Shoulder Dystocia

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Key learning points

- Antenatal and intrapartum risk factors.
- Understand manoeuvres required to effect delivery during shoulder dystocia.
- Clear and accurate documentation.
- Awareness of potential complications of shoulder dystocia.

Common difficulties observed in training drills

- Not calling the neonatologist.
- Not clearly stating the problem.
- Inability to gain appropriate internal vaginal access.
- Confusion over internal rotational manoeuvres.
- Resorting to traction to effect delivery.
- Use of fundal pressure instead of suprapubic pressure.

Shoulder Dystocia

- Most dreaded unanticipated Obstetric Complication
- Major cause of maternal and perinatal mortality and morbidity
- Costly source of litigation

تعریف دیستوشی شانه

- به دنبال خروج کامل سر جنین در جریان زایمان واژینال ممکن است بقیه بدن جنین خارج نشود.
- شانه قدامی جنین در پشت سمفیز پوبیس گیر می افتد و با فشار و کشش خارج نمی گردد.
- تعریف دقیقی وجود ندارد بر حسب مدت زمان هم تعریف واحدی وجود ندارد برخی از محققان فاصله زمانی خروج سر و زایمان بدن را ۶۰ثانیه تعریف کرده اند.

Definition and Incidence

- Defined as a range of difficulties encountered with delivering the shoulders after delivery of the head, 1% of all deliveries
- Many attempts have been made to try and standardize the definition and therefore the incidence reporting
- Efforts have been made to define different degrees of difficulty, ie Mild, moderate and severe

Fetal Mortality and Morbidity

به طور کلی خطر دیستوشی شانه برای جنین بیشتر از خطر آن برای مادر است.

آسیب عصبی-عضلانی شدید وآسفیکسی از نگرانیهای مطرح در نوزادان هستند.

میزان هر یک از عوارض در مواردی که زایمان در عرض ۵ دقیقه اتفاق افتاده بود ۰/۵درصد و در مواردی که بیش از ۵ دقیقه به تاخیر افتاده بود این مقادیر ۶و۲۴درصد افزایش یافته بود.

Reasons for fetal Mortality and morbidity

- Following delivery of head, fetal pH drops by 0.04 units per minute
- Delay may result in asphyxia, which can cause permanent neurological injury
- Also Brachial plexus injury ie Erb's palsy, which usually resolves in 6 months

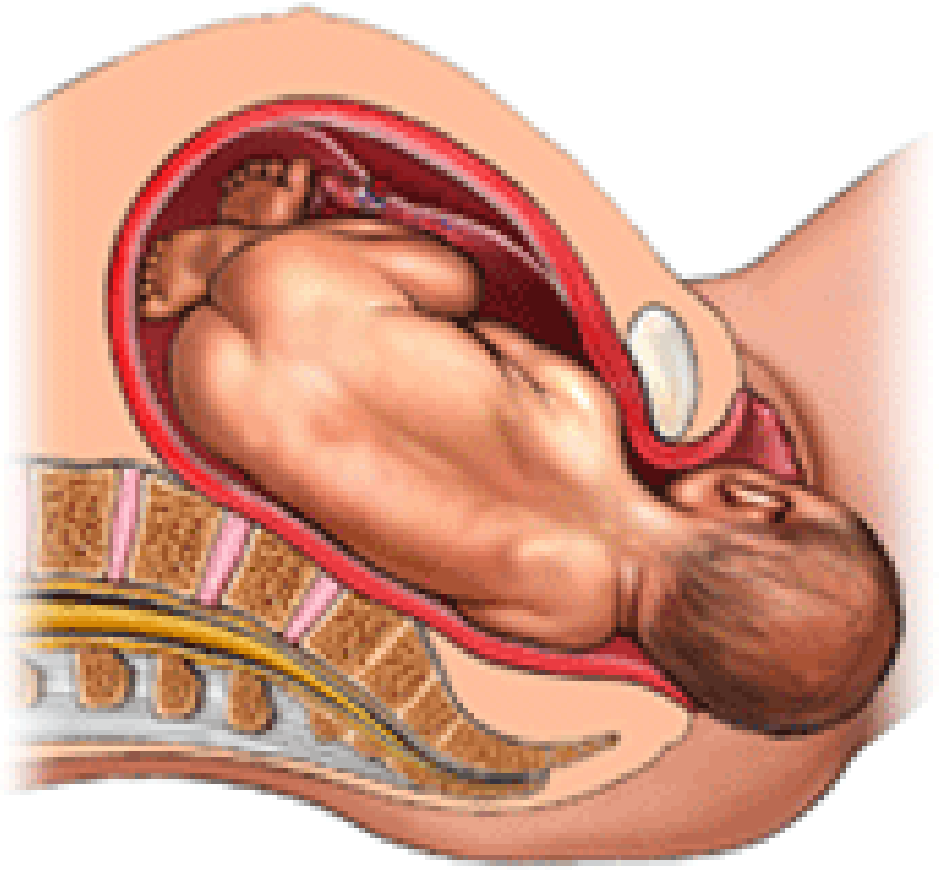
Maternal morbidity

- Postpartum haemorrhage is common following shoulder dystocia
- Vaginal and perineal lacerations
- Strong association between 3rd and 4th degree tears and shoulder dystocia
- Uterine rupture may also happen

Prevention

- No evidence that Induction of labour for big baby improves maternal or fetal outcome
- Women with Diabetes and Macrosomia, induction may reduce number of deliveries complicated by macrosomia
- Elective caesarean not recommended to reduce shoulder dystocia in non diabetic women.

