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Shoulder Presentation (Transverse or Oblique lie)

Definition:

The longitudinal axis of the fetus does not coincide with that of the mother. These are the most hazardous malpresentations due to mechanical difficulties that occur during labor .
The oblique lie which is deviation of the head or the breech to one iliac fossa, is less hazardous as correction to a longitudinal lie is more feasible.

Incidence:

3-4% during the last quarter of pregnancy but 0.5% by the time labor commences.

Etiology:

Factors that
- change the shape of pelvis ,uterus or fetus,
- allow free mobility of the fetus or
- interfere with engagement as:
(A) Maternal:
1- Contracted pelvis.
2- Lax abdominal wall.
3- Uterine causes as bicornuate , subseptate and fibroid uterus.
4- Pelvic masses as ovarian tumours.
(B) Foetal causes:
1- Multiple pregnancy.
2- Polyhydramnios.
3- Placenta praevia.
4- Prematurity.
5- Intrauterine fetal death.
Positions:
The scapula is the denominator
1- Left scapulo - anterior.
2- Right scapulo - anterior.
3- Right scapulo - posterior.
4- Left scapulo - posterior.
Scapulo-anterior are more common than scapulo-posterior as the concavity of the front of the fetus tends to fit with the convexity of the maternal spines.

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Diagnosis:

(A) During pregnancy:

(I) Inspection:

The abdomen is broader from side to side.

(II) Palpation:

a. Fundal level : lower than that corresponds to the period of amenorrhoea.

b. Fundal grip : The fundus feels empty.

c. Umbilical grip: The head is felt on one side while the breech one the other. In transverse lie, they are at the same level, while in oblique lie one pole , usually the head as it is heavier, is in a lower level i.e. in the iliac fossa.

d. First pelvic grip: Empty lower uterine segment.

(III) Auscultation:

FHS are best heard on one side of the umbilicus towards the foetal head.

(IV) Ultrasound or X-ray:

Confirms the diagnosis and may identify the cause as multiple pregnancy or placenta praevia.

(B) During labour:

In addition to the previous findings ,vaginal examination reveals:

The presenting part is high.

Membranes are bulging.

Premature rupture of membranes with prolapsed arm or cord is common. The dorsum of the supinated hand points to the fetal back and the thumb towards the head. The right hand of the fetus can be shaked, correctly by the right hand of the obstetrician and the left hand by the left one.

When the cervix is sufficiently dilated particularly after rupture of the membranes, the scapula, acromion, clavicle, ribs and axilla can be felt.

Mechanism of Labor:

As a rule no mechanism of labor should be anticipated in transverse lie and labor is obstructed.

If a patient is allowed to progress in labor with a neglected or unrecognized transverse lie, one of the following may occur:

(1) Impaction :

This is the usual and most common outcome.

The lower uterine segment thins and ultimately ruptures.

The fetus becomes hyperflexed, placental circulation is impaired , cord is prolapsed and compressed leading to fetal asphyxia and death.

(2) Spontaneous rectification:

Rarely the fetal lie may be corrected by the splinting effect of the contracted uterine muscles so that the head presents.

(3) Spontaneous version:
Rarely, by similar process the breech may come to present.
(4) Spontaneous expulsion:
Very rarely, if the fetus is very small or dead and macerated, the shoulder may be forced through the pelvis followed by the head and trunk.
(5) Spontaneous evolution:
Very rarely, the head is retained above the pelvic brim, the neck greatly elongates, the breech descends followed by the trunk and the after -coming head, i.e. spontaneous version occurs in the pelvic cavity.

Management:

(I) External cephalic version:
Can be done in late pregnancy or even early in labor if the membranes are intact and vaginal delivery is feasible. In early labor, if version succeeded apply abdominal binder and rupture the membranes as if there are uterine contractions.
(II) Internal podalic version:
It is mainly indicated in 2nd twin of transverse lie and followed by breech extraction.
Prerequisites:
a- General or epidural anaesthesia. b- Fully dilated cervix.
c- Intact membranes or just ruptured.

(III) Caesarean section:
It is the best and safest method of management in nearly all cases of persistent transverse or oblique lie even if the baby is dead.
As rupture of membranes carries the risk of cord prolapse, an elective caesarean section should be planned before labor commences.

Neglected (Impacted) shoulder:
Clinical picture (impending rupture uterus):

- **Exhaustion and distress of the mother.**
- **Shoulder is impacted may be with prolapsed arm and / or cord.**
- **Membranes are ruptured since a time.**
- **Liquor is drained.**
- **The uterus is tonically contracted.**
- **The fetus is severely distressed or dead.**

Management:

Caesarean section is the safest procedure even if the baby is dead. A classical or low vertical incision in the uterus facilitates extraction of the fetus as a breech in such a condition.
Any other manipulations will lead eventually to rupture uterus so they are contraindicated.

