

## **Parapagus dicephalus - Conjoined twin - A case report.**

**Karvendhan R, Shruthi K Bharadwaj, Vishnu Bhat B, Femitha P, Sriram P**

Department of Pediatrics, Division of Neonatology, JIPMER, Puducherry, India

### **Abstract**

**Parapagus dicephalus tribrachii bipedus conjoined twin is uncommon. We report a case with a single body fused anterolaterally with two heads, two fully formed upper limbs and a rudimentary limb between the heads which was delivered by caesarean section.**

**Key words-**Parapagus, dicephalus, Conjoined twin

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### **Introduction:**

Conjoined twinning occurs once in 50-100 thousand live births [1]. Parapagus dicephalus (anterolaterally joined two headed) twins account for less than 0.5% of all reported cases of conjoined twins [2]. Duplicated tracheae, upper gastrointestinal tract and spinal column, and either single or double versions of internal organs have been reported in Parapagus dicephalus cases. Most of them do not survive. We report a case of Parapagus dicephalus tribrachii bipedus delivered by C-section not diagnosed antenatally as conjoined twins.

### **Case Report**

A 30 year old primigravida woman had presented in labour at term. She had conceived after 10 years of primary

infertility but without any intervention. The antenatal sonogram performed at 32 weeks reported twin fetuses with monochorionic monoamniotic membranes. C- Section was performed for non progression of labour and a conjoined twin was delivered. The newborn was anterolaterally joined together with two heads, with two fully formed upper limbs, a rudimentary third limb like stump in between the heads (Fig. 1). The baby weighed 3.2kg. The Apgar scores were 1, 0 at 1 and 5 minutes respectively. Heart beats could be auscultated distinctly on either side of the fused thorax indicating the presence of two hearts. The baby had male external genitalia with a pair of testes palpable in the scrotum and an anus (Fig 2). An x-ray revealed two spinal columns, fused thoracic cage and pelvic cavity (Fig 3).

The parents did not agree for autopsy



**Figure 1.** Showing single body with two heads, two fully formed upper limbs and a rudimentary limb between the heads



Figure 2. Fused thoracic cage, male genitalia and two lower limbs



Figure 3. X-Ray showing two spinal columns, fused sacra and two cardiac shadows.

## Discussion

Spencer proposed a classification for anterolaterally conjoined twins which is widely accepted now [3]. According to this, the present case was classified as *Parapagus*

*dicephalus* with further specification as *tribrachii, bipedus* conjoined twin.

Conjoined twins are always derived from one fertilized ovum and are monochorionic and monoamniotic [4]. The incidence of conjoined twins is cited as 1 per 50,000-100,000 deliveries [1]. Parts of Asia and Africa may have a higher incidence [5]. Parapagus twins represent less than 0.5% of all reported cases of conjoined twins [2]. But in a few reviews they comprised between 11-13% of conjoined twins [6,7].

Two embryological theories explain conjoined twinning. The incomplete fission of single embryonic disc occurs after 13-15 days of fertilization [4,7] or a fertilized ovum completely dividing into two embryonic discs whose secondary fusion results from their unusual proximity as the embryos enlarge [8].

Most conjoined twins face each other but parapagus dicephalus twins' axes are side by side and nearly parallel [7,8]. Although autopsy was not permitted in our case, other parapagus twins have had characteristic findings. Fused hearts with complex anatomy like right aortic arch, transposition of great vessels and two hearts with one malformed heart have been described [8,9]. Situs inversus of the right twin's abdominal organs often accompany cardiac anomalies and the abdominal viscera are normally situated when the hearts are normal [10]. Two sets of lungs are usually present which may be underdeveloped and anomalous [9,10]. The liver, pancreas, gall bladder, rectum and genitourinary tracts may be shared [8-10].

Diagnosis of conjoined twins helps minimize injury by allowing the obstetrician to plan a suitable mode of delivery. A careful ultrasound is recommended for all suspected twins [4,11]. First and second trimester diagnosis of conjoined twins enables obstetrician to counsel parents about potential termination or about delivery and treatment options if pregnancy is continued.

Few parapagus twins survive due to heart, lung, abdominal and neurological malformations that are often present. Still birth and mortality are extremely high in dicephalus twins [11].

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**Correspondence:**

Shruthi K Bharadwaj  
Room No 316, Blackwell House  
JIPMER, Dhanvantrinagar  
Puducherry-605006  
India