Shoulder Dystocia



Warning signs

- Prolonged second stage-obesity-previous dystocia(1-13%)
- Head bobbing, which is retraction of head back into the pelvis between contractions
- Turtle sign at delivery, ie the delivered head gets pulled back towards the perineum “

Shoulder dystocia

- H E L P E R R
  - H: Call for plenty of help
  - E: Episiotomy
  - L: Legs in McRoberts
  - P: Pressure (Suprapubic)
  - E: Enter (Rotational Manoevres) Rubin or Wood's or reverse Wood's
  - R: Remove posterior Arm
  - R: Roll over onto all fours(Gaskin)

Mechanism

- Failure of shoulders to rotate into the transverse diameter of the pelvic inlet
- Posterior shoulder enters the pelvis
- Anterior shoulder gets stuck behind the symphysis pubis
- In more severe cases both shoulders get stuck at the brim

Box 7.1. Risk factors for shoulder dystocia

Prelabour

Previous shoulder dystocia

Macrosomia

Maternal diabetes mellitus

Maternal obesity

Intrapartum

Prolonged first stage

Prolonged second stage

Labour augmentation

Instrumental delivery

Key points

- The majority of cases of shoulder dystocia occur in women with no risk factors.
- Shoulder dystocia is therefore an unpredictable and largely unpreventable event.
- Clinicians should be aware of existing risk factors but must always be alert to the possibility of shoulder dystocia with any delivery.

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.