UNSTABLE LIE

Definition:

A fetus which changes its lie fequently from transverse to oblique to longitudinal.

Aetiology:

1. **Polyhydramnios.**
2. **Prematurity and IUFD.**
3. **Contracted pelvis.**
4. **Placenta praevia.**
5. **Pelvic tumours.**
6. **Multiparae with a lax uterus and abdominal wall**.

Management:

(I) External cephalic version:

- **Can be done whenever the woman in examined but in majority of cases it will recure so it is better to defer it until full term (37-40 weeks).**
- **After correcting the fetal lie to longitudinal, apply an abdominal binder, start oxytocin infusion and do amniotomy when the uterine contractions started and the presenting part is well settled into the pelvic brim.**

(II) Caesarean section is indicated in:

- **Failure of external version .**
- **Some do it selectively in cases discovered after 40 weeks' gestation**.

SHOULDER PRESENTATION—MECHANISM

Shoulder presentation is a malpresentation and occurs in 1 out of 250 - 300 cases. It is more common in multipara than in primipara and in premature than in mature labours.

Aetiology. Similar to other malpresentations. Twins, hydramnios, placenta praevia, contracted pelvis, anything preventing engagement of the head in the pelvis, undue mobility of the foetus or unusual shape of the foetus, abnormal shape of uterus - e.g. subseptate uterus.

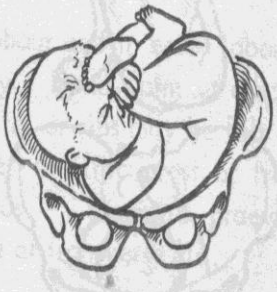
The Lie is transverse or oblique.

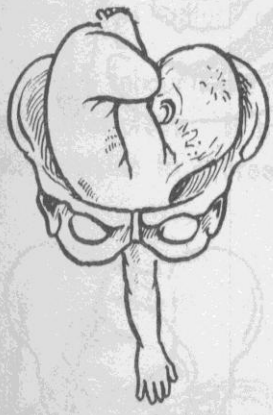
The head may be to right or left and the back may be anterior or posterior.

The Denominator is the shoulder.

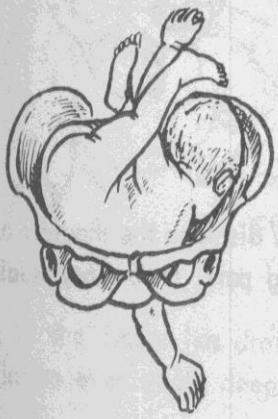
Vaginal examination reveals an empty pelvis, and an unusual presenting part. The shoulder might be mistaken for the breech but the ribs have a characteristic feel.

When the foetus and pelvis are of normal size there is obstruction and no mechanism.





If the pelvis is large and the foetus small then the mechanism of spontaneous evolution takes place. The head remains above the pubis and the arm and shoulder descend behind the symphysis.



The chest then descends into the pelvis.

