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BACKGROUND

• Patients aged with heart disease who underwent surgical care have changed related to neurological surgeries techniques.
• Infective endocarditis (IE) is an uncommon disease in children, however, it is associated with substantial morbidity and mortality.

METHODS AND MATERIALS

Design: Observational, analytical and retrospective study performed in a tertiary pediatric reference center (Hospital de Niños “Dr. R. Gutiérrez”) with 9,500 annual admissions at Buenos Aires, Argentina. Clinical charts of patients < 18 years of age with diagnosis of IE were reviewed, from March 2010 to March 2018.

Definitions: IE diagnosis was based on modified Duke criteria. IE definitive and possible categories were included. (JAMA. 1994;272: 1601-9)

Native IE: was defined when it occurred without a history of previous cardiovascular surgery.
Postoperative (PO) IE: when had previous cardiac surgery.
Early PO when diagnosis was within 12 months of cardiac surgery and late PO when presenting beyond that period. (J Heart Valve. 2005;20:271-7)

Statistical analysis: Descriptive analysis of the categorical and continuous variables were performed. Software: Stata v13.

RESULTS

• During the study period 49 IE were included, with definite Duke criteria in 71% and possible in 29% of them.
• IE annual rate: 6.4/1000 admissions (95% CI 4.7-8.5).
• Median age (M; 7 years) [range (7) 7 days – 17 yrs]. Fifteen (31%) were younger than 1 year.
• Male/female ratio 0:8:1.

No heart disease

78%

Congenital heart disease (%CHD)

22%

Clinical presentation:

Fever
Malaise
New or changed heart murmur
Sepsis
Nephritis
Enlarged spleen
Skin lesions

82%
95%
62%
53%
31%
22%
22%

• Sepsis was more frequent in patients with native IE without CHD (81.8% vs 39.5%: p<0.02)

OUTCOME

• Median length of hospitalization: 54 days (IQR: 44-82).
• Complications were detected in 29 (58%) of cases: embolism (32%), heart failure (22%), myocardial pseudoaneurism (17%), valve rupture (17%) and amenia (7%). Twelve patients (24%) had more than one complication.
• Patients who underwent surgical treatment: 20 (41%).
• Death: 4 patients (8%).

CONCLUSIONS

• A significant decrease in age at IE diagnosis in CHD patients was observed in the last years.
• IE was more frequent in < 1 year old, related to surgery procedures increased in neonates.
• S. aureus EI was predominant in healthy children, occurred at a younger age and was associated with sepsis and more days of bacteremia than S viridans.
• S viridans was isolated only in children with CHD.
• Complications rate was higher than described in the literature, however the mortality rate was lower than reported.