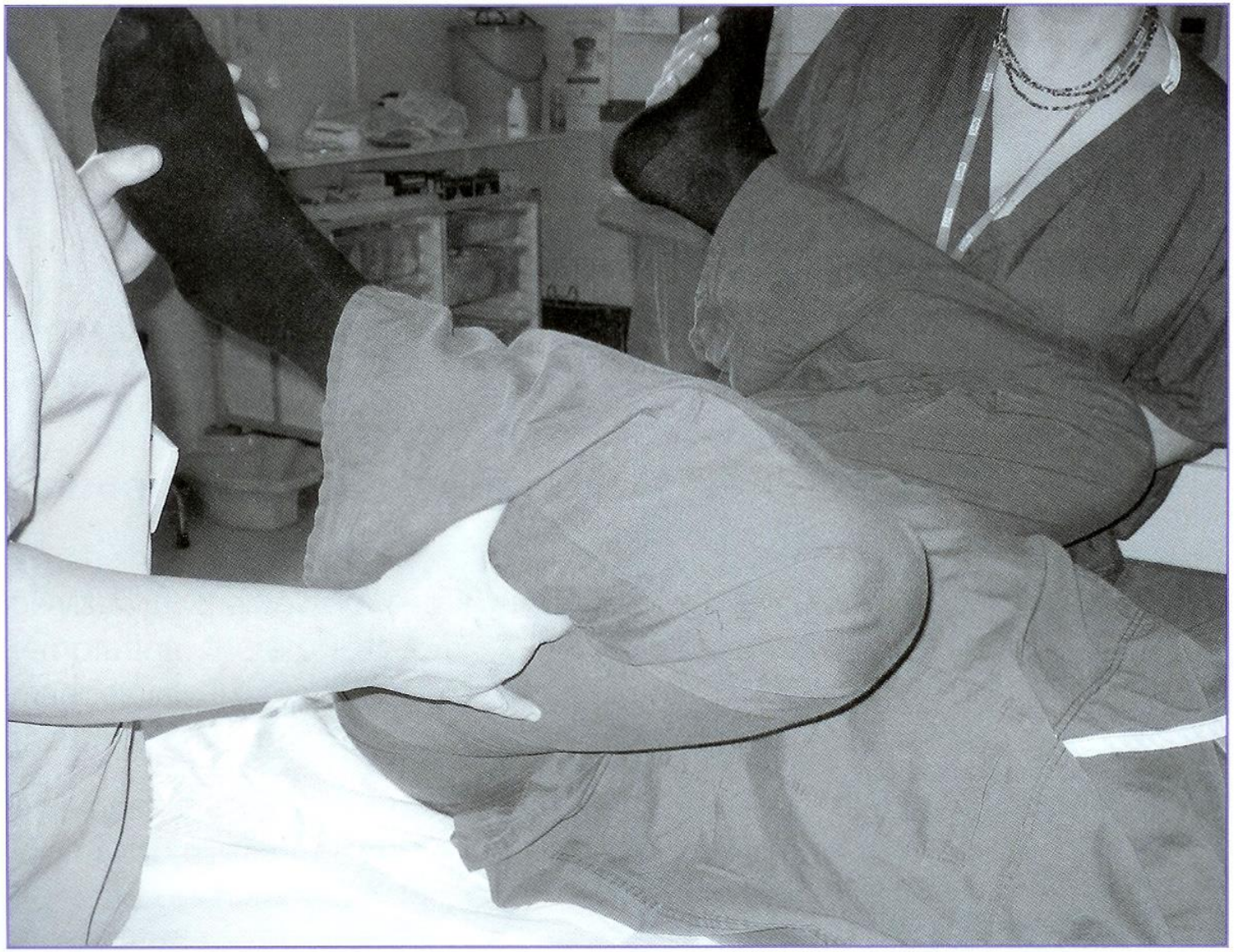


Figure 7.2. McRoberts' position

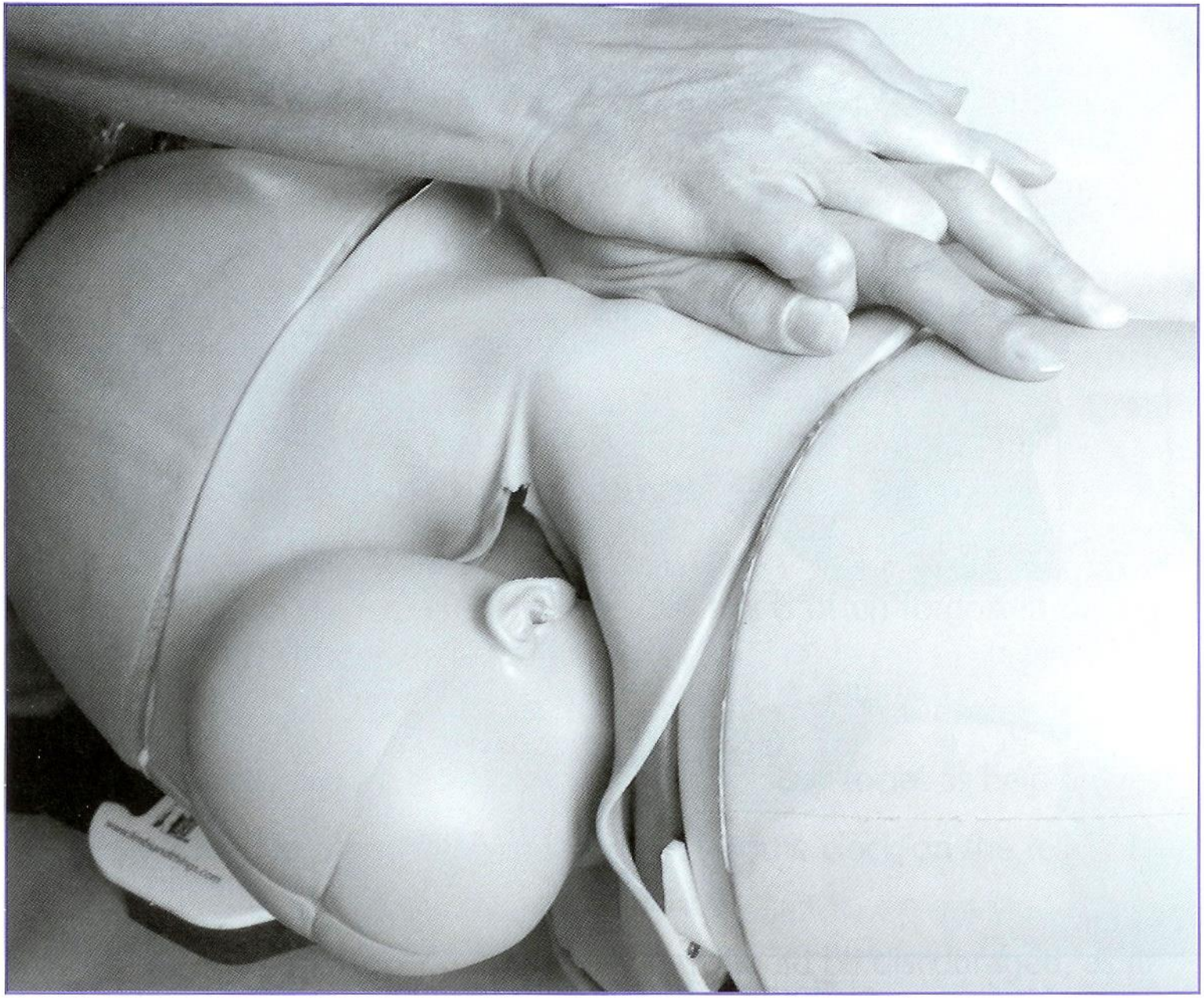
