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Mortality in breech presentation

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The mortality in Breech presentation is a persistent, pertinent and pressing problem, as investigation into any perinatal survey will show, while its reduction is a challenge worth tackling.

The mortality is, of course, greatest with regard to the foetus, and we shall confine ourselves to this aspect only in today's discussion.

What then are the risks to the foetus? Chassar Moir has estimated that the foetus which presents by the breech runs four times the risk of death than a vertex does. He describes it graphically as being greater than the risk associated with even the most major of standard surgical operations, greater than the risk of a patient, who is to have a pituitary tumour removed.

In expert hands the foetal mortality rate may be drastically reduced *e.g.* Marshall (1934) 2.7%, Goethals (1940) 2.3%, Tompkins (1943) 2.7%, Greig (1945) 1.6%, Cox (1950) 3.2% and Dieckmann and Harrod (1955) corrected rate of 0.9% for babies weighing 2,500 or more grams. The average foetal mortality rate, however, is between 10-20%.

Pathological causes

The pathological causes of foetal death are many and are shown below:—

A) Complicated Breech

This includes concomitant maternal disease, *e.g.* Cardiac, Renal, Diabetes Mellitus and Pre-eclamptic Toxemia. Such conditions should not be included in any mortality survey, as they already prejudice foetal survival.

B) Uncomplicated Breech

1. Asphyxia

Antenatally, the foetus may die from too forceful an attempt at External Cephalic Version, especially under anaesthesia, the actual cause of the asphyxia being separation of the placenta. Knotting of the cord or tightening of the cord round the neck of the child may also be factors.

During labour and delivery, asphyxia may result from cord prolapse, from premature separation of the placenta, and from delay in delivery of the foetus with aspiration of liquor amnii. Mortality may take the form of a stillbirth or neonatal death. Too deep or prolonged anaesthesia may depress the child's respiratory centre, and in this connexion attention must be drawn to the very dangerous condition of aspiration by the mother of regurgitant stomach contents, with fatal results to her and the baby.

2. Intracranial Haemorrhage

This is the commonest cause of foetal loss, resulting from tears of the tentorium cerebelli and falx cerebri. It arises from difficulty in delivering the after-coming head, or from too rapid delivery of the soft head of the premature baby.

3. Abdominal organ injuries

Injuries to the liver, spleen and adrenal glands from improper handling of the breech delivery may also prove fatal. Other injuries, like fractures and nerve injuries are not usually fatal.

4. Prematurity

This, per se, accounts for a large number

of early breech fatalities, and it may also render the foetus more prone to death from the other causes mentioned above.

5. Foetal abnormalities

These include Hydrocephalus and Anencephalus, which constitute unavoidable foetal loss. Other abbormalities, which need not necessarily be fatal are Conjoined Twins and Locked Twins, presenting by the breech.

6. Resuscitative injuries

Last, but not least, must be mentioned fatal injuries resulting from too energetic attempts at resuscitation of the feeble newborn infant.

Etiology of Foetal Mortality in Breech presentations

There are several factors, which make a Breech delivery more hazardous than a Vertex delivery.

1. The breech, with the exception of the frank breech, is not a good dilator of the cervix and labour tends to be prolonged, with the increased risk of intra-uterine infection.
2. There may be cord prolapse from early rupture of the membranes with an ill-fitting presenting part, as a footling.
3. There are greater obstacles during a breech delivery than with a vertex *e.g.* extended arms or extended head. Manipulative measures, necessary or otherwise, may be consequently increased.
4. The obstacles become greater as delivery advances, whereas in vertex deliveries the danger is usually over with delivery of the head.
5. There is no time for moulding of the head. If one errs in estimating foetal size, the baby may pay, with its life, the price of our mistake.
6. Delivery of the breech through an incompletely dilated cervix has more disastrous effects for the foetus than with a vertex, and occurs more frequently.
7. If the placenta separates before the baby is born in a vertex, the head is already or nearly out, and the child may breathe, but in a breech the first gasp takes in liquor, etc.
8. Similarly, it is also possible that the cold air on the trunk, or undue handling of the body in a breech delivery may precipitate premature respirations with the intake of liquor amnii.

Factors influencing Foetal mortality in Breech presentations

I shall only list these factors here, and leave the detailed analysis to the next speaker. These are:—

1. Age of the patient
2. Parity
3. Foetal Maturity
4. Foetal size
5. Pelvic size and shape
6. Type of breech
7. Type of labour
8. Type of delivery, whether assisted or extracted
9. Skill of operator
10. Resuscitation and good nenontal care

Measures to reduce Foetal Mortality—Some do's and don'ts

1. Good Antenatal care

External cephalic version is advisable in most cases, and is especially necessary if the pelvis is suspect. Use of anaesthesia is not entirely universal.

Postmaturity should be avoided.

Any contraction of the maternal pelvis or increased size of the baby should be appreciated, and Caesarean Section performed in these cases. X-ray pelvimetry is often necessary, especially in Primigravid Breech presentations.

2. Good technique in Breech delivery

a) Hospital or institutional delivery is best.

b) Ideally, the delivery should be in the Obstetric Theatre, equipped with an Ana-

esthetic apparatus, adequate resuscitative measures and the opportunity for the lithotomy position.

c) Team work is necessary for a safe delivery—the Obstetrician, Anaesthetist, Paediatrician and Midwife all playing their respective roles.

d) It is advisable to keep the membranes intact in the first stage of labour unless the breech is extended, and to do a vaginal examination when the membranes rupture, to exclude cord prolapse.

e) Make sure the cervix is fully dilated before proceeding with the delivery.

f) Maintain the mother's own expulsive efforts as far as possible to effect delivery, because if one pulls on the legs, the arms and head will be extended, leading to more difficulties. "Get the mother to put the breech into your hands, rather than put your hands in after the breech" is wise advice from Prof. Bruce Mayes. Other terms as "Masterly inactivity" and "Make haste slowly" speak for themselves. Remember that you have 8 minutes from the birth of the umbilicus to delivery of the head. Test for blanching of the skin and do not compress the cord, as this will only result in further cutting off the oxygen supply to the foetus. If interference is necessary then act quickly and with precision. De Lee (19 37) states "Let me watch a man conduct a breech case, and I will give you his obstetric rating."

g) Use of local analgesia is preferable to general anaesthesia.

h) Episiotomy is necessary in all cases of Primigravidae, and sometimes even in multigravidae.

i) Forceps is preferred by many obstetricians for delivery of the after-coming head.

j) If there is arrest of the breech at the pelvic brim in the second stage of labour and the baby seems unduly large, discretion is the better part of valour, and resort to Caesarean Section should be the answer.

k) Adequate resuscitation of the new-born baby is vitally important. It is wise to aspirate the stomach contents of a weak infant, and intramuscular injection of Vit. K 1 mgm. may be given to cases of difficult forceps or breech deliveries as a prophylactic measure against cerebral haemorrhage.

l) Last, but not least in importance, is good paediatric care of the new-born baby, especially the premature infant.

So far we have been discussing the actual foetal mortality. In closing, may I put in a plea for those Breech babies who after a difficult delivery, survive to endure a living death as spastic children, perhaps unloved and unwanted. Let us strive to make our breech deliveries so safe, that it may be said of us (if I may borrow the great Churchillian phrase), "Never in the field of Obstetrics was so much owed by so many to so few."

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