

LOCKED TWINS

(A Case Report)

by

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The complication 'Locked Twins' enjoys a continued interest even today, because of its extreme rarity. More so by the drama involved, where one foetus obstructs the delivery of the other, in various combinations, in second stage of labour, when the obstetrician least expects such a complication, taxing his ingenuity to the utmost. This has prompted the authors to report this case where the 'forecoming' head of the second of the twin obstructed the expulsion of the 'after-coming' head of the co-twin in the pelvic cavity ending up in fresh still births.

Case Report

Mrs. M. aged 28 years, a primigravida who has conceived after 3 years of married life, was admitted to the antenatal wards of Christian Medical College Hospital on 23-1-1977 at 30 weeks gestation with moderate pre-eclamptic toxæmia and hydramnios for investigation and management.

On Examination

She was 5 feet 2 inches tall (157 cms) with good physical build. She had moderate pitting oedema of feet and abdominal wall with a B.P. of 120/100 mm and trace of albumin but no sugar in the urine. Uterus was of term size

(more than the period of gestation by dates), irritable, with a shining, tense skin. She had marked hydramnios on palpation with a fundal height of 42 cms and girth of 39 inches. Multiple foetal parts could be made out but the type of presentation was difficult to judge. Foetal heart sounds were normal. As warranted by the aforementioned findings provisional diagnosis of multiple pregnancy with moderate Pre-eclamptic toxæmia and hydramnios was made.

Plain X-ray abdomen revealed twins, with both babies presenting as vertex; maturity being consistent with the period of gestation (Fig. 1). All the routine investigations were normal except the G.T.T. which showed a slightly raised two hour value of 143 mgm%.

In the ward she was put on absolute bed rest, round-the-clock sedation and diuretics to which she responded after 24 hours. But the uterus continued to be irritable. She was transferred to labour room on 28-1-1977 5.30 p.m. with ruptured membranes for half an hour.

Abdominal examination now revealed a strongly acting uterus at the frequency of 3 to 4 minutes, contractions lasting for 45 seconds. Per vaginally the cervix was completely effaced and 3 cms dilated with absent membranes. Presenting part was complete breech at O' station with one side footling in the vagina. No cord was felt within reach of finger. Pelvis was assessed to be good, gynaecoid.

Patient progressed rapidly to full dilation in less than 2 hours, breech with the footling of first baby having expelled upto umbilicus. Rapid mediolateral episiotomy was made under pudendal block. After the delivery of the shoulders, there was considerable difficulty in extracting the aftercoming head. After the lapse of about 5 to 8 minutes, a vaginal exami-

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nation revealed aftercoming head of first twin jammed along with the forecoming head of the second cotwin, below the pelvic brim, at about the level of ischial spines.

All the attempts to push up the head of the second twin to extract the first one were futile, with the gradual disappearance of the cord pulsations, denoting tragedy striking the first one. The foetal heart sound of the second could not be listened to properly, due to the strong contractions coming at quick succession with no respite in between. In a final bid to save the second twin (if at all that was possible) an endeavour was made to push up the after coming head of the first baby, to allow room for the extraction of second baby. This was thought possible as the aftercoming head of the first one was at a higher level than the forecoming head of the second cotwin. This brought out the desired result with the delivery of the second baby, during the next two contractions but unfortunately ending up again in a preterm, female fresh still born baby weighing 1000 gms. This baby had marks of compression on the right parietal bone to the extent of a deep depression (Fig. 2). The first baby could be extracted without any difficulty after that, which was (as expected) a preterm, still born, female baby weighing 1520 gms. The entire placenta was expelled almost immediately, with a retro-placental clot of 150 cms, suggesting an abruption, most probably commencing by the second stage, contributing to the death of second baby. Third stage was normal.

The placenta weighed 750 gms, appearing single, grossly healthy, with rich vascular connections between them (Uni-Ovular) Figs. 3 and 4. The cord of the first one measured 40 cms and that of the second 30 cms with no abnormalities of its contents. It had a common chorion and amnion with no septum in between the sacs indicating monochorionic, mono-amniotic variety. Patient made an uneventful recovery and was discharged on the seventh postpartum day.

Discussion

As regards the incidence, the standard figure of Von Braun viz 1 case in 90,000 deliveries (or 1 case in 1,000 twin deliveries) was generally accepted for want of other well documented figures. till

Horder (1944), Stenstrom (1951) and Lister (1958) who reporting on 7 cases among 17,230 deliveries giving an incidence of 1 in 2461 (or 1 in 140 twin deliveries). This seems to be the highest figure quoted so far. Lately Cohen *et al* (1965) quoted the figure of 1 in 71,644 deliveries (or 1 in 817 twin deliveries or 1 in 87 Breech—vertex combination). Mention has must be made about the outstanding papers on the subject viz. those of Jahkola (quoted by Falke 1939), Lawrence (1949) Williamson (1953), Nissen (1958) and Parikh (1967); the last author quoted that a total of 165 cases have been reported in literature till 1965, adding one of his own.

This case agreed well with most of the etiological factors heretofore considered in the occurrence of this condition namely primiparity, young age of the mother, premature rupture of membranes, roomy pelvis, small foetuses and possibly use of oxytocics during the second stage. The studies of Guttmacher and Kohz (1958) and Cohen (1965) suggest that the cotwins entangle because of their small sizes in relation to the larger area of pelvic "inlet" resulting in "competition" between them. The author's findings very well agree with this contention. Stenstrom (1951) found a higher incidence of locking in uniovular twins (monochorionic; monoamniotic), due to oligohydramnios. Eldeiry (1960) commented that this accident more commonly befalls when the leading breech happens to be "complete" as this gives a closer contact between the head of the first with the chest of the cotwin. In the present case it was a complete breech with one side "footling".

Other contributory factors mentioned in the literature are oligohydramnios, hypertonicity of uterus, extension of the

head (Coleman 1936) and monochorionic-monoamniotic twins (Nissen 1958). In the present case the patient instead had marked hydramnios, and the after coming head of the first twin showed marked deflexion. But premature rupture of membranes of monochorionic sac would have resulted in complete drainage of liquor, thereby providing that factor necessary before "locking".

As regards the type of locking this agrees with "impaction" suggested by Nissen (1958). The head of the second twin did show an area of indentation due to pressure (Fig. 2).

The contractions were quite strong with poor relaxation in between with evidence of abruptio placentae in the form of retroplacental clots weighing 150 gms. This agrees well with Nissen's (1958) contention of "hypertonicity" of uterus in first pregnancy.

Cohen *et al* (1965) in their paper suggested the prediction of "potential interlocking" from a lateral radiograph of the twins. In the present case unfortunately the lateral view was not taken as the authors were not aware of this above paper at the time of management.

In the present case "disengagement" of forecoming head of second twin under anaesthesia would be the treatment of

choice. Though successful disengagement could be done in this instance, it resulted in fresh stillbirths of both babies, the first one due to cord compression, the second one due to abruptio placentae and probably intracranial compression of a preterm head.

In conclusion the diagnosis of locking is made late in second stage at a point of "no return". Suspicion and increased awareness of cases of "potential locking" before labour will go a long way in successfully managing this obstetrical tragedy in terms of foetal salvage.

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See Figs. on Art Paper XIII