

Prenatal features and postnatal follow-up of congenital ventricular outpouching: a retrospective study of two center in China.

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September 18, 2023

Abstract

Objectives: Congenital ventricular outpouching (CVO) is a rare cardiac malformation that can manifest as congenital ventricular aneurysm (CVA) and/or congenital ventricular diverticula (CVD). In this study, we describe the prenatal features and postnatal follow-up of 27 cases of CVO. **Methods:** The clinical data of 27 patients with CVO who attended Sir Run Run Shaw Hospital Affiliated to the Medical College of Zhejiang University (Zhejiang Province, China) and Taizhou Hospital of Zhejiang Province Affiliated to Wenzhou Medical University (Zhejiang Province, China) from April 2013 to October 2022 were retrospectively analyzed. The patients were also followed up by telephone. The prenatal characteristics and postnatal outcomes of the patients with CVO were evaluated. **Results:** CVO was detected in 26 cases prenatally, 14 (51.85%) were diagnosed with CVA, 9 (33.33%) were diagnosed with CVD, 3 (11.11%) were equivocal for CVA/CVD, and 1 (3.70%) was detected with CVA postnatally. Six patients underwent follow-up fetal echocardiography approximately 4 weeks after the initial echocardiography examination, and a significant difference in CVO size was observed between the two examinations ($P = 0.02$). Eight patients (29.63%) demonstrated cardiovascular dysfunction, and the median CVO size in fetuses with and without cardiovascular dysfunction was 205 (range: 169–396) mm² and 124 (range: 92–154.5) mm², respectively ($P = 0.01$). Eight patients (29.63%) had cardiac/extracardiac defects. Thirteen patients were live born, 12 were terminated pregnancies, and 2 were lost to follow-up. The postpartum size of the CVOs remained stable in six patients, decreased in two patients, dissolved in three patients, and were surgically removed in two patients. With the exception of one patient with CVA complicated with complex congenital cardiac malformation who underwent surgical treatment after birth and who had postoperative left ventricular dysfunction (Case 1), the prognosis of all of the patients was good. **Conclusion:** Most cases of fetal CVO have typical echocardiographic manifestations of CVA or CVD, while some cases manifest as a mixture of the two. The size of fetal CVO can increase with the increase in gestational age. The occurrence of cardiovascular dysfunction is related to the CVO size. Prenatal echocardiography should examine changes in CVOs and the occurrence of cardiovascular dysfunction. In general, the postpartum prognosis of fetal CVO is good.

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