

# An Unusual Case of Infective Endocarditis

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## ABSTRACT

Almost any type of structural heart disease may predispose to infective endocarditis. Congenital heart disease (CHD) is the underlying condition in 4% - 26% of cases<sup>1</sup>. Association of Patent ductus arteriosus with infective endocarditis is rarely seen<sup>2</sup>. We present our experience with an unusual case in which both cardiac anomaly were found together.

## INTRODUCTION

Infective endocarditis (IE) is the microbial invasion of the endothelial surface of the heart and implies the physical presence of the microorganism in the lesion. The incidence is difficult to determine since the criteria for diagnosis and methods of reporting vary. An analysis of strict case definition often reveals that only a small proportion of clinically diagnosed cases are classified as definite IE.

### Case presentation

The patient was a 40-year-old female a diagnosed case of patent ductus arteriosus, came with 2-month's history of intermittent fever. Associated symptoms included general malaise, anorexia, and the loss of 6 kg body weight within the previous 2 months. On admission, the vital signs were as follows, blood pressure: 124/68 mmHg; pulse rate: 80/min; respiratory rate: 22/min; body temperature: 38.5°C. Physical examination revealed a 3/6 Continuous murmur above pulmonary region consistent with a patent ductus arteriosus. Laboratory tests revealed a WBC count of 11000/ $\mu$ L with elevated neutrophils (82.7%); normocytic anemia with a hemoglobin level of 10.4 g/dL; an elevated ESR level (48 mm/1 hr); and liver function with AST/ALT of 49/79 IU/L. A chest x-ray was within normal limit and abdominal sonography showed mild splenomegaly. 2D echocardiography revealed a vegetation with size of 1cm, at main pulmonary artery. The vegetation was

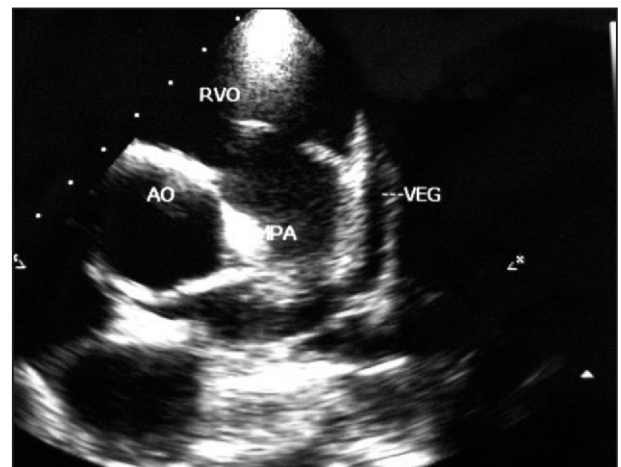


Fig1: PSAX, view, showing vegetation

arising from the site of PDA, where it was communicating with the left pulmonary artery. It was a

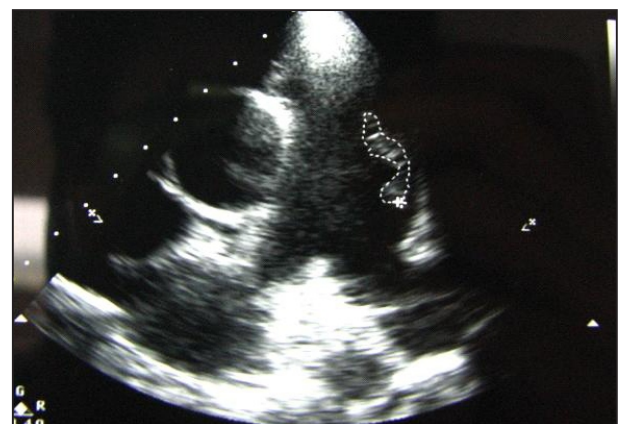


Fig 2 Transthoracic echocardiogram showing vegetation (0.9 cm) in main pulmonary artery.

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long and mobile mass. However, the cardiac systolic and diastolic functions were normal with the ejection fraction of 68%. Pulmonary pressure was slightly elevated (40 mm Hg).

### Discussion

Nevertheless, IE accounts for approximately 1 case/1000 admissions with a range of 0.16-5.5 cases/1000 admissions in reviews of surveys in the United States<sup>3,4</sup>. Underlying conditions has been identified in patients with native valve endocarditis such as rheumatic heart disease, congenital heart disease, mitral valve prolapse, degenerative heart disease and intravenous drug use<sup>5</sup>. The nature of the predisposing factor of IE correlates well with the age of the patient. Congenital heart disease (CHD) is the underlying disease in 28% of neonates, 75%-90% of children from 2 months to 15 years, 10%-20% of patients between 15-60 years and 2% after the age of 60. In a review by Kaye<sup>4</sup> CHD was found to be the underlying cause in 4%-26% of IE with a mean of 10%. In his review, McKinsey showed that 13% of IE had CHD as the underlying disease<sup>5</sup>. There is not much published data in the India regarding the association of infective endocarditis with patent ductus arteriosus.

### Summary

The final diagnosis was endocarditis in this case of a patent ductus arteriosus. Ductus arteriosus is usually encountered in pediatric patients and accounts for 10% of cases of congenital heart disease(7). Infective endocarditis is a serious complication of clinically apparent PDA with fatality rate 20-45%(8). In countries with limited health resources, infective endocarditis remains a significant health issue(9). The case reported here is a patient with a small, asymptomatic PDA, with no previous risk procedure, who developed infective endocarditis, and likely to get complicated by septic pulmonary embolism. In this case there was a high probability of infected pulmonary embolism, as the

mass was highly mobile. Patient was put on antibiotics and she responded to the treatment.

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