

ORIGINAL RESEARCH

Pericardial effusion among children: Retrospective analysis of the etiology and short-term outcome in a referral center in the south of Iran

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Abstract

Background and Aims: We reinvestigated the causes, symptoms, and management of childhood pericardial effusion (PE) and its gradual changes during recent years in a referral pediatric cardiology center in the south of Iran.

Methods: We retrospectively analyzed the profile of PE patients who were under 18 years old from 2015 to 2020. The patient's demographic, clinical, and paraclinical information was extracted and analyzed using SPSS software.

Result: In general, 150 out of 63,736 admitted patients (0.23% of the total pediatric admissions) were diagnosed with PE (male/female 1:1.17). The median age was 3.25 years (range: 2 days to 18 years; interquartile range: 9.5), and 50% of them were under 3 years of age. 32.6% had moderate to severe PE. Most patients presented with acute symptoms (68%) and respiratory problems, as the most common symptoms (30.6%). Tamponade signs were presented in 2% ($n = 3$) of the patients, and 80.7% ($n = 121$) were in a stable hemodynamic condition. In total, renal failure (22%) and parapneumonic effusion were the leading etiologies. Viral (7%) and bacterial (5%) pericarditis were the seventh and eighth causes; however, in severe cases, renal failure (22%) and bacterial pericarditis (14%) were dominant. In total, 14.1% ($n = 21$) of the patients needed pericardiocentesis that increased to 78.3% ($n = 18$) in severe cases. Only 6% had persistent PE for more than 3 months.

Conclusion: Childhood PE is mostly a result of renal failure and noninfectious causes. True pericarditis cases are not common, except in severe cases. It is more common in less than 3-year-old patients, and chronicity is rare. Severe cases had a high chance of pericardiocentesis, but other cases were mainly managed by treatment of the underlying causes.

KEYWORDS

pericardial effusion, pericardiocentesis, pericarditis, tamponade

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Yazdani: Writing—review & editing. All authors have read and approved the final version of the manuscript and had full access to all of the data in this study and take complete responsibility for the integrity of the data and the accuracy of the data analysis.

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

TRANSPARENCY STATEMENT

The article authors affirm that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned have been explained.

ETHICS STATEMENT

This retrospective study was approved by the Local Ethics Committee of Shiraz University of Medical Sciences and registered with the code of IR.SUMS.MED.REC.1399.559. It was exempted from the informed consent form of patients and no sensitive or private patient data, such as name or their address field, was used in this study.

DATA AVAILABILITY STATEMENT

Data are available on request from the corresponding author.

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