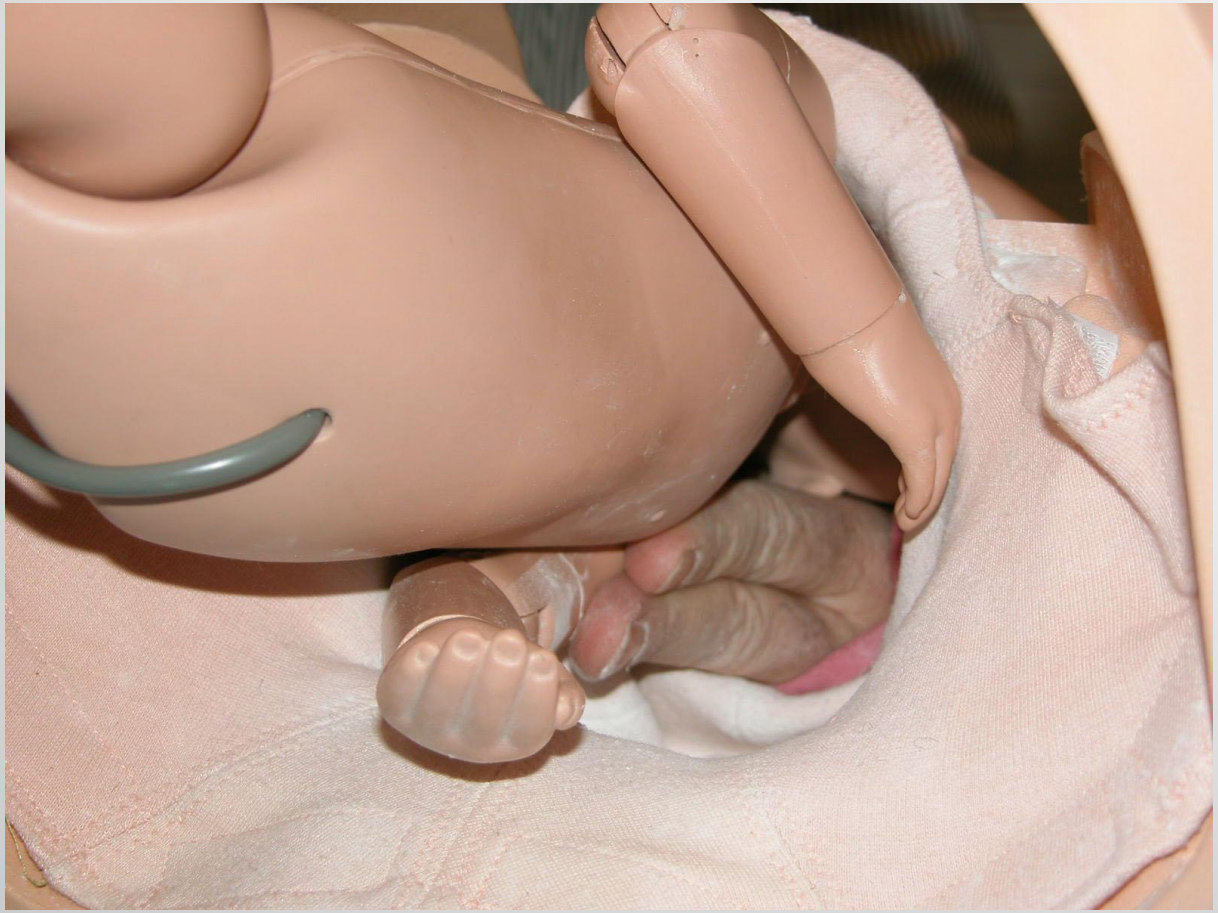
Anterior Rubin's Maneuver

Shoulder Dystocia