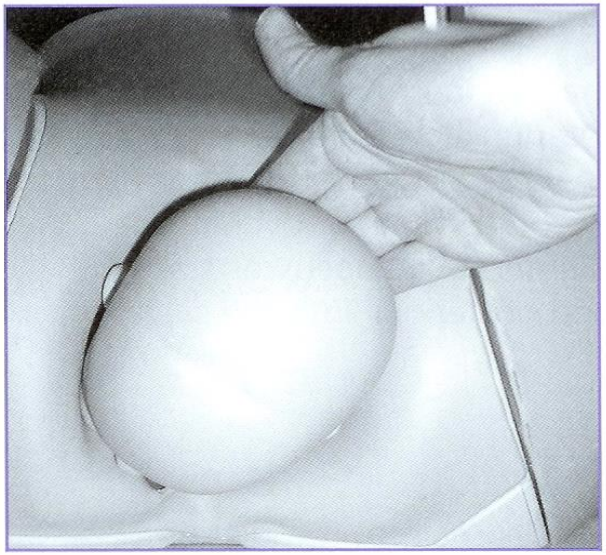
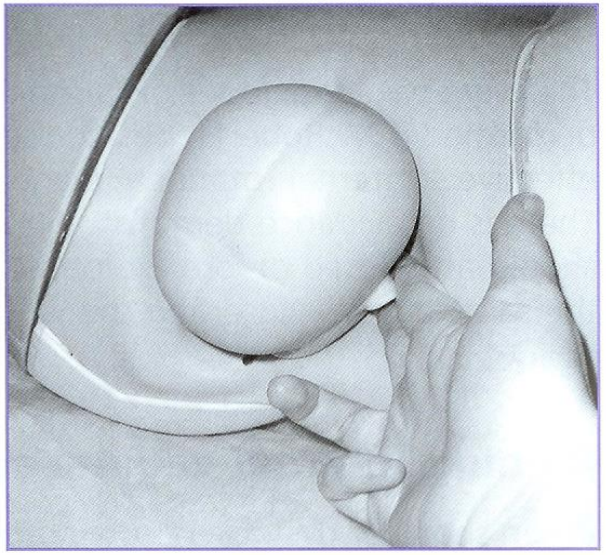