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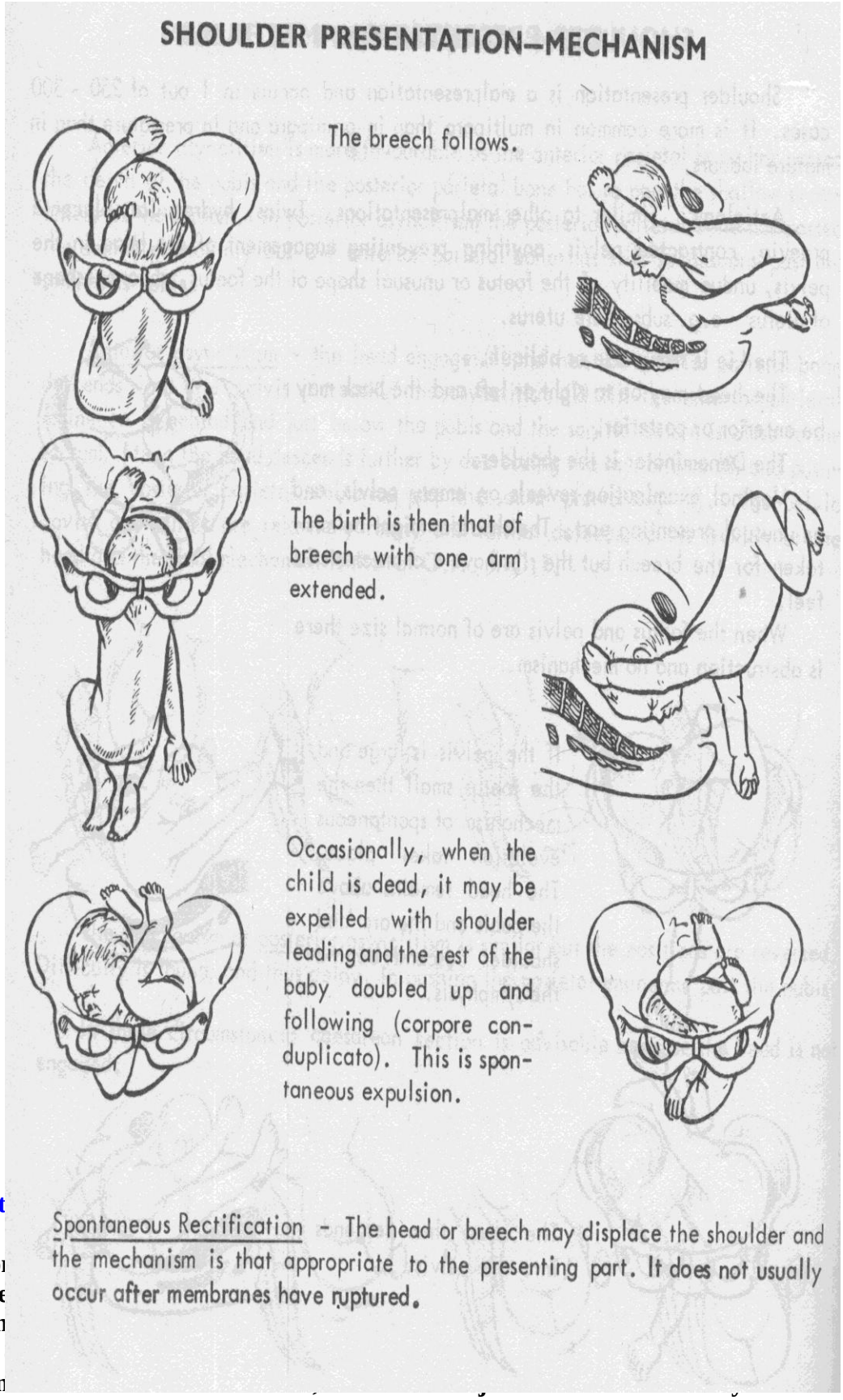

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SHOULDER PRESENTATION—MANAGEMENT

PALPATION

1. Fundal height is less than expected.
2. Uterine breadth is greater than expected.
3. Head in one flank and breech in opposite side.
4. Lie may be transverse or oblique.

AUSCULTATION

Site of foetal heart not significant (best heard through foetal back).

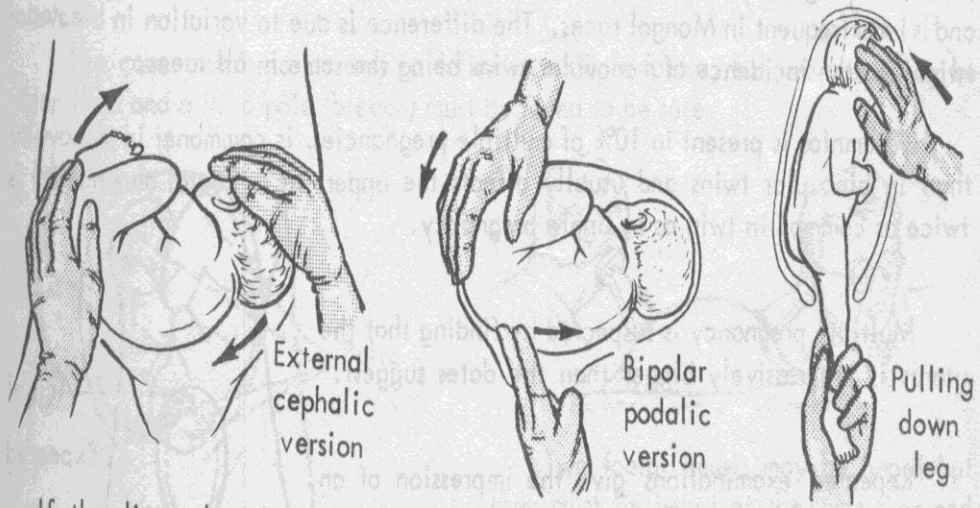
VAGINAL EXAMINATION

Prior to labour and in early labour, pelvis is empty. Hand, arm or elbow may be in pelvis, or ribs may be felt or tip of shoulder or iliac crest or trochanter of foetus. Placenta praevia may be a cause of transverse lie.

If the foetus is alive and viable caesarean section is the method of choice, but if it is dead then embryotomy may be carried out.

Shoulder presentation is an impossible labour unless the foetus is very small. The membranes rupture early in labour and the cord frequently is prolapsed.

In early labour if the membranes are intact external version to a vertex or breech can be attempted. If the membranes have ruptured and there is still liquor present bipolar version to a breech may be performed. This requires general anaesthesia.



If the liquor has drained away the uterus wraps round the foetus and manipulation even under deep anaesthesia may cause uterine rupture.