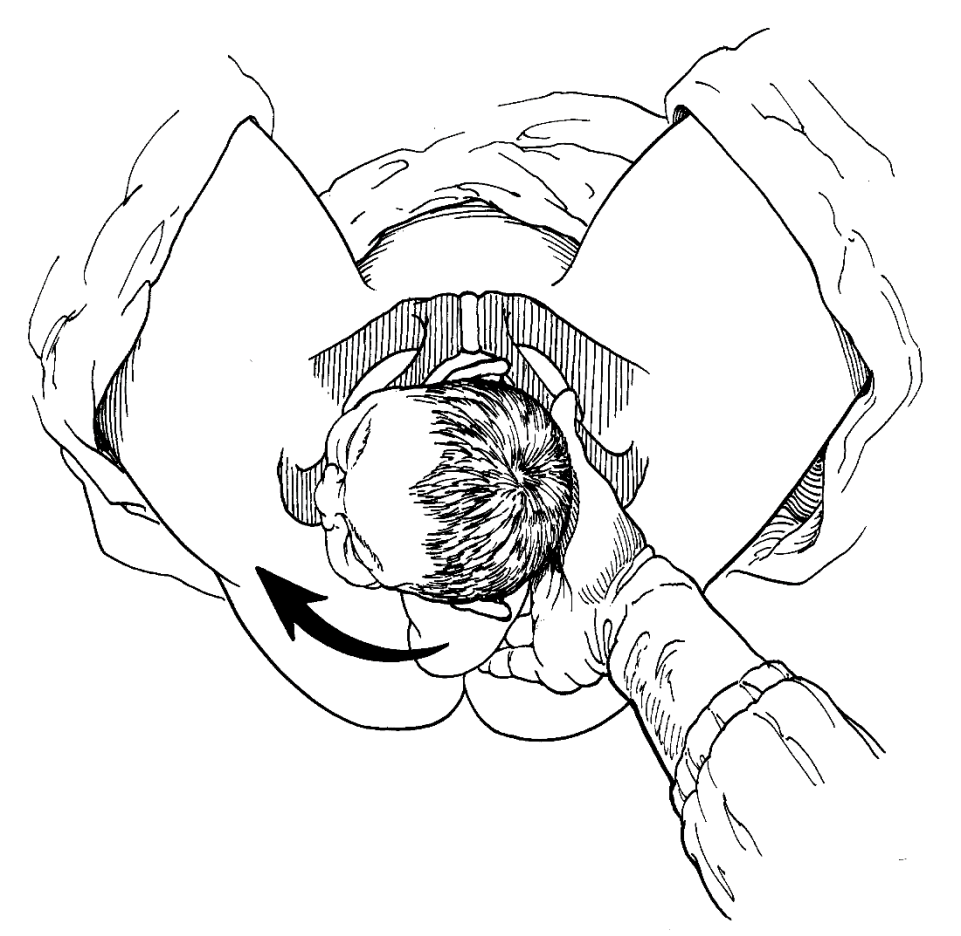
Posterior Arm Delivery

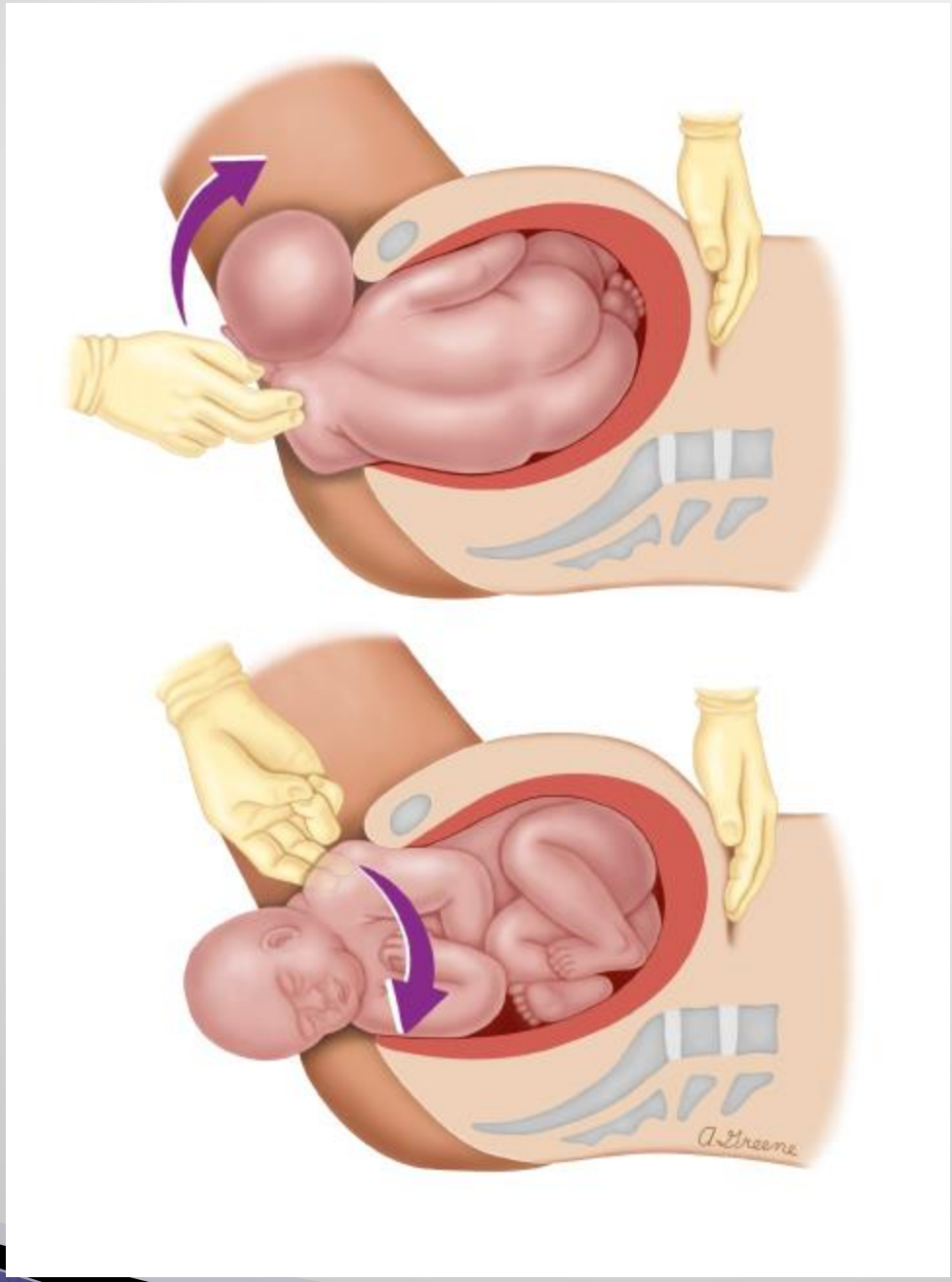
