



## CASE REPORT

### THORACOPHAGUS CONJOINT TWIN: A CASE REPORT

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#### ABSTRACT

A 27 years old primigravida woman at 19 weeks of gestation was came for routine antenatal checkup in Chitwan Medical College was diagnosed as twin pregnancy with thoracophagus conjoined twin. The fetal biometrics of both were consistent with the gestational age. Fetuses were found with fusion of the skin contour, at the level of the lower chest with complex appearing fused cardiac near midline and liver appears separate. Both fetal heads were in breech presentation facing faces with each other at the same level. Bilateral upper and lower limbs were identified in both fetuses with same gender. The parents decided to terminate the pregnancy but refused autopsy.

#### INTRODUCTION

As a rare outcome of a monoamniotic and monochorionic gestation, conjoined twins occur when two identical individuals are joined by part of their anatomy and share one or more organs. The incidence of conjoined twins ranges from 1:50,000 to 1:100,000 live births.<sup>1</sup> Five types of conjoint twins are classically described- Thoracopagus, Omphalopagus, Pygopagus, Ischiopagus and Craniopagus. Female fetuses are more commonly affected with the ratio of male to female being 1:3, particularly in thoracopagus type. With a reported incidence of

74- 75% of all conjoined twins, thoracopagus is the most common type. It is proposed that the origin of conjoined twins is at the primitive streak stage of the embryonic plate (15–17 days), and results from an error in blastogenesis due to incomplete fission of a single zygote. The prenatal diagnosis may be suspected and confirmed if two fetuses cannot be visualized. separately in a single gestational sac. The heart anomaly is a crucial factor in survival.<sup>2</sup> The detection in very early pregnancy is important. Here we report a case of conjoined twins with a single heart in prenatal imaging.

## CASE REPORT

A 27 years old 19 weeks of gestation primigravida woman at 19 weeks of gestation came for routine antenatal check-up in Chitwan Medical College. She was diagnosed as twin pregnancy with thoracophagus on her second sonographic examination. There was no family history of twin pregnancy. Past medical history was unremarkable and she was not under any medication for hypertension, diabetes mellitus and thyroid disorder. Ultrasound scan was performed by Samsung HS 70 machine using convex transducer two times revealed conjoint twins. The ultrasound showed abnormality of the ventral aspect of the skin

contour at the level of the lower chest with complex appearing fused cardiac near midline. The liver appeared separate with identifiable umbilical vein within it. Both fetal heads were in breech presentation facing faces with each other at the same level. Both upper and lower limbs were identified in both fetuses with same gender. Placenta was localized anteriorly and single in number. On the basis of these findings, diagnosis of terata anacatadidyma, thoracophagus, and conjoined twins was made. No other congenital anomalies were detected. Counseling regarding the outcome of the thoracophagus pregnancy was done and planned for the termination of the pregnancy. Autopsy was not done because of religious reason.



Figure 1A. USG showing fused complex appearing heart. B. Same external genitalia and four thighs are seen as the lower unfused abdomens. C. Post abortion anterior photograph shows eight limbs (lower and upper) with enlarged umbilical cord.

## DISCUSSION

Conjoined twins are identical twins whose bodies are joined in utero. It is a rare phenomenon, classified depending on the site of union of their body parts as thoracopagus (40%) - thorax, omphalopagus

(33%) - lower abdomen, pyopagus (19%) - sacrum, ischiopagus (6%) - pelvis, parapagus (5%) - lateral union of lower half and craniopagus (2%) - skull.<sup>5,6</sup>Forty percent to 60% of conjoined twins are stillborn and almost 35% of live births do not survive

24 hours. There is a female predominance on the order of 3:1.<sup>7</sup>

Anterior union of the upper half of the trunk is the most common form of conjoined twins constituting approximately 35-40% of all conjoined twins. Babies face one another and have major junction at the level of chest, with conjoined hearts and livers as well as upper gastrointestinal (G.I) tract. Separation surgery depends on cardiac anatomy.<sup>8</sup> The false positive ratio is very high before the 10<sup>th</sup> week of pregnancy. In the earlier weeks of pregnancy fetal movements are limited and monochorionic twins may be mistaken for conjoined twins.<sup>9</sup> On careful transvaginal sonography and serial scanning, there appears to be an inability to separate between the anatomical parts of the fetuses. Once conjoined twins have been diagnosed, characterization of the type and severity of the abnormality can be performed with ultrasound, three-dimensional ultrasound, computed tomography, or magnetic resonance imaging.<sup>10,11</sup>

Termination of pregnancy can be offered to the family, if the diagnosis has been performed in the early weeks.<sup>12</sup> In the present study the family has chosen termination of this pregnancy. Autopsy was refused for religious purpose.

## CONCLUSION

Twin pregnancies should be carefully screened for signs of conjoint fetuses. Thoracophagus is the rarest of the conjoined twins and ultrasonography helps early diagnosis and plan for management.

## REFERENCES

1. Rode H, Fieggen AG, Brown RA, Cywes S, Davies MR, Hewitson JP, Hoffman EB, Jee LD, Lawrenson J, Mann MD, Matthews LS. Four decades of conjoined twins at Red Cross Children's Hospital-lessons learned. *South African Medical Journal*. 2006;96(9):931-40.
2. Graham III GM, Gaddipati S. Diagnosis and management of obstetrical complications unique to multiple gestations. In *Seminars in perinatology* 2005 Oct 1 (Vol. 29, No. 5, pp. 282-295). WB Saunders. doi10.1053/2005.10.003
3. Kirbas A, Biberoglu E, Celen S, Oztas E, Uygur D, Danisman N, Zekai and Tahir Burak 2014 :fetalmedicine.org. Women's Health Education and Research Hospital, Ankara, Turkey
4. Hansen J. Incidence of conjoined twins. *Lancet*. 1975;306:1257.
5. Chalam KS. Anaesthetic management of conjoined twins' separation surgery. *Indian J Anaesth*. 2009;53:294-301.PMC2900119
6. Lalwani J, Dubey K, Shah P. Anaesthesia for the separation of conjoined twins. *Indian J Anaesth*. 2011;55:177-80.doi: 10.4103/0019-5049.79902
7. Edmonds LD, Layde PM. Conjoined twins in the United States, 1970 -1977. *Teratology* 1982; 25: 301-308 DOI:10.1002/tera.1420250306
8. Kolli S Chalam. Anaesthetic Management of Conjoined Twins' Separation Surgery *Indian J Anaesth*. 2009 Jun; 53(3): 294-301. PMID: PMC2900119
9. Pajkrt E, Jauniaux E. First-trimester diagnosis of conjoined twins. *Prenat Diagn*. 2005;25:820-6
10. Kuroda K, Kamei Y, Kozuma S, et al. Prenatal evaluation of cephalopagus conjoined twins by means of three-dimensional ultrasound at 13 weeks of pregnancy. *Ultrasound in Obstetrics and Gynecology*. 2000;16(3):264-266. DOI:10.1046/j.1469-0705.2000.00263.x
11. Kingston CA, McHugh K, Kumaradevan J, Kiely EM, Spitz L. Imaging in the preoperative assessment of conjoined twins. *Radiographics*. 2001;21(5):1187-1208. Doi:10.1148.21.5.g01011187
12. Mehmet A. Osmanağaoğlu, Turhan Aran, Süleyman Güven, Cavit Kart, Özgür Özdemir, and Hasan Bozkaya *ISRN Obstet Gynecol*. 2011; 2011: 238360. Published online 2010 Nov 28. doi: 10.5402/2011/238360