MANAGEMENT OF THE FRANK-BREECH PRESENTATION

BY

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The frank breech, or breech presentation with extended legs, is well known as a cause of stillbirth and neonatal death. In order to reduce this danger to the infant many methods of delivery have been tried, such as induction of premature labour, routine bringing down of a leg, routine forceps on the aftercoming head, and even Caesarean section; but all these procedures involve interference, and danger to the mother by increasing the liability to infection. Obviously such a drastic treatment as Caesarean section can hold only a very limited place in the treatment of this condition, as the operation itself carries a mortality risk that is four times greater than the maternal mortality rate as a whole.

In the series of 100 cases now under review the child mortality rate has been considerably reduced by using simple methods with no risk to the mother. In the first place, all unnecessary interference has been eliminated; and, secondly (remembering how the new and inexperienced house-surgeon in a maternity hospital usually has one or more stillbirths before becoming proficient at breech deliveries), a special effort has been made to provide a skilled and sufficient staff of attendants for each breech delivery. This has been easy to arrange in this particular series of cases, as the institution (a municipal maternity home) is served by permanent full-time medical officers. The home consists of thirty-five beds (ten antenatal), and is a training school (for Certificate A) and also a postgraduate school for midwives, thus having an adequate staff of trained midwives.

From June, 1931, until April, 1938, 113 infants were delivered as "breech with extended legs." In thirteen of these cases twins or infants weighing less than 5 lb. were delivered, and for this reason have been omitted from the series. All thirteen were born alive, and suffered no ill effects from their mode of delivery. The results of delivery in the remaining 100 cases are shown in the accompanying table, which indicates the parity of the mother, weight of the child, and cases in which there were other complications.

The management of the delivery is kept as simple as possible; there is no interference except fundal and suprapubic pressure, unless definite indications arise. Induction of labour is performed only for post-maturity or small pelvis, as the mature head stands the compression of delivery better than the premature one. A leg is pulled down only when there is definite delay during the second stage, as the complete breech is a better dilator than the half-breech. In no case in this series was it found necessary to bring down a leg during the first stage of labour. Traction is not used, as this extends the arms and head. Hot towels are not employed, as they obstruct progress and make handling of the infant difficult; in no case has the child suffered from this omission. Forceps are used only when there is difficulty with the aftercoming head. They are, however, always boiled and ready for use in emergency. Episiotomy has been performed in most of the later cases of the series, especially in primiparae, as it reduces pressure on the infant's head and also eliminates risk of a third-degree tear. It is done while the breech is distending the vulva.

Table showing Particulars of Series of 100 Cases, with Complications and Results

	No. of Cases	Stillbirths	Neonatal Deaths
Parity :			
Primiparae	68	3	5
Multiparae	32	1	0
Weight of Child :			
5-6 lb.	15	0	0
6-7 lb.	35	0	1
7-8 lb.	40	3	3
8-9 lb.	7	0	1
9-10 lb.	3	1	0
Other Complications Present :			
Toxaemia of pregnancy (moderate degree)	14 (1 A.P.H.)	0	1
*Small pelvis	22 (4 cases induced)	0	0
Pyelitis	2	0	0
Lateral placenta praevia	2 (leg pulled down in 1 case)	0	1
Post-maturity	4 (all induced)	1	0

* Twenty cases with a diagonal conjugate of less than $4\frac{1}{2}$ inches are included under this heading (in no case was it less than $4\frac{1}{2}$ inches), and the remaining two cases had slight contraction of the outlet.

Mode of Delivery

Delivery is allowed to proceed naturally until the child's body is born as far as its costal margin (fundal pressure being used only if progress is unduly slow). From this stage onwards no time is lost until the child's mouth is free, as the head begins to enter the pelvis and may press upon the cord. A loop of cord is *not* pulled down to feel for pulsation, as this not only wastes valuable time but may also pull the cord out of a safe hollow in the pelvis. The uterine contraction is at once aided by fundal pressure until the head leaves the uterus and enters the pelvic cavity; then the patient is rapidly anaesthetized with chloroform, so as to enable the head to be pushed firmly but slowly through the pelvis by suprapubic pressure. (Fundal pressure is of little use at this stage, and efficient suprapubic pressure is difficult with the patient conscious. Uterine contractions and bearing down are no longer of any use, as the head has left the uterus.) As soon as the head is low enough its delivery is aided by the Mauriceau-Smellie-Veit (or shoulder-traction and jaw-flexion) method. Once the mouth is free and the child can breathe the delivery through the outlet can be as slow as one pleases.

The following is the personnel present at each delivery. A medical officer delivers the child and conducts the labour generally. Two senior midwives assist in the delivery—one to perform fundal and suprapubic pressure, the other to give the chloroform. In emergency one skilled midwife can perform both these duties.

Results obtained by these Methods

Risks to Mother.—(a) *Tears* (if no episiotomy is done): Primiparae run a 60 per cent. risk of a second-degree tear and 4.5 per cent. risk of a third-degree tear, while multiparae run a 40 per cent. risk of a second-degree tear. (b) *Pyrexia*: No case of notifiable pyrexia occurred in the series.

Risks to the Child.—Risk of stillbirth, 4 per cent.; risk of neonatal death, 5 per cent.

Particulars of Stillbirths in this Series

Case 12. Primipara. Baby 7 lb.—The child died during the first stage of labour, and at birth was found to have been strangled by the cord being tightly wound round its neck.

