Antenatal diagnostic spectrum and early postnatal outcome of conjoined twins

Mota C C C, Capuruco C A B, Brum, A P, Valadares L C, Lana A M A

INTRODUCTION
Conjoining is a rare event with an incidence of 1:200 000 live births. The organ sharing is the limiting factor for survival and surgical approach. The aims of this study were to evaluate the fetal echocardiographic findings and early postnatal outcome of conjoined twins.

METHODS
A retrospective review of the fetal and newborn database and case notes of 11 sets of conjoined twins seen between January 2001 and December 2007 at Hospital das Clínicas-UFMG and diagnosed prenatally by endovaginal and/or transabdominal echocardiography was made. Besides echocardiography, the confirmation of diagnosis after birth included cardiac catheterization, magnetic resonance and/or surgical and/or post-mortem findings.

RESULTS
There was a female predominance of 2,1:1,0. The gestational age at diagnosis ranged from 12 to 31w (mean=21,2±6,8w; median=25,0w). The mean maternal age was 24,6±5,9y and no maternal complications related to delivery were seen.

Both antenatal and postnatal echocardiography evaluation of the diagnostic aspects and the possibility of surgical approach were concordant. As regards the classification there were 54,5% thoracopagus or thoraco-omphalopagus, 18,2% parapagus and 9,1% each of omphalopagus, ischiopagus and cephalo-thoracopagus. None of the set of conjoined twins with two hearts was classified as thoracopagus.

The thorax was involved in the fusion in 9(81,9%) cases, of whom two showed two separate hearts and common pericardium. In the remaining seven, the findings involved fused hearts with fused atria, including common atrial chambers, common or straddling atrioventricular valves and complex ventricular structure of three or four ventricles with communication between them by VSD. Anomalies in venous connections were frequent. Besides one judicial termination at the 14th week, four deaths occurred during the prenatal period. Five newborns died, two after surgery.

CONCLUSIONS
Conjoined twins presented a dismal prognosis. Thoracic-level fusion was associated with high frequency of fused hearts and complex structural heart disease. The endovaginal echocardiogram constituted an important tool for early diagnosis and counseling.

REFERENCES