Shoulder Dystocia



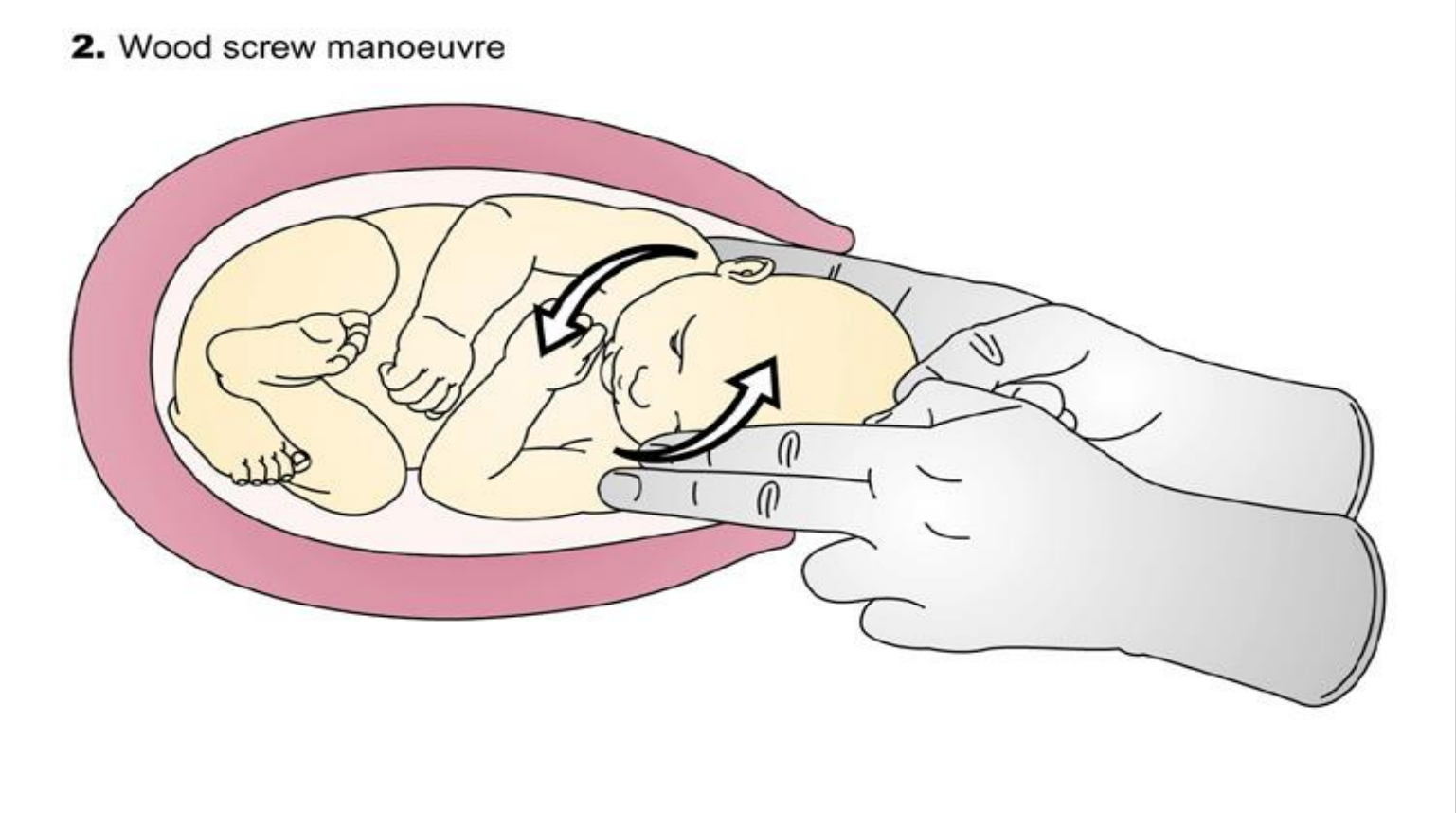
Posterior Rubin's Maneuver

Shoulder Dystocia




