

## DICEPHALUS PARAPAGUS TRIBRACHIUS DIPUS CONJOINED TWINS: A CASE REPORT

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### ABSTRACT

Dicephalus parapagustribrachius dipus conjoined twins are a very rare phenomenon. We present a case of stillborn dicephalus parapagustribrachius dipus female conjoined twins. The twins were delivered after nine months of amenorrhea by cesarean section for labor abnormality at second stage of labor. It is supposed that with proper early diagnosis, this case should be better if terminated at first or second trimester of pregnancy.

**KEY WORDS:** Dicephalus parapagustribrachius dipus; conjoined twins; stillborn

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## INTRODUCTION

Conjoined twins are rare complication of monozygotic twinning<sup>1</sup>. They occur 1 in 50,000 to 1 in 100,000 live births<sup>1,2</sup> and 1 in every 200 identical twins<sup>3</sup>. Females in conjoined twins predominate at the ratio of 3:1 and 75% die within the first 24 hours<sup>1,4, 5</sup>. Conjoined twins is a condition believed to be caused by either delayed splitting of fertilized ovum (after 13 days of ovulation) or incomplete division of the developing embryo<sup>6</sup>. This event gives rise to mono-chorionic monoamniotic placentation with conjoined fetuses<sup>1</sup>.

## CASE REPORT

A 34 year-old gravid V, para III (all alive), abortion I (spontaneous) woman was referred from a local health center to our hospital (Dessie Referral Hospital) with the diagnosis of prolonged second stage of labor after vacuum delivery was attempted for better management. The fetal heart rate was negative as reported on the referral paper. She had ultrasound scanning for the first time at the gestational age of four and a half month, which was found to be a suspected conjoined twins. For this reason she was referred to a senior radiologist and was diagnosed with dichorionic diamniotic twins. She started to have labor after uneventful pregnancy course. There was no self or family history of twinning.

On physical examination, her vital signs were within normal range. She had contractions and one head was already delivered with chignon mark over the right occipito-parietal region. There was right medio-lateral episiotomy.

Ultrasound done at the hospital showed one head within the uterine cavity, only one cardiac shadow and one trunk was seen. The fetal heart beat was negative, placenta was fundal, and gestational age by femoral length was 38 weeks and 5 days.

After informed written consent was obtained, lower uterine segment transverse cesarean section was made to effect the delivery of 4800 grams freshly dead female conjoined twins by reverse breech extraction and a third assistant push the delivered

head back to the uterus. The extraction of the heads were somewhat difficult, extracted turn by turn, without any complications. The babies had one trunk, two well-formed upper limbs, a rudimentary arm in between two heads and necks and two lower extremities. There was a single placenta and umbilical cord. The cord had single umbilical artery and one umbilical vein. (Figure 1 & 2) Episiotomy was repaired.



Figure 1. Conjoined twins with two heads, two well-formed upper limbs and single rudimentary arm and shared trunk.



Figure 2. Conjoined twins with two heads, two well-formed upper limbs and single rudimentary arm and shared trunk, a pair of lower limbs, female genitalia and a single umbilical cord.

## DISCUSSION

Four days after fertilization the trophoblast differentiates. If the split occurs before 8th days, the monozygotic twins will have separate amnions and there is no direct contact between fetuses. If the split occur after 8<sup>th</sup> day and before 13<sup>th</sup> day, the twins will share of their chorion and amnion. If the embryonic disk starts to differentiate after day 13, then the twins will share body parts in addition to sharing their chorion and amnion <sup>7, 8</sup>.

Conjoined twins are classified according to the union's site, with the suffix pagus, meaning fixed. Thorax(thoracopagus), abdomen (omphalopagus), sacrum(pyopagus), pelvis(ischiopagus), skull (cephalopagus), and back(rachipagus) <sup>9,10</sup>. It can be further classified by the number of limbs present: two arms (dibrachius), three arms (tribrachius), four arms (tetrabrachius), two legs (bipus), three legs (tripus) and four legs (tetrapus) <sup>8,9</sup>. Parapagus is a term used where there is extensive side to side fusion <sup>8</sup>.

Dicephalus parapagus tribrachius dipus conjoined twins are rare variants of conjoined twins. It is asymmetric or parasitic form of twining where one twin is a potential survivor and usually appears normal while the other is incomplete and attached as a parasite. They are usually stillborn or die immediately after birth, but some have lived for a number of years <sup>5, 6</sup>. In this case report, the twins were stillborn.

## CONCLUSION

Conjoined twins should be suspected in all monochorionic, monoamniotic twin pregnancies and careful early ultrasound assessment with an experienced hand should be performed to rule out the presence of union site between fetuses. If conjoined twins are diagnosed earlier, the parents can be counseled for options of management including termination of pregnancy.

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## DECLARATION

Conflict of interest statement

The authors declare that there is no conflict of interest.

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### Ethical approval

No ethical approval was needed.

### Consent

Informed written consent was obtained from the woman.

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## REFERENCES

1. Gabbe SG, Niebyl JR, Simpson JL, Landon MB, Galan HL, Jauniaux ER, Driscoll DA, Berghella V, Grobman WA. *Obstetrics: normal and problem pregnancies e-book*. Elsevier Health Sciences; 2016 Mar 18.
2. Kaveh M, Kamrani K, Naseri M, Danaeian M, Asadi F, Davari-Tanha F. Dicephalic parapagustribrachius conjoined twins in a triplet pregnancy: a case report. *Journal of family & reproductive health*. 2014 Jun;8(2):83.
3. Osmanağaoğlu MA, Aran T, Güven S, Kart C, Özdemir Ö, Bozkaya H. Thoracopagus conjoined twins: a case report. *ISRN Obstetrics and Gynecology*. 2011;2011.
4. Swar MO, Khawaga MA, Altahir SA. Dicephalus tribrachius conjoined twins: A case report and review of literature. *Sudan J Pediatrics* 2011; 11(2):50-53.
5. Edmonds LD, Layde PM. Conjoined twins in the United States, 1970–1977. *Teratology* 1982; 25:301–8
6. Byers CD, Young JR, Connell M. Parapagus dicephalus dibrachius dipus conjoined twin case. *Applied Radiology*. 2018 May 1;47(5):29-32.
7. Ibinaiye PO, Mshelbwala PM, Abdulgafar N, Lawal AK. Dicephalus dipus tetrabrachius conjoined twins of Zaria: Case report and literature review. *Nigerian Journal of Clinical Practice*. 2013;16(3):395-7.
8. Sahu SK, Choudhury PR, Saikia M, Das TK, Talukdar KL, Bayan H. Parapagus Dicephalus Tribrachus Tripus Conjoined Twin: A Case Report. *International Journal of Scientific Study*. 2015 Feb 1; 2(11):211-3.
9. Mondal M, Biswas B, Mandal P. Dicephalus, tetrabrachius, dipus conjoined twins. *Journal of Mahatma Gandhi Institute of Medical Sciences*. 2015 Jul 1;20(2):196-197.
10. Aparna C, Renuka IV, Sailabala G, Nayudamma Y. Dicephalus dipus tribrachius: A case report of unusual conjoined twins. *Indian journal of Pathology and Microbiology*. 2010 Oct 1;53(4):814.