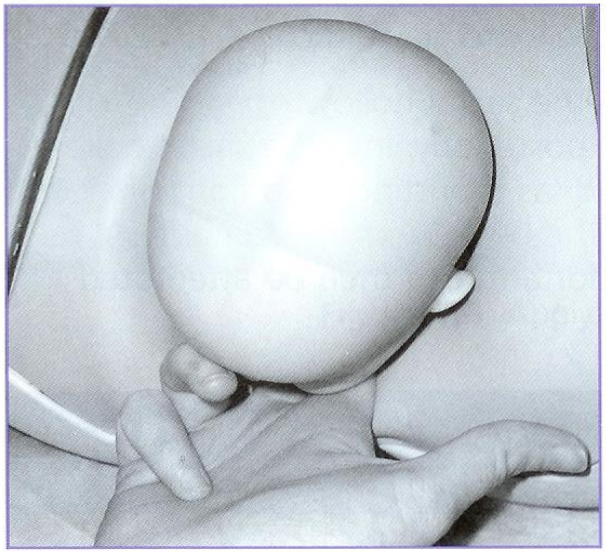
Figure 7.3. Applying suprapubic pressure



a. Attempting to gain anterior access



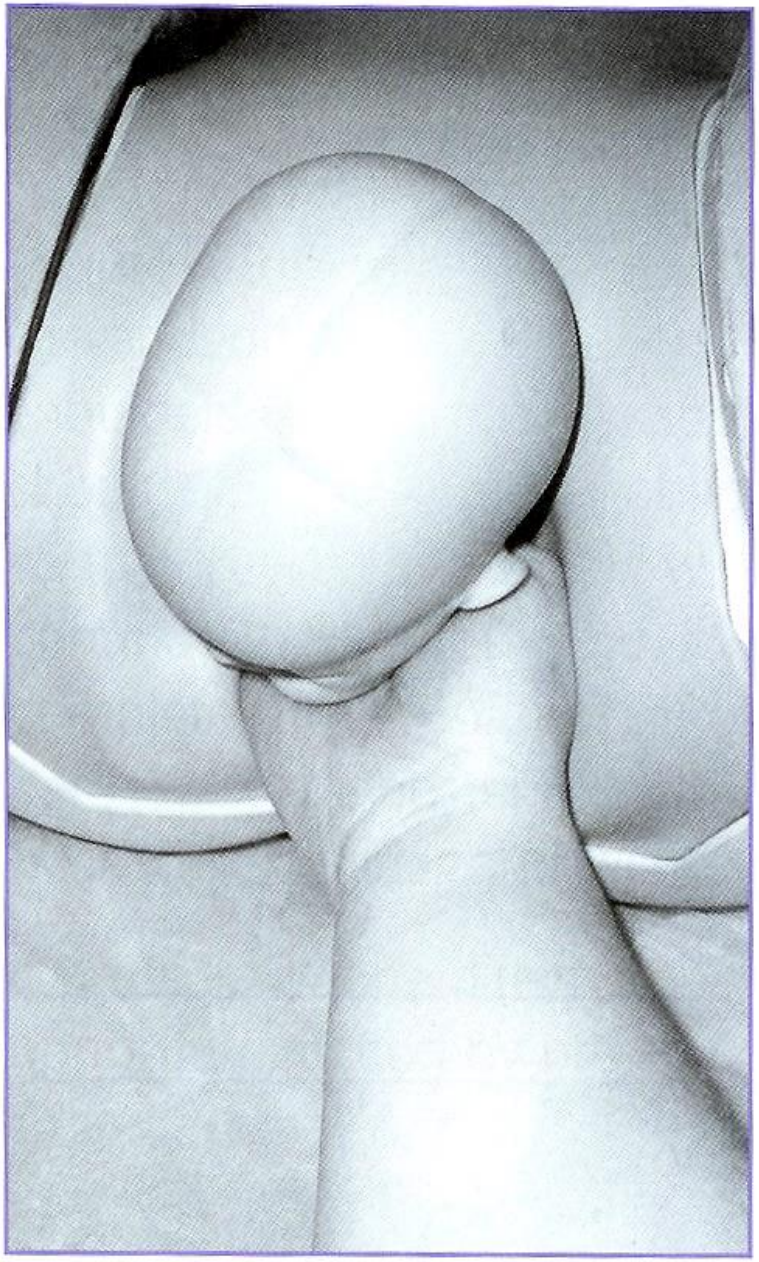
b. Attempting to gain lateral access

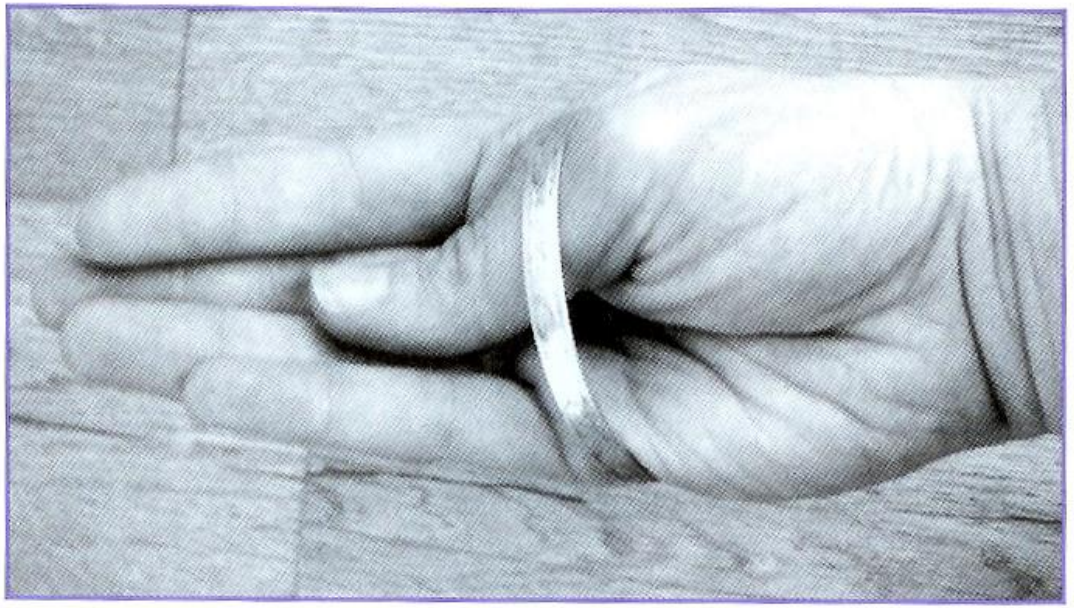


c. Entering the vagina with two fingers as if performing a routine vaginal examination