A. Greene

Wood screw manoeuvre



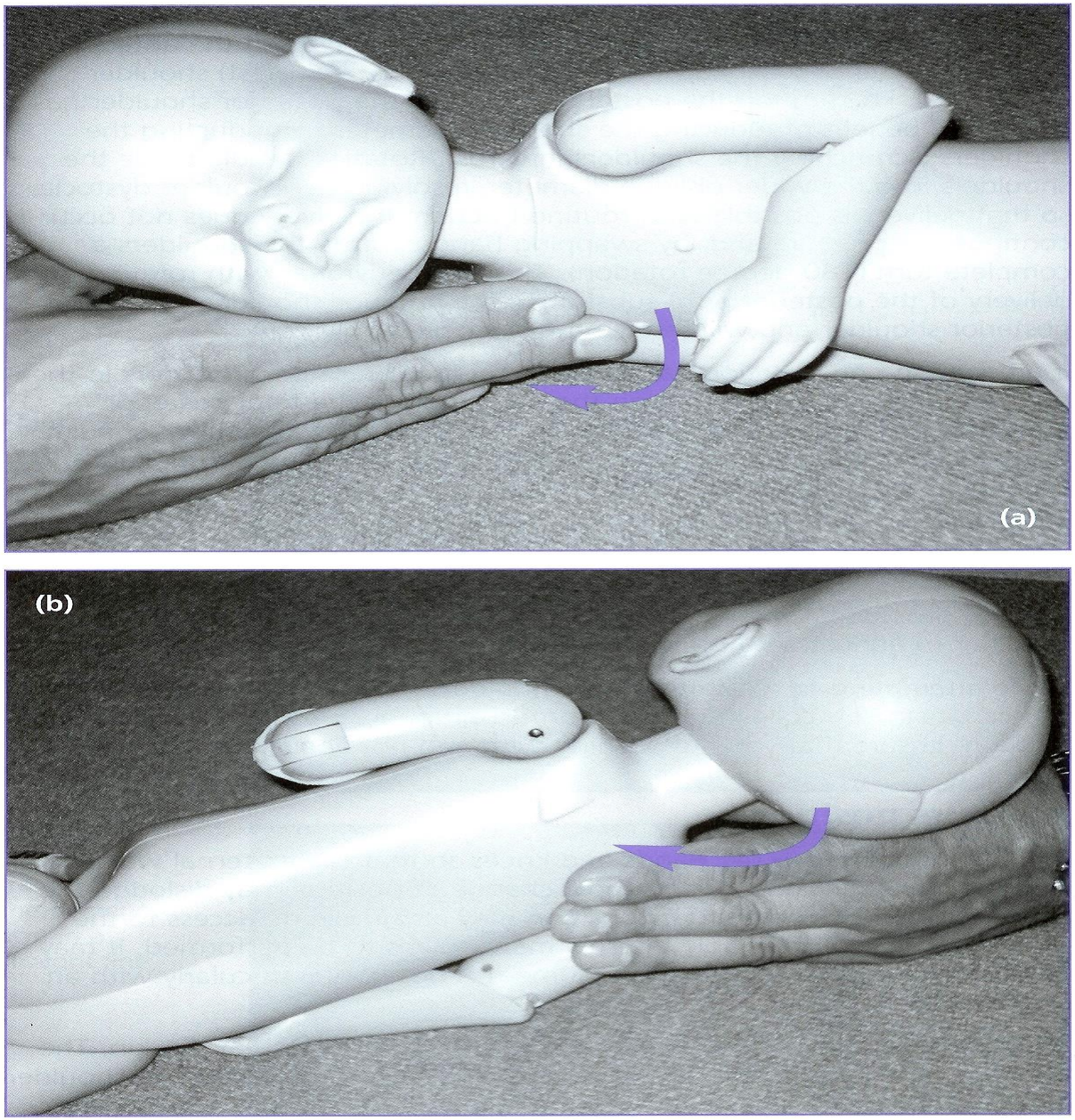
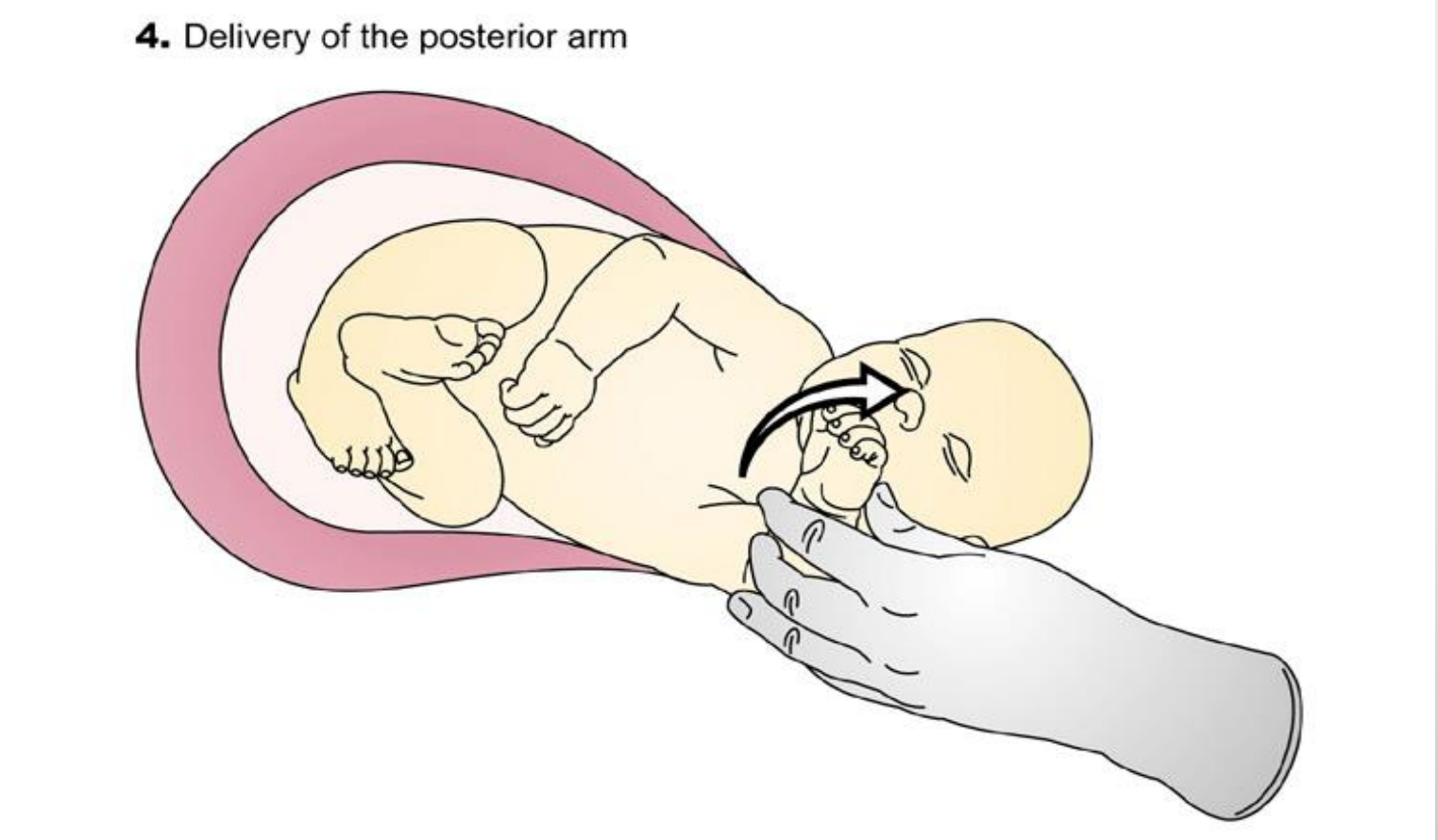
