

THORACO-OMPHALOPAGUS CONJOINED TWINS

(A case report)

by

R. K. DAS* D.G.O., M.O.

F. R. CHOUDHARY** M.B.B.S.

Conjoined twins are very rare obstetric abnormalities. Potter (1961) reported them only once in 60,000 deliveries from Chicago Lying in Hospital. Freedman and his associates (1962) noted an incidence of one in 80,000 deliveries. In India, Gupta and Wakhloo (1968) published one case. One case of thoracopagus conjoined twins was reported by us recently (Das, 1969). This is the second case reported from this institution (1 in 60,000 deliveries).

The earliest record of double monsters was probably a 'dicephalous' born in the year 375 A.D. as reported by Shrewsbury (1946). He mentioned another female dicephalous born in 961 A.D. known to live till adulthood. Other interesting pairs known to survive till adulthood were the famous "Siamese twins", the Hungarian sisters, Helen and Judith (born in 1701), living together for 22 years and the Scottish brothers (during the reigns of James III and James IV) attaining the age of 28 years (quoted by Badawy and Ramzy, 1961).

Conjoined twins are uniovular.

According to Hill *et al* (1961), female thoracopagus is three times more common than male. Khanna *et al* (1969) reported a case of conjoined twins in which the external genitals of one foetus was male and that of the other female.

The origin of these monsters is still disputed and differently viewed. These twins are attributed to embryonic fusion or division. Inner cell mass division after its differentiation results in univular twins. In the normal circumstances, axial splitting occurs and individual twins result. If the splitting is incomplete, the intermediate area is shared by both the embryos and thus conjoined twins are formed.

This fusion may be superficial when separation is easy and the twins may survive. On the other hand, if the fusion is visceral involving the vital organs, separation is almost impossible. The mode of fusion in well developed complete twins may be 1. anterior (thoraco or thoraco-omphalopagus), 2. posterior (pyopagus), 3. cephalic (craniopagus) or 4. central (ischiopagus).

The following is a case report of a thoraco-omphalopagus twins:

CASE REPORT

A 20 years old Hindu female was admitted to the Obstetric ward of the Assam Medical College Hospital, Dibrugarh, on

*Assistant Professor.

**Postgraduate research student.

Dept. of Obst. & Gynec., Assam Medical College, Dibrugarh.

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21-3-69, for confinement. She came to the hospital in the late second stage of labour following a pregnancy of about nine months. She had been in labour for 48 hours before admission into this hospital. Membranes ruptured about 14 hours back. She had not felt foetal movements since one hour before admission. Initially she was attended by her general practitioner who diagnosed the case to be twins. An attempt to deliver the baby by forceps failed. Thereafter she was referred to us for treatment.

She did not have any prenatal care during the course of this pregnancy, but she maintained good health.

Her menstrual history was normal. She could not remember the date of her last menstrual period. There was no significance in her past medical and family history. She was married in 1967 and had a premature stillbirth in 1968. The stillborn baby did not have any congenital abnormality.

On general examination, she was already exhausted. Blood pressure was 132/40 mm of Hg; and pulse 100/m. There was no oedema and pallor. Systemic examination revealed no abnormality. On abdominal examination, the uterus was found to be contracting and tender, without appreciable relaxation. This made the palpation of the foetal parts difficult. Foetal heart sounds were not audible. Bladder looked slightly distended but this did not subside even after catheterisation. Bowels were markedly distended.

On vaginal examination, the vulva was moderately oedematous. One foetal head was noted to be lying out of the vaginal introitus. Further internal examination revealed the breech of the second twin (twin B) by the side of the first (twin A). An initial attempt at extraction of twin A was unsuccessful. Intrauterine exploration revealed a fusion band involving the ventral surfaces of both the twins. However, the next attempt could deliver the first twin with much difficulty. Twin B was next delivered by breech extraction without much effort. No anaesthesia was needed during this manipulation. One thick umbilical cord was attached to the common fused umbilicus. The placenta which

was single was delivered next along with the membranes.

Examination of the foetuses and the placenta

Both the foetuses (Fig. 1) were male weighing jointly 10 pounds and 8 ounces. The fusion line was from the body of the sternum to the umbilicus. One foetus (twin A) was bigger than the other (twin B). Both had extended spines.

Postmortem examination revealed a common liver to both the foetuses. Twin A had it on the right side whereas twin B on the left side. Gall bladders were separate. Twin A showed a normal disposition of the structures, whereas twin B showed transposition of the viscera. In the gastrointestinal tract, there was a common jejunum from the duodeno-jejuno junction to jejuno-illial junction. The rest of the tract was independent. Both the twins had a common tubular heart within the same pericardium with separate aortae and vena cavae. Twin A had it on the left side, whereas twin B on the right side. Lungs of the foetuses were normal and independent.