d. Leaving the thumb out of the vagina

Figure 7.4. Incorrect attempts at gaining vaginal access





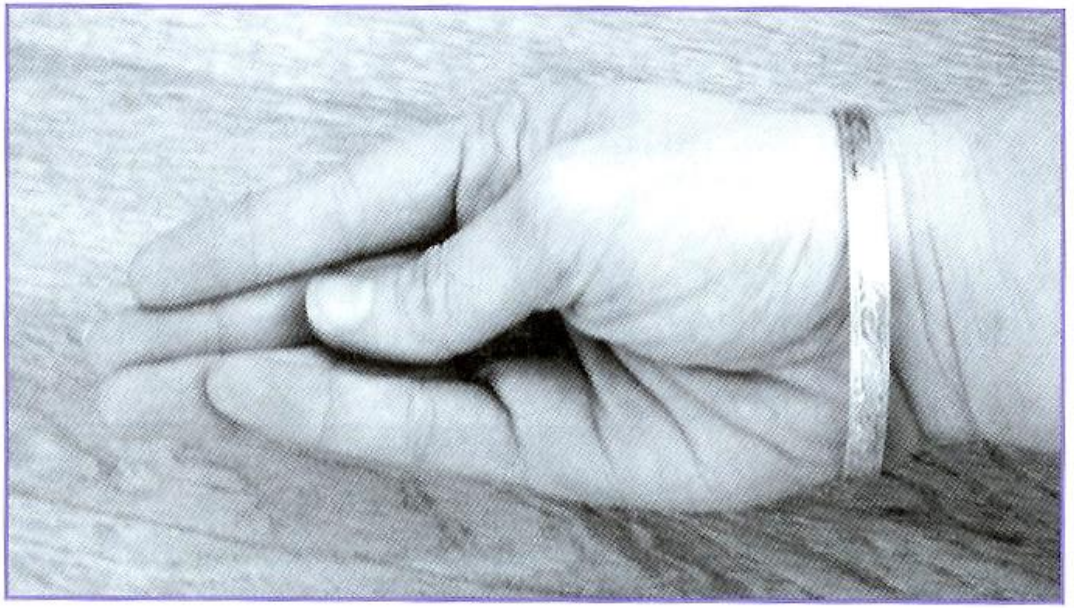


Figure 7.5. Correct vaginal access

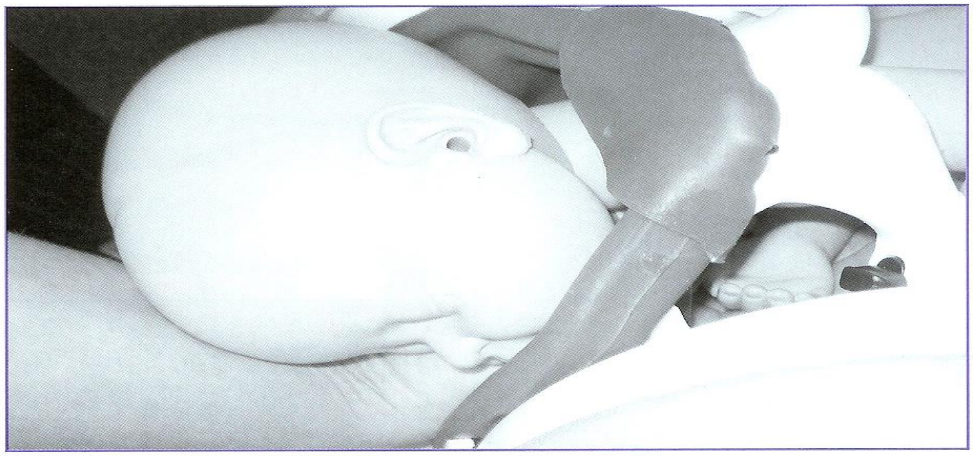


Figure 7.6. Location of the posterior arm

