

An Unusual Site of Infective Endocarditis after Surgical Trauma- Evaluated by Three Dimensional Echocardiography

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Introduction

Infective endocarditis (IE) is an inflammation of endocardium and heart valves, associated with high risk of morbidity and mortality, prompt and early diagnosis and early treatment is essential. The age-specific incidence of endocarditis is 5 cases per 100,000 person-years among persons younger than 50 years to 15 to 30 cases per 100,000 person-years in the sixth to eighth decades of life.¹ Ventricle septal defect (VSD), patent ductus arteriosus (PDA) and bicuspid aortic valve (BAV) are common predisposing lesion for IE in adults. Isolated Atrial septal defect (ASD) associated with IE not reported in literature yet. We are reporting a rare case ASD associated with IE.

Case Report

A 43 year non diabetic, non-hypertensive, post-surgical closure of atrial septal (ASD) female patient presented with high grade fever from last one month. Her blood pressure was 130/86 mm of mercury and pulse rate was 104 minute, chest bilateral clear, no murmur, Abdomen and nervous system examination was normal. No significant abnormality detected in x ray chest PA view, total leucocyte count was 18000/cm³, 90 % neutrophil. All blood culture were negative. All other parameters were normal. Evaluation with two dimensional echocardiography (2D ECHO) reveals oscillating mass seen in right atrium (Figure 1A) attached to interatrial septum. which was not present in previous 2D ECHO before surgical closure. Trans esophageal

echocardiography confirmed oscillating mass attached to opening of superior vena cava (Figure 1B) which was further confirmed by three dimensional echocardiography (Figure 1 C, D).

Discussion

Intact cardiac endothelium is resistant to bacterial invasion, damaged cardiac endocardium is strong stimulator for bacterial attachment leading to infective endocarditis. In VSD, PDA, BAV high velocity blood stream jet cause damage to endothelium in adult leading to IE. In literature most common site IE is valves (native or prosthetic), interventricular septum and intra-cardiac devices.² IE after surgery first reported by Taussig and associates in patients tetralogy of Fallot, assumed that unhealed suture line was the potential source of IE.³ Various case reports also described IE after surgical mitral commissurotomy.⁴⁻⁶ Hurst, Jones and Scott reported case of IE after PDA surgery.⁷⁻⁹ Uncomplicated ASD in adult never been reported in literature as associated with IE. But after surgical closure of ASD, normal endothelium could be receptive for bacterial adhesion due to unusual site surgical trauma, could be a source of prolonged fever. Prompt and early recognition and treatment result in excellent patient recovery.

Conclusion

Surgical trauma, could be a unusual site of infective endocarditis. Awareness of unusual site of infective endocarditis and early recognition result in excellent patient recovery.

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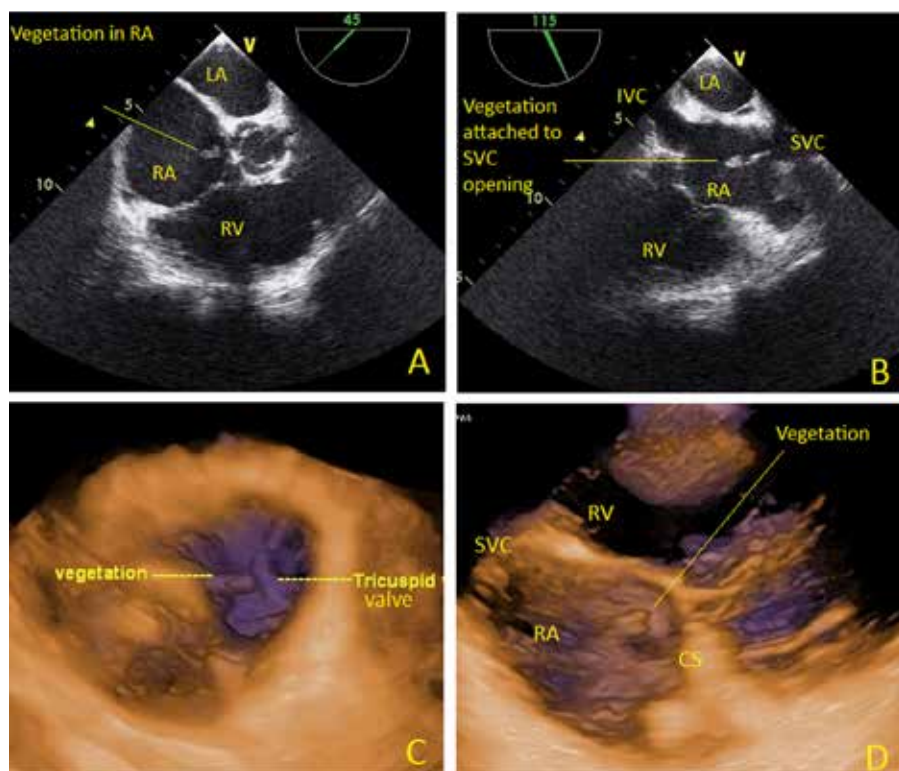


Fig. 1: (A) Two-dimensional TEE at 45° angle showing a vegetation near the aortic valve in RA. (B) Two-dimensional TEE at 115° angle clearly delineating the vegetation attached to SVC opening. (C and D) 3D TEE showing Vegetation attached to SVC. TEE=Transesophageal echocardiography, RA= Right atrium, SVC = Superior vena cava, 3D=Three dimensional

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