The placenta was single and big weighing jointly 2 pounds 4 ounces. There was a velamentous insertion of the cord. No other abnormality was detected.

Comments

Antepartum diagnosis of conjoined twins is a real problem. Diagnosis is almost impossible by clinical examination. Recently, emphasis has been laid on radiological diagnosis. Melin (1967) reported a case of conjoined twins diagnosed by antenatal radiography. By subsequent amniography, he found that the abdominal viscera were shared by both of them. Gray *et al* (1950) described the "kissing position" of the foetuses and the unusual backward flexion of the cervical spines as diagnostic features. Graber (quoted by Moir 1956) pointed out that in radiography of conjoined twins, the two heads were at

the same level even at repeated exposures, whereas in normal twins they were not at the same level. On the other hand, according to Freedman *et al* (1962). X-rays are inconclusive because of the large amount of liquor amnii.

Intrapartum diagnosis is, however, less difficult. Labour in normal twins is usually uneventful. If it presents unusual difficulty in the extraction, locked twins or conjoined twins should be kept in mind. Careful internal exploration is then indicated. In a case reported earlier by one of us (Das, 1969), a diagnosis of conjoined twins was made when intrauterine exploration showed a band of fusion uniting both the twins. In the present case, a similar difficulty was experienced in conducting the labour. An internal exploration clinched the diagnosis.

Normal delivery is often impossible. Most accidents occur, sometimes with disastrous consequences, when an attempt at forcible extraction is made (Mahfouz, 1949, quoted by Theresa and Lee 1967). Ripman (1958) said that in this modern era caesarean section is far less hazardous to the mother than complicated and extensive blind intrauterine manipulations. This is also the opinion of Moir (1956) and Freedman *et al* (1962). Breech is more favourable for vaginal delivery than the head. Moir (1956) advised version in cephalic presentation. This facilitates any subsequent manouvre that may be necessary.

Spontaneous delivery often occurs with small foetuses. For large foetuses at full term, as in this case, assisted vaginal delivery is possible in some cases. There was a torsion of

the band of fusion resulting in vertex-breech presentation. In which stage of pregnancy this torsion developed is difficult to understand. This probably made the spontaneous vaginal delivery easy.

Induction of labour at the 36th week was advocated by Moir (1956) in some cases diagnosed antenatally. Badawy and Ramzy (1961) similarly suggested induction of labour if diagnosed before the 36th week allowing vaginal delivery, and caesarean section if diagnosed at term.

The problem will arise if the babies are born alive. Operations for separating the twins continues to be unsuccessful. Sherman (1965) made an unsuccessful attempt at separation of a thoraco-omphalopagus twins. Melin (1967) said, "In view of previous totally unsuccessful attempt at separation of a thoraco-omphalopagus twins, strong support was given to vaginal delivery".

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References

1. Badawy, Abdul Hamid and Sheheta, Ramzy: *Obst. and Gynec.*, 18: 106, 1961.
2. Das, R. K.: *J. Obst. and Gynec. India*, 19: 246, 1969.
3. Freedman, Henry, L., Tafeen, Carl H. and Harris Herbert.: *Am. J. Obst. and Gynec.*, 84: 1904, 1962.
4. Gray, C. M., Nix, H. C. & Wallace, A. J.: *Radiology*, 54: 398, 1950.
5. Gupta, A. N. & Wakhloo, R. L.: *J. Obst. and Gynec. India*, 18: 344, 1968.

6. Hill, A. J. Jr., Peterson, C. G., Grandahl, R. D. and Krippaehne, W. W.: *J. Paed.*, **58**: 99, 1961.
7. Khanna, K. K., Roy, P. B. & Bhatt, V. P.: *India J. Med. Sc.*, **23**: 201, 1969.
8. Melin, J. R.: *Obst and Gynec.*, **29**: 1, 50, 1967.
9. Moir, C. J.: *Munro Kerrs operative Obstetrics*, ed 6, London, 1956 Baitiere, Tindall and Cox, p. 255.
10. Potter, E. L.: *Pathology of the Foetus & Newborn* ed. 2, Chicago, 1961 Year Book Publication, p. 216.
11. Ripman, H. S.: *Guys' Hos. Rep.*, **107**: 173, 1958.
12. Sherman R. T., Wilson, H. & Pate, J. W.: *Ann. Sur.*, **161**: 390, 1965.
13. Shrewsberry, J. F. D.: *J. Obst. and Gynec.*, *Brit. Emp.* **56**: 67, 1946.
14. Therese, L. & Lee, K. H.: *J. Obst. and Gynec.*, *Brit. Comm.*, **74**: 757, 1967.

See Fig. on Art Paper VIII