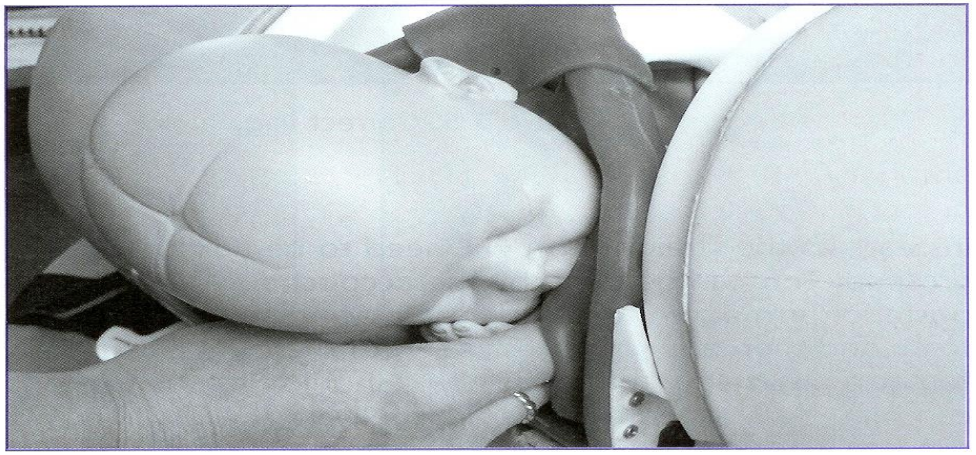


Figure 7.7. Grasp the wrist of the posterior arm

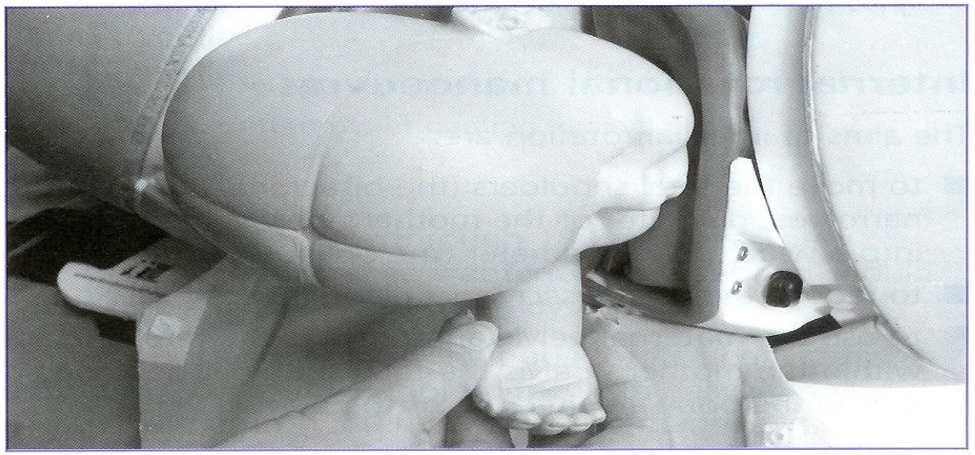


Figure 7.8. Gentle traction on the posterior arm in a straight line

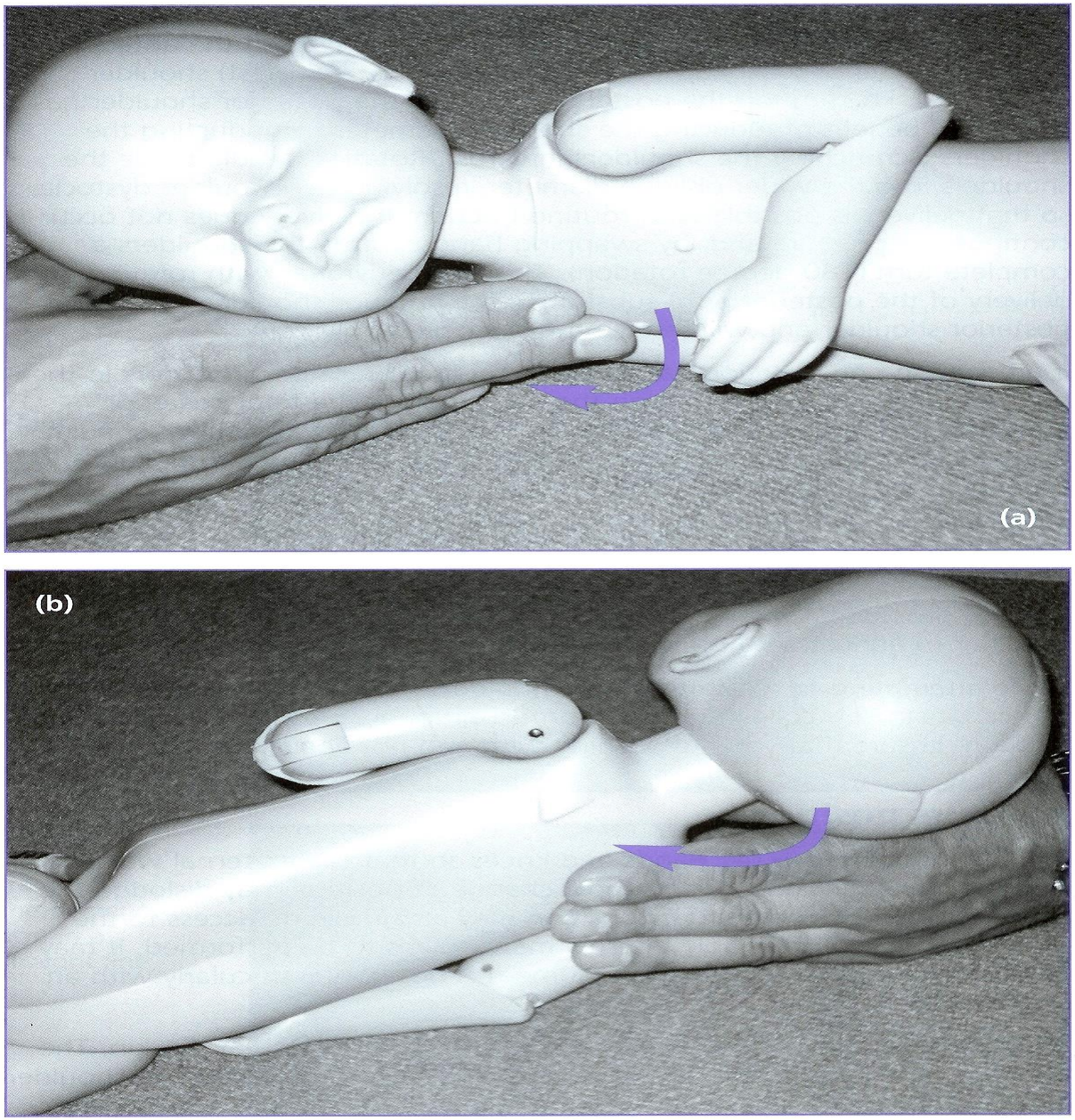
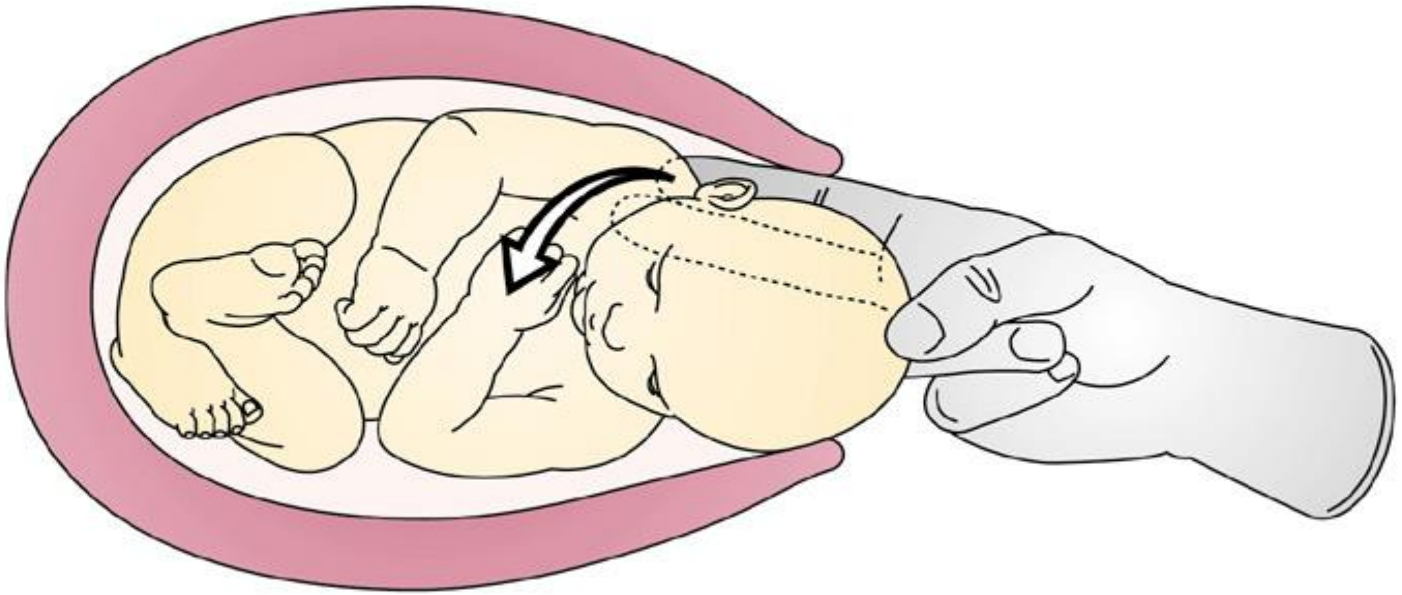


