PEDIATRIC INFECTIVE ENDOCARDITIS: CASE SERIES

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BACKGROUND

Congenital heart disease (CHD) is the predominant underlying condition for infective endocarditis (IE) in children. Increasingly, IE develops in the absence of CHD, mostly in patients with indwelling catheters. In 8 to 10% of all cases there is no identifiable risk factor.

CASE PRESENTATION SUMMARY

A total of 9 cases of IE in subjects <18 years of age were treated in University Hospital for Infectious Diseases in Zagreb in the past 13 years (2005-2017). There were 5 boys and 4 girls, aged 7 months to 17 years (median 7 years). 55% of cases were caused by common pathogenic bacteria (2 Coagulase-negative *Staphylococcus*, 2 *Staphylococcus aureus*, 1 *Streptococcus sanguinis*), while almost half of them (45%) were caused by relatively uncommon organisms in pediatric population: *Enterococcus faecalis*, *Granulicatella adiacens*, *Haemophilus parainfluenzae* and *Abiotrophia defectiva* (1 patient each). Although one (11%) patient didn’t have risk factor for IE, all of the others had CHD and one of them had central venous catheter as well.

Table 1. Patient	Hospitalization year	Age	Sex	CHD	Cusative pathogen	Therapy	Relapse	Outcome
1	2008.	14 years	Male	+	<i>Enterococcus faecalis</i>	Ampicillin Meropenem	No	Death
2	2010.	15 years	Male	+	<i>Staphylococcus epidermidis</i>	Vancomycin Gentamicin	No	Positive
3	2012.	17,5 years	Female	+	<i>Streptococcus sanguinis</i>	Ampicillin Gentamicin	No	Positive
4	2013.	17,5 years	Male	+	<i>Staphylococcus aureus</i>	Amynoglicoside Linezolid Rifampicin	Yes	Positive
5	2015.	2 months	Male	+	Cagulase-negative <i>Staphylococcus</i>	Vancomycin Linezolid	Yes	Death
6	2016.	17 years	Female	No	<i>Staphylococcus aureus</i>	Flucloxacillin Linezolid Clindamycin	No	Positive
7	2016.	6,5 years	Male	+	<i>Haemophilus parainfluenzae</i>	Vancomycin Ceftriaxone Cefpodoxime proxetil	No	Positive
8	2016.	7 years	Female	+	<i>Granulicatella adiacens</i>	Gentamicin Penicillin G Linezolid	No	Positive
9	2017.	5,5 years	Female	+	<i>Abiotrophia defectiva</i>	Ampicillin, Ceftriaxone Gentamicin Cefpodoxime proxetil	No	Positive

One patient (with IE due to *S. aureus*) had septic embolisation (meningoencephalitis) and two patients had relapse of IE (caused by CoNS and *Staphylococcus aureus*). The most frequent antibiotic regimen for first 2 weeks of therapy was penicillin or its derivatives combined with gentamicin. Total duration of treatment was 6-8 weeks. Mortality rate was 22%, while others recovered completely.

LEARNING POINTS/DISCUSSION

IE is a rare bacterial infection usually affecting children with CHD. Although IE is uncommon in children without risk factors, it should be suspected in patients with nonspecific clinical symptoms. In our case series *Staphylococcus spp* predominated as causative microorganism. We also noticed high proportion of cases caused by unusual bacteria and relatively low prevalence of streptococcal IE.