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Original research article

Left ventricular apical aneurysm in a 2 year old child: Case report

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Abstract

We present a case of two year old male child with past history of fever at the age of 13 months, who was incidentally diagnosed of left ventricular apical aneurysm and surgically managed.

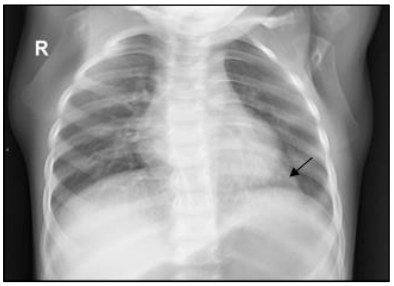
Keywords: Left ventricle, aneurysm, apical

Introduction

A two year old child with past history of fever was hospitalised and treated with iv antibiotics. Child was diagnosed to have gram negative sepsis and meningitis. Blood culture was positive for Salmonella species. During evaluation, child was incidentally found to have Left Ventricular [LV] apical aneurysm. Asymptomatic at the time of presentation.

Blood investigations were within normal limits. ECG showed normal sinus rhythm.

Pre-operative echo showed normal biventricular function, LV apical aneurysm communicating with LV cavity, size 7 x 5 mm, gradient across connection-43 mm of Hg.



Chest x Ray shows hyperdense shadow at the cardiophrenic angle, appearing like left lower lobe of lung collapse.

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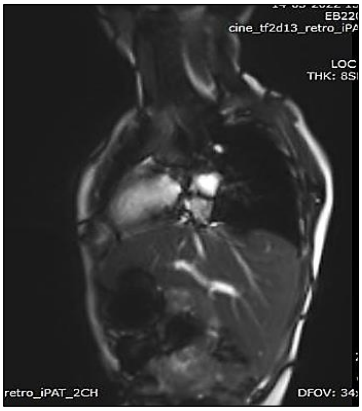
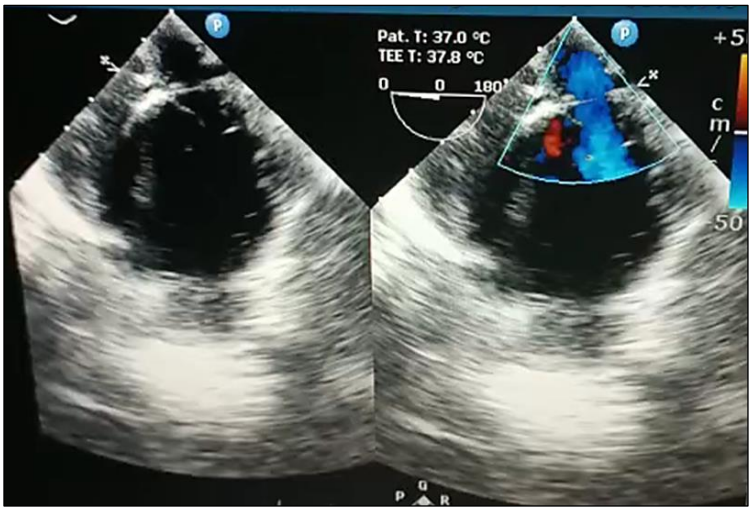
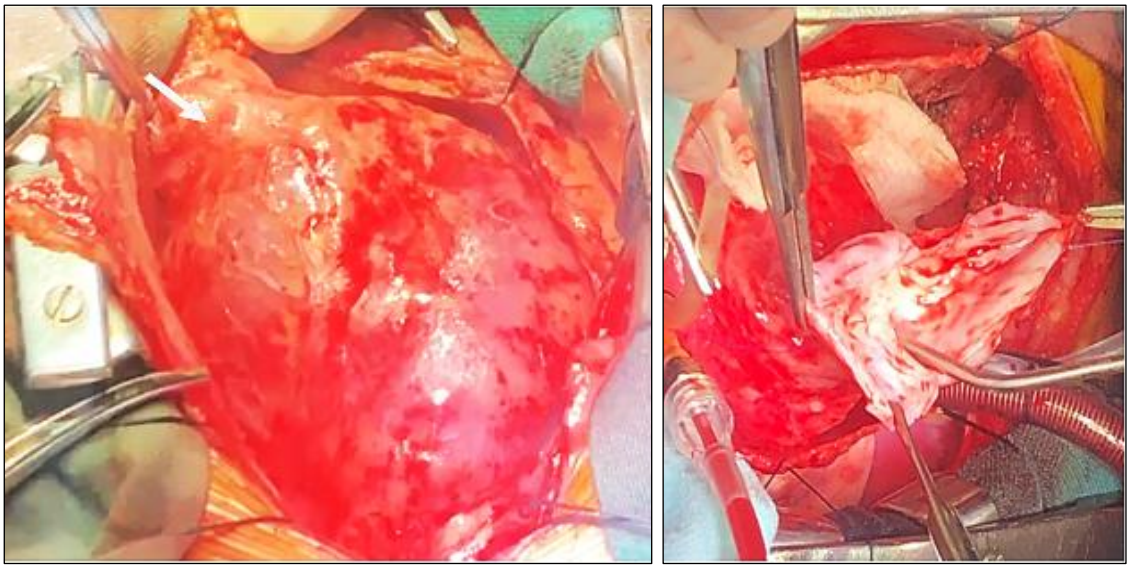