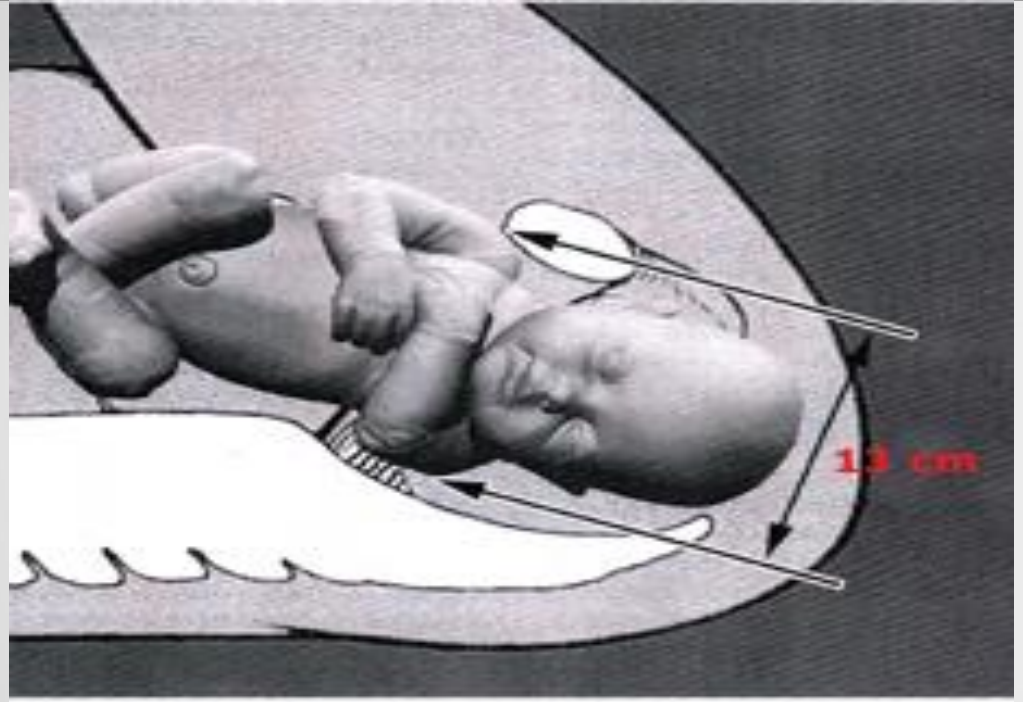
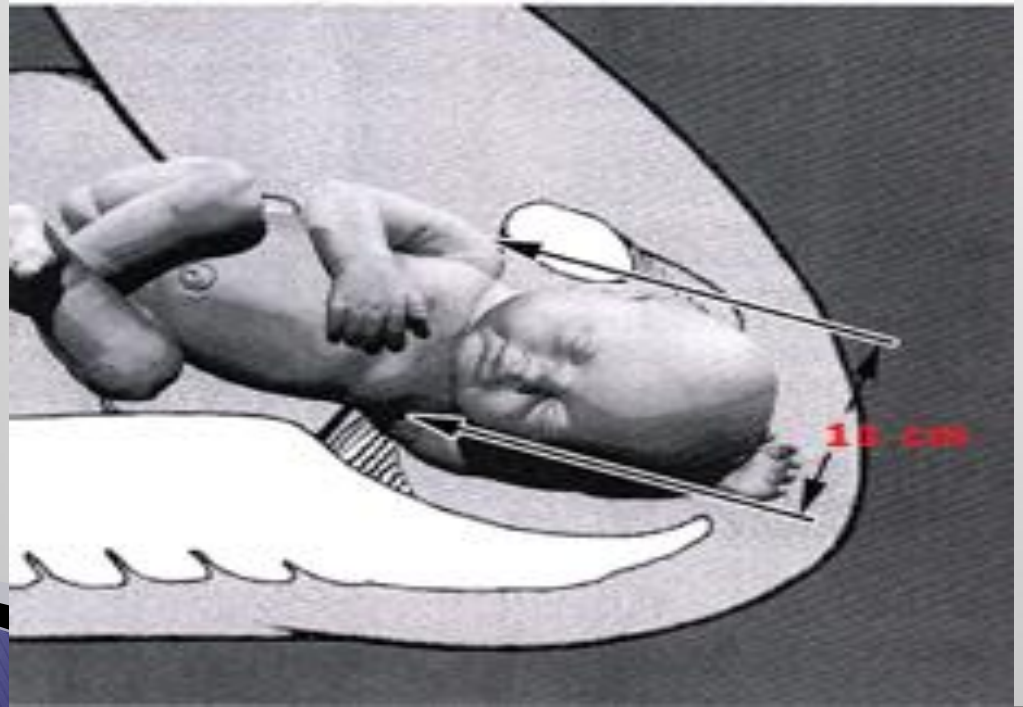