Case 29. Primipara. Baby 7 lb.—This was a case of badly managed labour. The second stage lasted six hours, and the child died one hour before delivery. Obviously a leg should have been brought down earlier in the second stage when advance became slow.

Case 61. Multipara. Baby 9 lb. 1 oz.—Delay occurred owing to difficulty in delivery of the shoulders, and death was due to asphyxia. There was no intracranial injury.

Case 76. Primipara. Baby 7 lb.—As Case 61.

Particulars of Neonatal Deaths

Case 30. Primipara. Baby 8 lb. 9 oz. Complicated by Toxaemia of Pregnancy.—The child was born with white asphyxia, and never recovered. There was marked delay during delivery, due to dorsal displacement of an arm. There was no intracranial injury.

Case 32. Primipara. Baby 7 lb. 7 oz.—Death was due to foetal abnormality—hydrocephalus.

Case 70. Primipara. Baby 6 lb.—Death was due to foetal abnormality—spina bifida.

Case 77. Primipara. Baby 7 lb. 12 oz. Complicated by Toxaemia of Pregnancy.—The child died of haemorrhagic disease on the third day in spite of treatment with blood.

Case 85. Primipara. Baby 7 lb. 8 oz.—The child was born in a state of white asphyxia due to separation of a lateral placenta praevia, and never recovered. There was no intracranial injury.

Of these nine fatalities only four were actually due to the mode of delivery (Cases 29, 30, 61, and 76).

Comparison of the Mortality Rate with that of the Maternity Home for all Cases.—During 1938 (when the percentage of primiparae was practically the same as in this series—that is, 68 per cent.), the stillbirth plus foetal mortality rate was 6.5 per cent. The corresponding percentage for this series is 9.

Observations on the Series

1. Induction of labour does not seem to be necessary unless there is some special indication—for instance, post-maturity, small pelvis, or such complication as toxaemia of pregnancy. In this group of cases, ten (10 per cent.) were induced for the following reasons: post-maturity (four), toxaemia of pregnancy (two), small pelvis and toxaemia (three), and small pelvis (one).

2. A leg need not be pulled down as a routine method, as delay due to splinting by the legs occurred in only four cases (Cases 29, 76, 78, and 86).

3. Extension of the arms is not a common complication in the absence of traction. It occurred in three cases only.

4. Routine delivery of the head by forceps is unnecessary. They were needed in only two cases.

5. Hot towels are unnecessary.

6. Episiotomy is advisable, especially in primiparae.

Conclusion

A relatively low infant mortality rate can be obtained if the frank breech is delivered, with a minimum of interference, by a skilled team of attendants, preferably in an institution. Thus every effort should be made to diagnose this complication (especially in patients booked with midwives) so as to ensure delivery in suitable institutions with skilled personnel instead of being left to one midwife in difficult surroundings with inadequate help.

Clinical Memoranda**Rupture of the Thoracic Aorta**

Rupture of the thoracic aorta is an uncommon cause of death. The following case is of interest in that death did not occur instantaneously, and, secondly, because it presented a problem in differential diagnosis.

CASE HISTORY

The patient was a man aged 63 who gave a history of having had no medical attention for years but had not felt well for two years. He suffered from occipital and, occasionally, frontal headache; dyspepsia and progressive weakness, associated with a certain amount of dyspnoea. These symptoms, however, did not warrant him seeking medical advice.

On March 21, 1939, while stooping forward to do some repairs, he became suddenly ill. He experienced a slight pain at the lower end of the sternum and in his back, at approximately the same level. A feeling of faintness then came over him and he sat down. His legs then felt numb and he decided to enter his home, and this he just managed to do before he fell to the ground. To his surprise his legs refused to function. This information he gave lucidly. He was seen at this stage, and examination disclosed that both legs were paralysed from the waist down.

The leg reflexes were absent. Sensation to pain, touch, and temperature was, however, present. The abdominal reflexes were absent. There was no loss of sphincter control. The pupils were normal and reacted to accommodation and light. No other nervous lesion was found. His blood pressure was systolic 150, diastolic 100. Auscultation over the apex revealed an accentuated first sound. No murmur was heard.

It was decided to remove him upstairs. This was done with the patient assisting by holding on to the stairs. When in bed he felt comfortable with very little pain. He was now left prior to his removal to hospital. An urgent message within twenty minutes prevented this.

The patient was dying when seen for the second time. He was unconscious. His face was grey. Breathing was imperceptible. There was no pulse at the wrist. Over the praecordia the auricles could be heard beating quickly with an occasional ventricular systole. The vesicular murmur was inaudible. Within three to four minutes the patient was dead.

POST-MORTEM FINDINGS

At the necropsy the following facts were found. In the right pleural space free blood was present. The left pleural cavity contained adhesions in its lower half.

The lungs showed changes indicative of chronic bronchitis. There was hypertrophy of the heart, especially the left ventricle. The musculature was pale and soft. The valvular orifices were normal. Extending on either side of the aorta from the fourth to the sixth thoracic vertebrae was a mass of clotted blood, and when this vessel was opened it was seen that a tear was present at the lower border of the fifth thoracic. This tear had the appearance of being incised as with a knife. It extended transversely and in an upward direction for about an inch. The aorta itself was the seat of advanced atheromatous changes, but the area surrounding the tear was entirely free from any degenerative change.

In the spine adjacent to the lesion nothing pathological was found. The gall-bladder walls were diseased and a stone was present. The liver was somewhat enlarged and fatty. Both kidneys were cystic with the capsules adherent. The transverse colon was distended to a fair degree. Examination of the brain, which was minutely investigated, showed nothing.

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