

### **Infective endocarditis in children with normal heart**

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The objective of this study was to assess the features of infective endocarditis(IE) and long-term prognosis of children with normal heart.

Material and methods: Data of all patients less than 18y diagnosed with IE and no previous cardiac lesion from 1972 to 2016 were retrospectively analyzed. Demographics, cause of IE, microbial agent, cardiac location, short and long term outcomes and survival were assessed. Diagnosis of IE relied on Duke criteria.

Results: 34 patients (20 females= 59%) aged  $8.8\pm 5.4$ y at diagnosis were included. All presented with fever and a heart murmur, and had echographic evidence of vegetations left-heart sided in 27 cases (80%= 17 mitral valve, 7 aortic valve, 3 mitral and aortic) or right-heart sided in 6 (tricuspid valve) (18%); vegetations were present on aortic and mitral and tricuspid valves in 1 case. Microbial agents were identified in 88% of the cases (17 staphylococcus (57%), 4 streptococcus (13%), 4 kinghella kingae, 4 corynebacterium and 1 propionibacterium acnes), unknown in 12%. Causes of IE were identified in 16 cases (47%), of which 50% were cutaneous, 25% dental and 25% miscellaneous. Cerebral embolic events occurred in 10 cases (29.5%), other embolic localisations in 8 (24.5%) (total of embolic events= 53%), severe HF in 6 cases (18%). Early surgery was performed in 22 of 34 patients (65%) because of embolic events and/or severe HF, at  $19\pm 5$ days after diagnosis of IE (median 13 days, range 1 to 68 days): 15 valvular plasties (68%) and 4 valvular replacements. Hospital stay ranged 19 to 95 days (mean 43days). Mean follow-up was 10 years (median 4.5y). No patient died, 3 experienced a second episode of IE (9%). Sequellae (valvular regurgitation) were present in patients who did not require surgery.

Conclusion: IE can occur in children with normal heart is more frequently due to Staphylococcus agent, from a cutaneous cause. Early surgery is performed in most of the cases with favorable outcome, sequella persisted in unoperated cases.