Figure 7.9. Internal rotational manoeuvres: (a) pressure on the anterior aspect of the posterior shoulder to achieve rotation; (b) pressure on posterior aspect of posterior shoulder to achieve rotation

Delivery of posterior arm




13 cm


11 cm

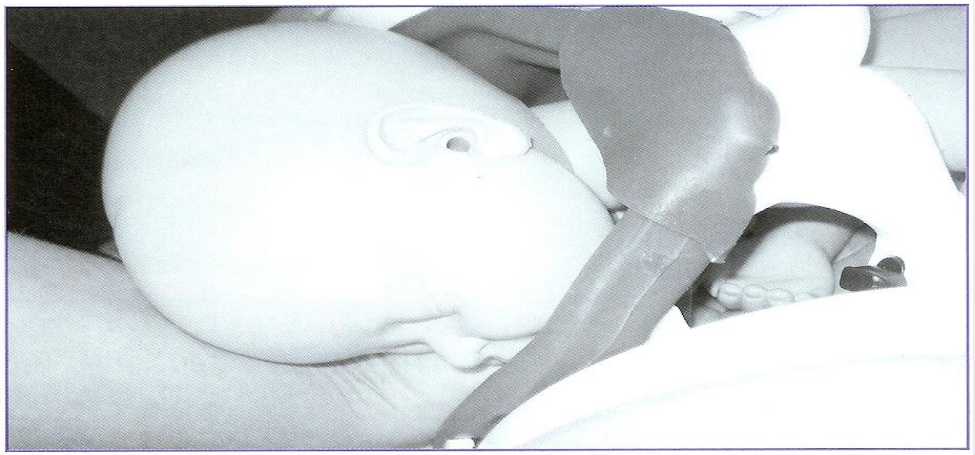


Figure 7.6. Location of the posterior arm

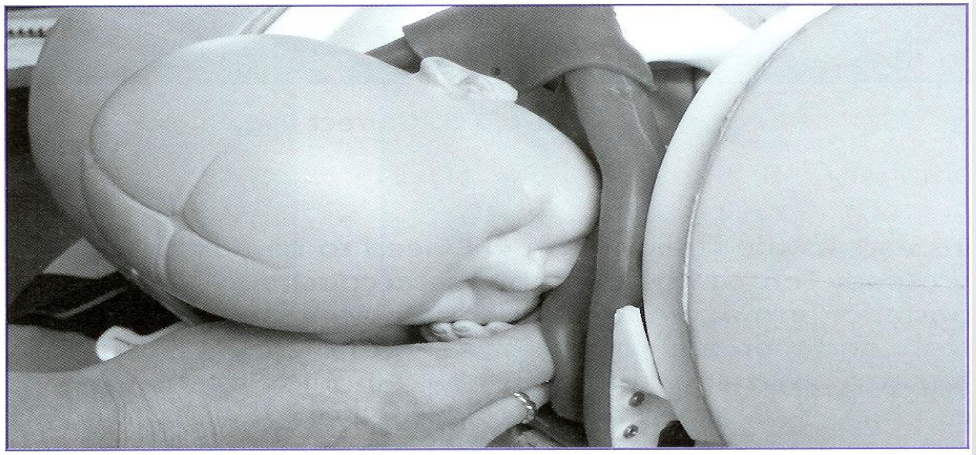


Figure 7.7. Grasp the wrist of the posterior arm

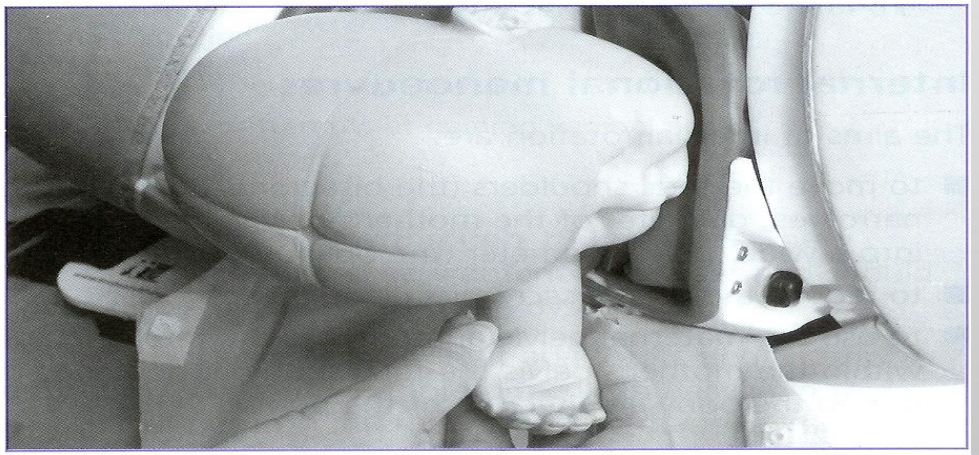
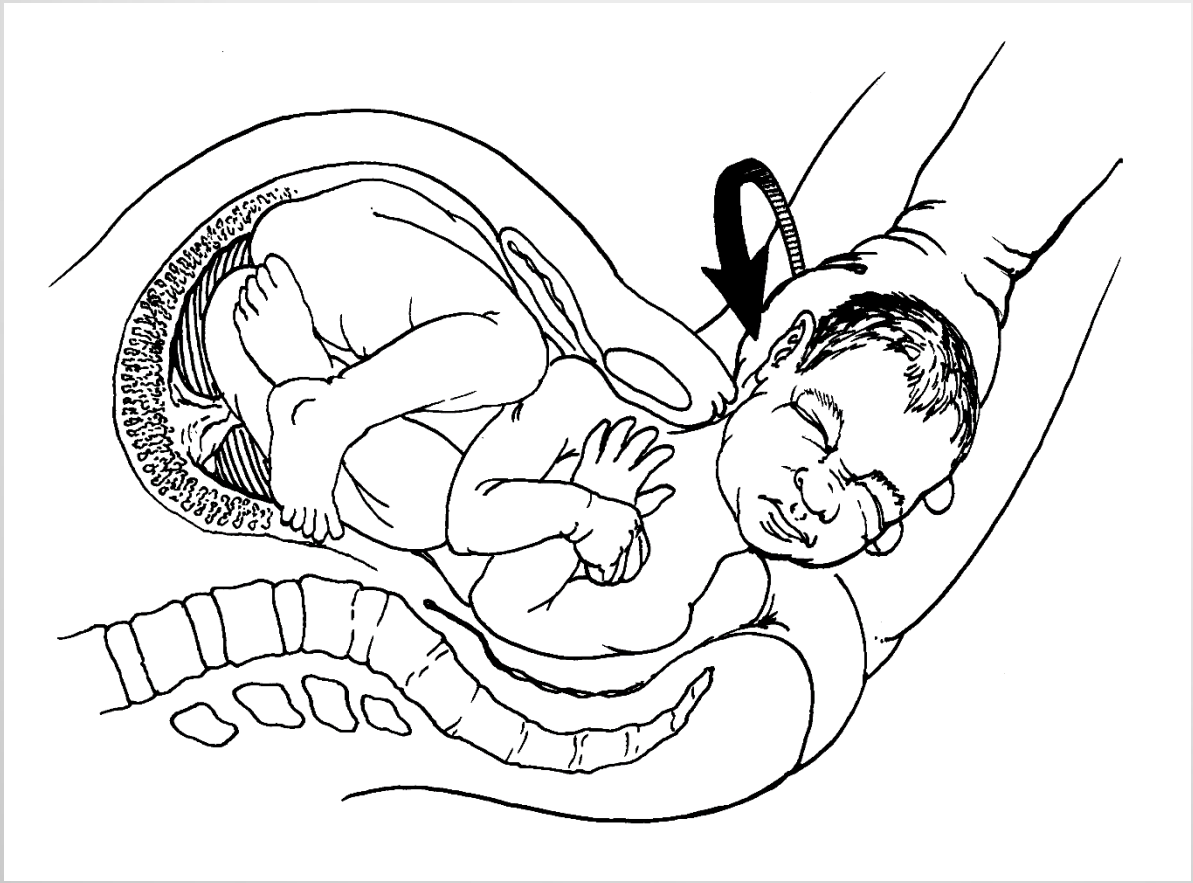


