# INTERLOCKING IN TWIN PREGNANCY

## (A Case Report)

by

V. T. PARMAR*, M.D., D.F.P.; A. V. PANCHAL**, M.B., B.S.

and

J. H. FONSECA***, M.D.

Interlocking due to apposition of the inferior surfaces of the chins of both twins above or below the pelvic inlet is a rare complication of labour in twin pregnancy. Braun gave the incidence of locked twins as 1: 90,000 deliveries or 1: 1000 twin gestations (Moir, 1964). Lawrence (1949) could collect reports of only 28 cases of locked twins published between 1907 and 1949. Recently Cohen *et al* (1965) gave the incidence as 1: 71,664 deliveries or 1: 817 twin gestations. Though not quite as rare as previously thought, a case of locked twins is of sufficient interest to merit publication.

**Case Report**

M. X., aged 24 years, was admitted as an emergency case to the Lokmanya Tilak Municipal General Hospital, Bombay, on 10-11-1966 at 3-10 P.M. for pre-eclampsia. She was a primigravida at full-term. She had moderate oedema of feet, vulva and abdominal wall. Her blood pressure was 140/90 mm. of mercury, and pulse was 80 per minute; she was averagely built.

*Registrar.

**House Surgeon.

***Hon. Obstetrician & Gynaecologist.

*Lokmanya Tilak Municipal General Hospital, Bombay.*

*Received for publication on 9-12-66.*

Abdominal examination revealed a full-term uterus with twin pregnancy. One foetus presented by vertex and the other by breech. They were not engaged. The foetal heart sounds were normal. The foetuses seemed to be below average weights. There was no oligohydramnios. She was not in labour and her pelvis was adequate. Other systems were normal. She had 8 gms. of haemoglobin and the urine was clear. Since we were certain of our diagnosis of twin pregnancy and presentation of foetuses, radiological examination of the abdomen was not performed. She was kept under observation and was advised complete rest in bed, diuretics, haematinics and sedation.

On the next day, i.e. on 11-11-1966 at 3-0 P.M. she went into labour. A vaginal examination, done after 3 hours, revealed two fingers' dilatation, a completely taken up cervix, presence of bag of membranes and a breech presentation. At 9-0 P. M. on the same day, the membranes ruptured and within 10 minutes, twin A presented by buttocks at the vulval introitus. One of us (A.V.P.) attempted to conduct the breech delivery, but failed to extract the aftercoming head. The patient was having strong uterine contractions. The cervix was fully dilated. The vertex (occipito-posterior position) of twin B was felt in the pelvis just above the ischial spines and it was well jammed into the pelvis. The occiput of the aftercoming head was very high in the abdominal cavity. Its chin could not be palpated owing to the presence of the forecoming head of twin B. The condition of locked twins was diagnos-

ed and it was decided to deliver them under anaesthesia. Meanwhile the cord pulsation of twin A had disappeared, but the foetal heart sounds of twin B were regular.

By 9-45 P. M. the patient was given general anaesthesia, but we failed to push up the forecoming head of twin B as it was well jammed into the pelvis and the patient was having strong uterine contractions. As the occiput of the aftercoming head was not accessible per vaginam, craniotomy of the head could not be performed. The trunk of twin A was delivered by decapitation with the help of Gigli's saw. The head of twin A was then pushed up. Twin B was delivered by forceps at 9-55 P.M. It was face to pubis extraction. The head of twin A, which was pushed up before the forceps delivery of twin B, was extracted by applying a bulldog volsellum to its stump of neck. The uniovular placenta was expelled immediately. Both the twins were female and premature. Twin A weighed 1500 gms. and twin B weighed 2000 gms. The latter cried immediately after the forceps delivery.

The patient had an uneventful puerperium in the hospital. Her blood pressure came down to 120/70 mm. of mercury and the oedema of feet was much less. She was discharged on 17-11-1966. The mother and the baby were in good condition at the time of discharge.

*Discussion*

Four varieties of locked twins have been described. They are (1) locking of two forecoming heads, (2) locking of forecoming and aftercoming heads, (3) locking of aftercoming head of one foetus with the shoulder of the other, (4) locking when both foetuses present with breech and with limbs prolapsed. Our case belongs to the second variety which incidentally is the commonest one. Nissen (1958), reviewing the world literature, states that 45 cases of locked twins of the breech and vertex combination have been described till 1957.

It is difficult to anticipate this peculiar complication of labour in twin pregnancy. Large pelvis, small babies, oligohydramnios and primiparae are predisposing factors. Our case, a primiparous patient, had not diminished liquor amnii. Cohen *et al* (1965) advise routinely lateral and postero-anterior x-ray plates of abdomen, stating that locking may be expected if twins have opposite poles and parallel lies in the vertical axis. Unfortunately we have had not enough cases to verify this point though the radiological examination is worth considering.

Disparity in the sizes of the foetal skulls may favour the interlocking of twins as enough space in the pelvis is available for the head of twin B to descend even if the head of twin A is present. This, we think, was an important predisposing factor in the present case. The difference in weights of the two foetus was 500 gms.

As happened in our case, the complication is usually diagnosed late in labour. Nondescent of the first foetus, in the presence of effective uterine contractions, leads one to think, in addition to locked twins, of various other causes such as an ovarian or uterine tumour obstructing the birth passage, presence of aftercoming hydrocephalic head, double-headed monster and constriction ring. The interlocking of twins can be diagnosed wih reasonable accuracy by proper examination.

*Treatment*

The treatment of locked twins consists of disengagement and assisting the delivery whenever possible. In

a case like the present one, it may be possible to push up the forecoming head of twin B, specially early in labour, and deliver twin A. Continued breech extraction may result in an irreversible impaction in the pelvis necessitating instrumental delivery, with sacrifice of the first baby. Craniotomy of the aftercoming head whenever possible should be attempted. Failing that, decapitation is necessary. In our case, we had used Gigli's saw for decapitation of twin A. The operation was smooth and clean. Lawrence (1949) believes that caesarean section should be considered liberally in cases of locked twins. No cases of rupture of the uterus, however, have been reported.

*Summary*

A case of interlocked twin pregnancy (breech and vertex combination) is described and its diagnosis and management discussed.

*Acknowledgement*

Our thanks are due to Dr. V. N. Panse, M.D., D.P.H. for allowing us to quote hospital case records.

*References*

1. Cohen, M., Kohl, S. G. and Rosenthal, A. H.: Am. J. Obst. & Gynec. **91**: 407, 1965.
2. Lawrence, R. A.: J. Obst. & Gynec. Brit. Emp. **56**: 58, 1949.
3. Moir, C. J.: Munro Kerr's Operative Obstretics, ed. 7, London, 1946, Balliere, Tindall & Co., p. 221.
4. Nissen, E. D.: Obst. & Gynec. **11**: 514, 1958.