

Prevention of Infective Endocarditis is Necessary for all Risk Groups: Case Series

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Introduction

- Infective Endocardite (IE) is a serious disease with mortality rate of 16-25% in children. Incidence of IE increases with congenital heart diseases.
- Cyanotic congenital heart disease, history of previous IE, prosthetic heart valve, heart transplant patients with a valvulopathy in the implanted heart, repaired heart disease with residual significant lesion, or 6 months after repaired heart disease with prosthetic material are defined high risk group for IE and current guidelines are recommend antibiotic prophylaxis for only the high risk group just before dental procedures to prevention of IE.
- The profile of IE differs between developed and developing countries. In developing countries patient age, place of acquisition of the infection, and causative microorganisms may be different because of the ongoing higher rate of chronic rheumatic heart disease (CRHD).
- Since the publications of these recommendations, at least one study has documented the lack of any demonstrable increase in IE as a cause of hospitalization for children. However, no data has been reported about whether it has changed frequency of IE in developing countries.

Patients

- In our clinic, 4 patients aged between 3.5 and 11 years were diagnosed with IE in the last year. All of them had a congenital heart disease and 2 of them were in high risk group (vsd, bicuspid aortic valve, c-TGA with PS, opere d-TGA with peripheral pulmonary stenosis)(table).
- Only one patient diagnosed with vsd had a history of dental prosedure who applied antibiotic prophylaxis. Methicillin-sensitive staphylococcus aureus was identified in two patients and streptococcus viridans was identified in other patients in blood cultures.
- Moving vegetations (> 10 mm) were detected over the aortic valve in the patient diagnosed with bicuspid aortic valve who died within the first 24 hours due to multisystemic septic embolism and heart failure despite broad spectrum antibiotics and intensive care support (figure 1).
- Two cases underwent anticoagulant therapy due to pulmonary embolism in second week of follow-up due to the vegetations over the tricuspid valve and in the pulmonary arteries (figure2-3). Recovery was achieved In 3 patients after parenteral antibiotherapy given 4 to 8 weeks thus surgical treatment was not necessary.

Case	Age(year)	Cardiac lesion	Fever duration	Embolic event	Blood culture
1	11	Bicuspid aortic valve	3 day	Brain Pulmonary	S.aureus
2	10	C-TGA	65 day	-	α-hemolytic streptococci
3	6	VSD	10 day	Pulmonary	S.epidermidis
4	3.5	Arterial swich with Peripheral pulmonary stenosis	60 day	-	α-hemolytic streptococci

Table:Clical features of patients

Conclusion

- We want to emphasize that limiting the use of antibiotic prophylaxis with high-risk patients in the prevention of infective endocarditis, which is known to have a high mortality and complication rate, may have negative consequences especially for developing countries.

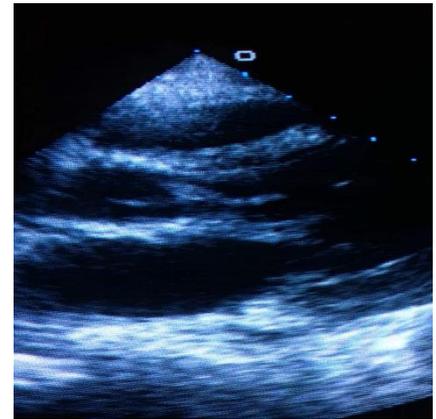


Figure 1: Vegetation on aortic valve



Figure: Vegetation on tricuspid valve



Figure 3: Vegetation on pulmonary valve