

### Paediatric Acute Myocarditis in University Hospital within Years 2010-2015

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Acute myocarditis (AM) in children is a rare disease and most often has viral etiology but can also arise from bacterial, parasitic, autoimmune, fungal, toxic, drug-related causes. Myocarditis is connected with high mortality in small children and the diagnosis can be missed.

The objectives of the study were to analyse all cases of AM treated or discovered during autopsy in our hospital during years 2010-2015.

**Methods** All the cases with AM were selected from hospitals database and/or autopsy register. We analyzed case histories to explore the course of disease, causative agents, echocardiographic findings and the outcome.

**Results.** There were 11 cases of AM diagnosed during hospitalization: 4 girls and 7 boys (63%), age  $8.9 \pm 4$  years. 63,6% complained about chest pain, but 27% were too young to complain, 72,7% had heart rhythm disorders, all 11 patients had elevated troponin I ( $3,6 \pm 2,7$  ng/L), 45,5% of patients were in need of inotropic support, 3- ventilation. Causative agents found in 5 cases (1- Coxsackie B, 1- rheumatic fever, 1-EBV, 1-Diphtheria, 1-Rotavirus). There were 3 cases of death (27,3%): 7 months old girl with large VSD, pneumonia (cause unrecognized, moderate myocardial interstitial lymphoid cell infiltration on autopsy), 10 year old girl with severe heart rhythm disorders (atrial fibrillation, undulation), cause of myocarditis unclear, autopsy revealed large regions of myolysis, severe lymphocytic and moderate leucocytic interstitial infiltrations, 4 months old girl with atypical haemolytic-uremic syndrome and myocarditis with poor cardiac function (EF 30%) (only Rotavirus positive found).

There were 10 cases where myocarditis as a part of diagnosis was revealed only during autopsy, 6 boys (60%), 4 girls, mean age  $1,17 \pm 2,5$  years (5 days to 8 years), causative agent recognized in 90% (8 patients with severe septicemia (2-*Acinetobacter Baumannii*, 1-*Micrococcus luteus*, 1-*Pseudomonas aeruginosa*, 1-*Serratia marcescens*, 1-*Salmonella enteritidis*, 1-*Clebsiella oxytoca*, 1-*Staphylococcus epidermidis* (two cases in combination with RSV), 1-*Influenza A/H1N1*). 4 of the patients were newborn (3 premature).

**Conclusions.** AM remains serious disease with high mortality rates and diagnosis is still often recognized only post mortem. Myocardial damage should be evaluated in patients with severe disease with a rapid, progressive, downhill course.