

Infective endocarditis in patients with ventricular septal defect

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In the context of recent change in guidelines for prophylaxis of infective endocarditis (IE), the objective of this study was to assess the features and outcomes of IE in children and adults with non-significant ventricular septal defect (VSD).

Methods: A retrospective analysis of records of patients with non-significant VSD. Clinical, echocardiographic and microbiological data, and outcomes were assessed.

Results: From 1980 to 2013, 57 IE occurred (1 to 4 per year), in patients aged 14.2 ± 11.3 y (med 12.1), 29 males (51%) and 39 were <18y of age. VSD was membranous in all cases, isolated (39=68.5%) or associated with mild aortic regurgitation or pulmonary stenosis. VSD was native in 39 (68.5%) and not diagnosed before IE occurred in 4 cases (7%). The cause of infection was unknown in 36% of the cases, while 23% were from dental, 13% from cutaneous, 9% from ENT or digestive origin, and 19% occurred in the early postoperative course of patch closure, i.e. 81% of the cases occurred in native mild VSD. Streptococcus from dental origin was the most frequent causal agent (54.5%), staphylococcus was found in 35% of cases, Gram-negative bacillus in 3.5%. Hemocultures were negative in 7% of the cases. Vegetation was the most frequent echographic lesion, and located either on VSD, and/or tricuspid valve and/or RV free wall and/or pulmonary valve. Aortic valve location occurred in 8 cases. Embolic event occurred in 28 cases (49%): multiple pulmonary embolia in 21 (37%), systemic embolia in 6. Eighteen patients were operated (31.6%): early surgery in 11 (19.3%), delayed patch closure in 7. Six patients died (10.5%). Death was not related to early surgery. FU was 13.4 ± 11.2 y (med 10.2y).

Conclusion: Infective endocarditis can severely impair prognosis of mild membranous VSD and dental events are the most frequent origin of infection. Despite recent recommendations, preventive surveillance and management of any dental lesions are probably to be emphasized in these patients.