Figure 7.8. Gentle traction on the posterior arm in a straight line

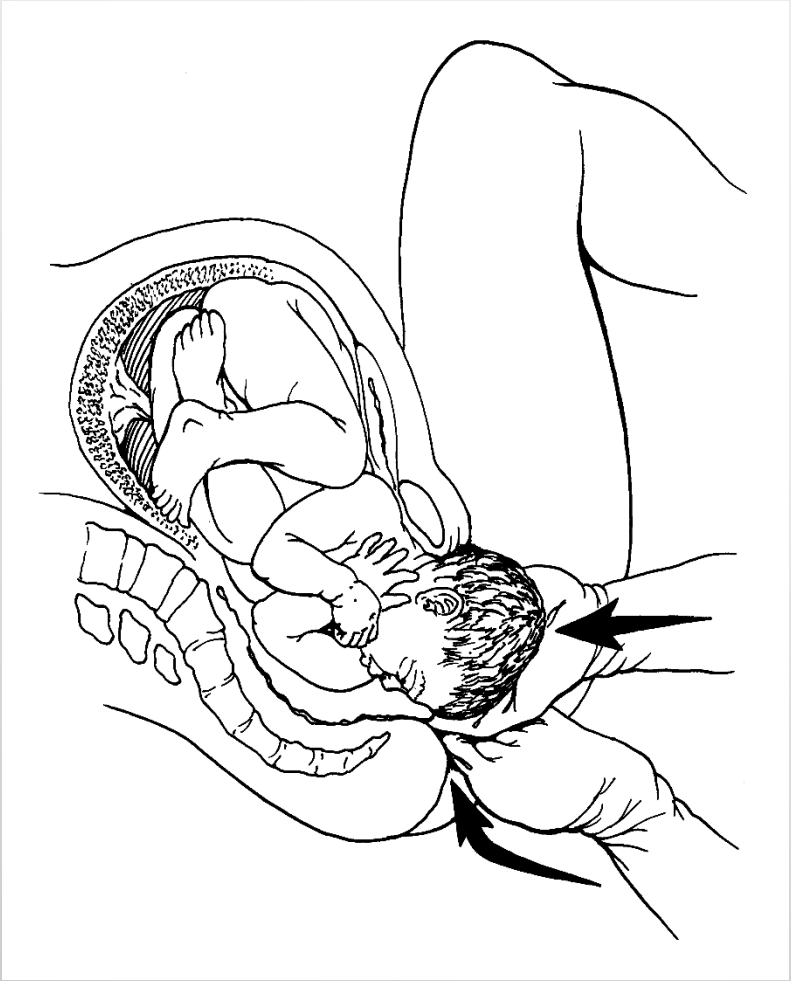
Cephalic Replacement *(1 of 2)*

Shoulder Dystocia



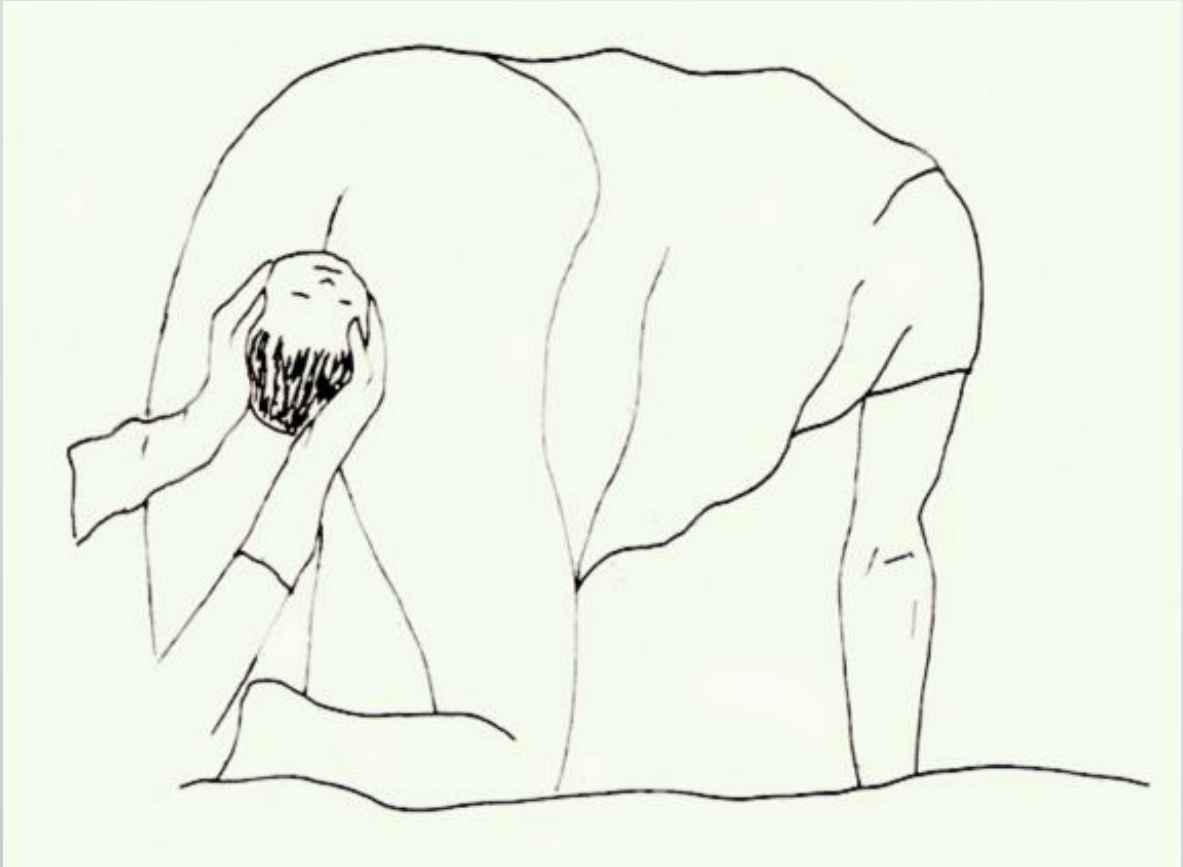
Cephalic Replacement *(2 of 2)*

Shoulder Dystocia



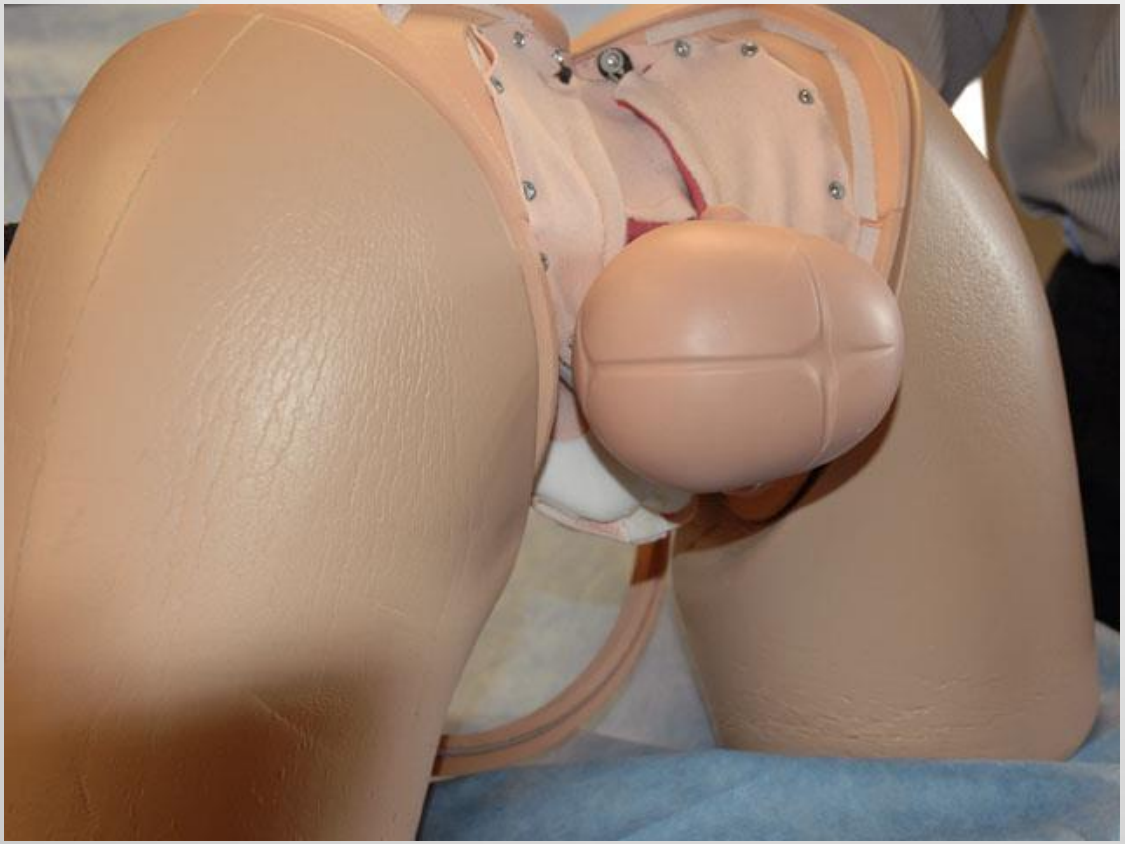
Hands and Knees Position

Shoulder Dystocia

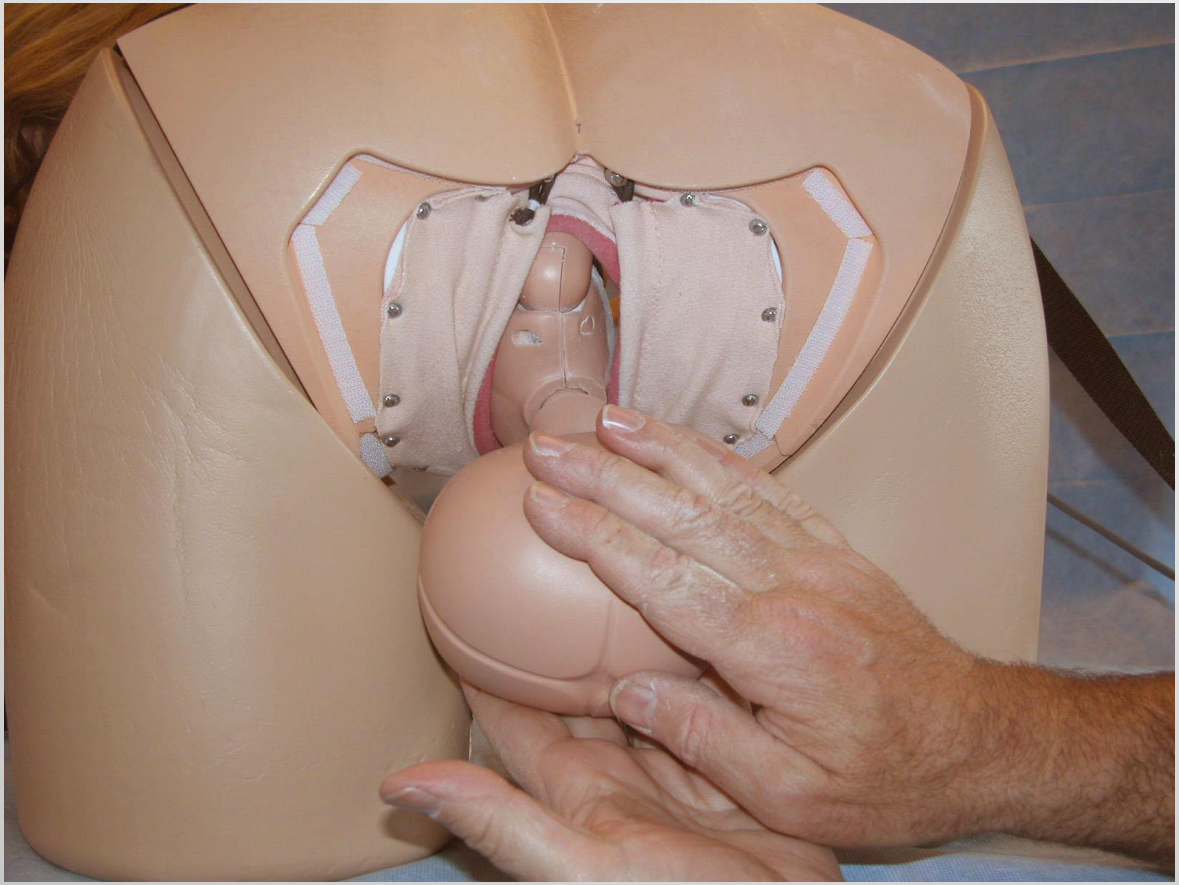


Hands and Knees Position

Shoulder Dystocia



Delivery of Shoulder in Hands and Knees Position



SHOULDER DYSTOCIA DOCUMENTATION

Date .....
Time .....
Person completing form .....
Signature .....

Mother's name _____
Date of birth _____
Hospital number _____
Consultant _____

Called for help at:		Emergency call via switchboard at:		
Staff present at delivery of head:		Additional staff attending		
Name	Grade	Name	Grade	Time arrived

Procedures used to assist delivery	By whom	Time	Order	Details	Reason if not performed
McRoberts' position					
Suprapubic pressure				From maternal **left / right**	
Episiotomy				Enough access / tear present / already performed	
Delivery of posterior arm					
Internal rotational manoeuvre					
Description of rotation					
Description of traction	Routine	Other:		Reason if not routine:	
Other manoeuvres used					

Time of delivery of head		Time of delivery of baby		Head-to-body delivery interval	
Fetal position during dystocia		Head facing maternal **left**		Head facing maternal **right**	
Birth weight	kg	Apgar score	1 minute:	5 minutes:	10 minutes:
Cord gases		Art pH :	Art BE:	Venous pH :	Venous BE :
Explanation to parents		Yes	No	Incident form completed	Yes / No

Figure 7.10. An example of a shoulder dystocia documentation pro forma

Box 7.2. Perinatal morbidity and mortality

Perinatal

Stillbirth

Hypoxia

Brachial plexus injury

Fractures (humeral and clavicular)

Maternal

Postpartum haemorrhage

Third- and fourth-degree tears

Uterine rupture

Psychological distress

Now …we will move to practice plz!!

Thank you!!