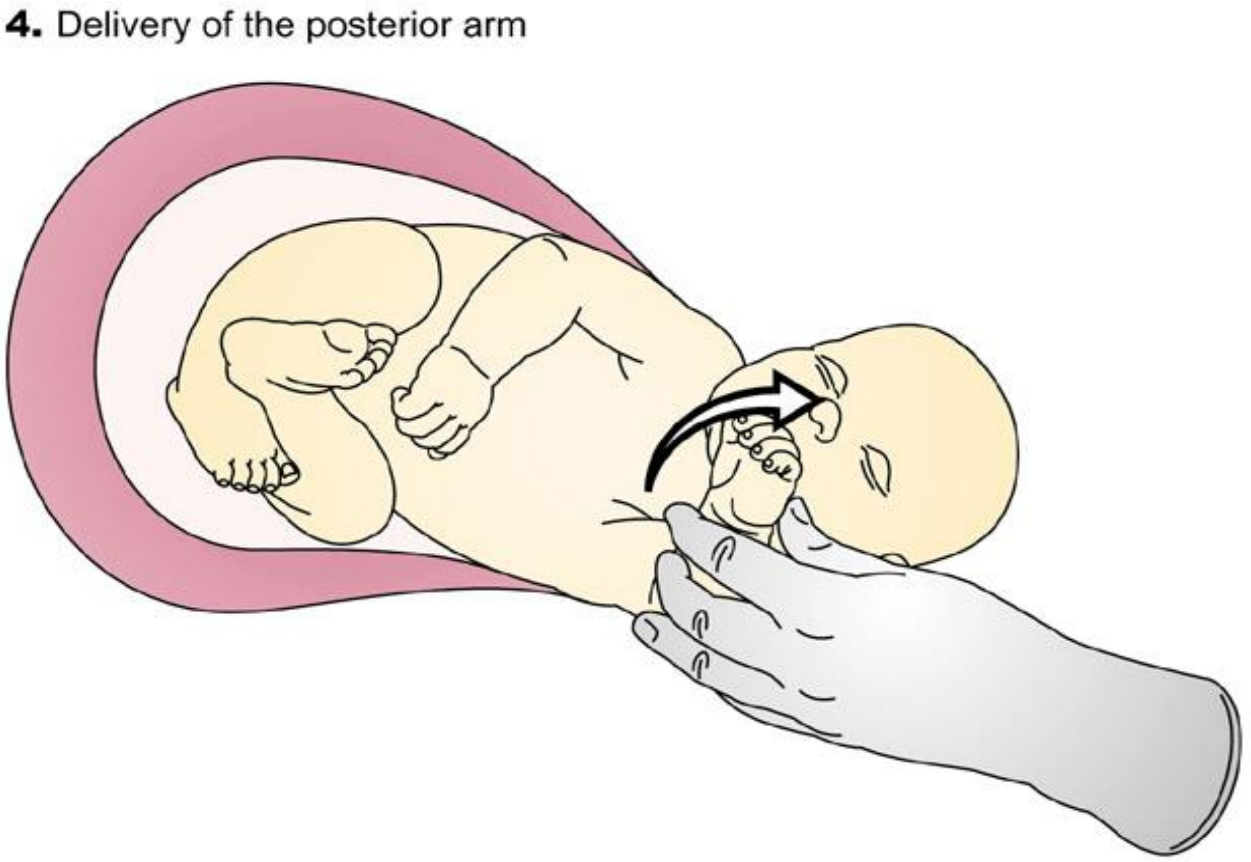
Figure 7.9. Internal rotational manoeuvres: (a) pressure on the anterior aspect of the posterior shoulder to achieve rotation; (b) pressure on posterior aspect of posterior shoulder to achieve rotation

Rubin manoeuvre

1. Rubin manoeuvre (2)



Delivery of posterior arm



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

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

Conclusion

- Shoulder dystocia is an acute obstetric emergency
- Cannot predict when and in whom this can occur
- Risk factors can be identified
- Staff need to be ready and aware through regular education and training sessions and drills
- Incident Reporting forms (IR form)

Thank you