



ORIGINAL RESEARCH PAPER

Cardiology

VSD DEVICE CLOSURE IN A CASE OF DEXTROCARDIA

KEY WORDS: Ventricular septal defect, dextrocardia

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ABSTRACT

VSD Device closure in dextrocardia is a challenging case. The case presented with failure to thrive since childhood. On examination he had pansystolic murmur and on 2D echo perimembranous VSD with left to right shunt was seen. VSD was closed with device successfully and patient improved symptomatically. On follow up patient gained significant weight.

INTRODUCTION

VSD is the most common congenital heart disease in children and second most common congenital heart disease seen in adulthood [1,2]. Surgical closure of VSD was associated with increased patient morbidity and scarring of skin [3-6]. Percutaneous transcatheter closure of VSD is associated with shorter hospital stay, less morbidity, no scarring of chest, higher success rate and less complications [7-12]. VSD device closure in dextrocardia is a challenging case.

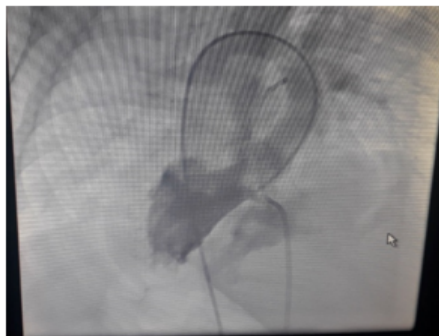


Figure 1: Left ventriculography suggestive of perimembranous VSD

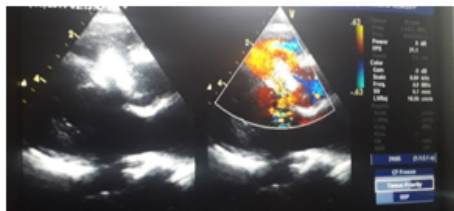


Figure 2: Post op echocardiography suggestive of device in situ

CASE REPORT

A 5 years old male child with a weight of 11 kg presented with failure to thrive and frequent cough and cold since childhood. On auscultation, he had pansystolic murmur in parasternal area and ECG was suggestive of right ventricular hypertrophy with right axis deviation. On echocardiography, a 5.8 mm perimembranous VSD with a gradient of 62 mm Hg with left to right shunt was seen with dextrocardia with situs inversus.

Procedure was performed under general anaesthesia. Left ventriculography was performed in RAO cranial view (figure 1). Judkins right catheter was used to cross the defect and terumo 0.035" glide wire was used to cross the defect and catheter was advanced over it to the pulmonary artery. Wire was snared and exteriorized from the right femoral vein to

form an arteriovenous loop. Patient underwent successful VSD device closure with Amplatzer 8/10 device. LV shoot demonstrated good device position and was confirmed on echo (figure 2).

Patient remained stable in the post op period and was subsequently discharged. On follow up, patient gained 1.5 kg weight after one and a half months and on echocardiography device was in situ.

DISCUSSION

In experienced hands device closure in dextrocardia is a challenging case but can be done with high success rates and low complications. VSD Device closure has high success rates with major complications being death, embolization, stroke, cardiac perforation, acute AR and complete AV block [12]. On follow up complications like infective endocarditis, aortic regurgitation, tricuspid regurgitation and femoral site complications were also less [13].

Challenges faced during deployment of the device were the operating on mirror image of usual levocardia patients and positioning of the delivery sheath and formation of the AV loop.

CONCLUSIONS

VSD device closure in dextrocardia is a challenging case and achieves successful outcomes in experienced hands.

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