Intact epicardial fat and a neck/body-width ratio >0.9 are classical findings of true LV aneurysm on Cardiac MRI [1].



Echo image showing blood shunting across the aneurysmal sac.

LV aneurysm repair (modified Dor-Cooley technique)-aneurysm sac excision and patch closure using dacron and pericardium was done. Post-operative period was uneventful.



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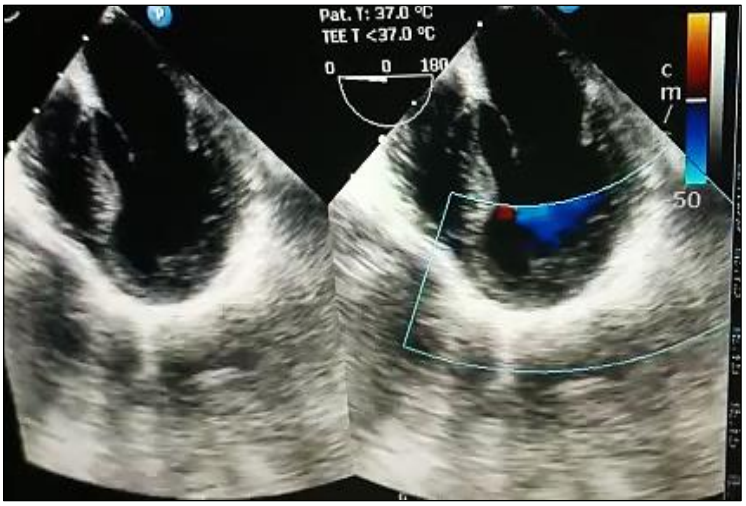

Post-operative echo showed normal ventricular function. Histopathology confirmed true LV apical aneurysm.

Discussion

Left ventricular aneurysm is rare in children. When present, it is usually asymptomatic. The etiology could be congenital or acquired [2]. Congenital aneurysms are usually secondary to defective embryogenesis or congenital coronary stenosis. Most common acquired aneurysms are secondary to blunt trauma, infection or post cardiac surgery [3]. In our case, most likely cause could be myocarditis. Complications of LVA are generally more common with large aneurysms. They include ventricular arrhythmias, congestive heart failure, angina pectoris, and thromboembolism [4].

Conclusions

Though LV aneurysms are rare in children, once diagnosed, surgical excision becomes crucial due to associated complications. Prognosis after surgical excision is good.

Author Disclosures

The authors have reported that they have no relationships relevant to the contents of this paper to disclose.

References

1. Kumbasar B, Wu KC, Kamel IR, Lima JAC, Bluemke DA. Left ventricular true aneurysm: diagnosis of myocardial viability shown on MR imaging AJR Am J Roentgenol. 2002;179:472-474.
2. Marijon E, Phalla O, Concordet S, Le Bidois J, Sidi D, Bonnet D. Diagnosis and outcome in congenital ventricular diverticulum and aneurysm. J Thorac Cardiovasc Surg. 2006;131:433-437.
3. Veeragandham RS, Backer CL, Mavroudis C, Wilson AD. Traumatic left ventricular aneurysm and tricuspid insufficiency in a child. Ann Thorac Surg. 1998;65:247-248.
4. Gunshot-Related Pediatric Left Ventricular Apical Aneurysm. Achala Donuru, David Saul, Maansi Parekh, Maruti Kumaran, Rami Kharouf. JACC: Case Reports. 2021 Jan;3(1):26-30.