

Conjoined Twins - Report of two cases.

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Conjoined twins or Siamese twins as they are popularly known derive their name from the twins born in Siam. It is a rare occurrence resulting from late and incomplete division of monozygotic embryonic disk generally after 13th day of fertilization. The phenomenon is a matter of curiosity by general public and hence early direction by routine antenatal ultrasound is desired. We present two cases of omphalopagus conjoined twins diagnosed antenatally.

Case Report :

Case 1 : A 22 years old primigravida patient came in 2nd trimester at 20-22 weeks of pregnancy for routine antenatal ultrasound. She had no family history of twin pregnancy.

Antenatal ultrasound showed conjoined twins with two separate heads and joined from the level of xiphisternum downwards [Fig. 1]. The twins had two pairs of upper and lower limbs.



Fig.1: Ultrasound showing conjoined twins joined from the level of xiphisternum downwards.

A single umbilical cord [Fig. 2] supplied them with umbilical artery dividing into two after entering the umbilicus [Fig.3]. One of the babies had thoracic kyphus while the spine of other baby was normal. They had two urinary bladders communicating with each other.



Fig 2&3: Ultrasound showing a single umbilical cord supplying them with umbilical artery dividing into two after entering the umbilicus.

The pregnancy was terminated after proper parental counseling.

The babies born were both having female external genitalia and they had two separate heads, four upper limbs and four lower limbs [Fig. 4]. They were attached at lower thorax and anterior abdominal wall. There was a single umbilical cord entering the umbilicus. Radiographs of the twins [Fig.5] showed kyphosis in thoracic spine of one baby. One of the babies had dextrocardia with situs inversus.

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Fig.4: Photographs of the babies show two separate heads, four upper limbs and four lower limbs.They were attached at lower thorax and anterior abdominal wall.



Fig. 5: Radiograph of the babies showing kyphosis in one of them.

Ultrasound showed part of liver was shared between the babies.

Due to cultural constraints autopsy of the babies could not be done.

Case 2 :

A 25 year old female with gravida three, para two with no history of abortion and no family history of twins came at 24 weeks of gestation for routine antenatal ultrasound.

The ultrasound [Fig.5] showed thoraco-omphalophagus types of conjoined twins with separate heads and four upper limbs with only two lower limbs. The pregnancy was terminated after proper parental counselling.

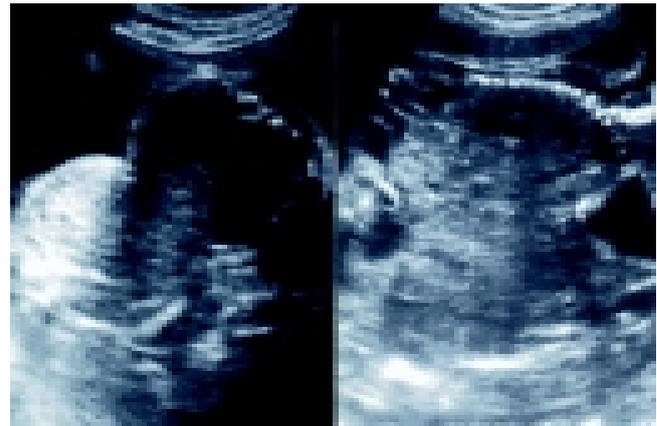


Fig. 6: Case 2 :Ultrasound shows thoraco-omphalophagus types of conjoined twins.

Discussion :

Conjoined twins is a rare sporadic event with prevalence of 1 in 50000 to 100000 births [1] and necessarily occurs only in mono chorionic monoamniotic pregnancies. The mortality rate is quite high. The pattern of fusion has been studied by Barth and coworkers. The nomenclature is based upon the joined regions [2]. In case of symmetry of the joined regions, the anatomic site of fusion is named, followed by the suffix pagus, from the Greek for fastened. Typical fusions are thoraco - (chest), omphalo - (umbilical - abdominal), pygo - (sacral), ischio - (pelvic) and cranio - (head).

Very extensive zones of fusion may be named by the prefix di-(meaning two) followed by the portion of twins that is unfused like dicephalus (two heads in one baby), dipygus (single head and torso with separate pelvis - four legs).

Asymmetric forms known as heterogeneous are exceedingly rare and have a parasitic attachment of a variably sized portion of anatomy attached to or even within

any region of the body. Of the various forms anterior fusion from the midchest to umbilicus is most common accounting for 75 % of cases as is seen in our case.

The embryological basis is split occurring after day 13, so that the twins share body parts in addition to their chorion and amnion [1].

The major role of sonography is to analyze the extent to which the organs are shared so that a reasonable assessment of surgical separability can be made. Sharing of heart or brain virtually excludes separability.

If based on sonographic features, surgical separation and viability appear possible, caesarean section is indicated, since dystocia is likely during vaginal delivery which may also cause fetal and maternal injury[3].

Antenatal diagnosis by ultrasound can be done by following signs: both head in same plane with inseparable skin contact which is persistent and no change in relative position after maternal movement and manual manipulation[4].

The pitfalls of ultrasound are that a relatively small zone of fusion may be pliable and permit the twin to rotate as much as 180 degrees so that a vertex breech presentation is possible. With extreme degrees of fusion, the twins may be mistaken for a singleton.

Separation of conjoined twins is a complicated procedure which involves a multidiscipline team (surgical, anaesthetic and nursing), the prognosis is often determined by underlying anatomy[6, 7].

Conjoined twins are a subject of curiosity. Early diagnosis and precise characterization is essential for proper obstetric and postnatal planning. The presented cases highlights the features of two cases of thoraco-omhalopagus twins which is the commonest variety. Proper parental counseling should be provided to reduce psychological trauma and plan early intervention.

REFERENCES :

1. Finberg HJ. Ultrasound Evaluation In Multiple Gestation. In Callen's Ultrasonography in Obstetrics and Gynecology : Harcourt Publishers 3rd edition, 1994; Chapter 8:121-124.
2. Barth RA, Goldberg JD et al; conjoined twins, Prenatal diagnosis and assessment of associated malformations. Radiology 177:201:1990.
3. Tandon R, Sterns LP, Edwards JE. Thoracopagus Twins. Arch Pathol 1974; 98:248-251.
4. Kalchbrenner M, Weiner S, Templeton J, Losure TA. Prenatal Ultrasound Diagnosis of Thoracophagus Conjoined Twins. J Clin Ultrasound 1987; 15: 59-63.
5. Golladay ES, Williams GD, Seibert JJ, Dungan WT, Shenefelt R. Dicephalus Dipus Conjoined Twins: A surgical separation and review of previously reported cases. Journal of Pediatric Surgery 1982; 17(3): 259-264.
6. Miller D, Colobani P, Buck JR, Dudgeon DL, Haller JA. New techniques in the diagnosis and operative management of Siamese twins. Journal of Pediatric Surgery 1983; 18(4): 373-376.
7. Levi CS, Lyons EA, Martel MJ, Dashefsky SM, Holt SC. Sonography in the diagnosis and management of Multifetal Pregnancy. In Rumack's Diagnostitc Ultrasound: St. Louis, Mosby - Year Book Inc, 1997; Chapter 35: 1062-1065.

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