Chest pain – the most common cardiac causes in pediatric age group

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Chest pain as a symptom is a very frequent reason for pediatric emergency department visits. Parents and patients as well are usually very frightened about the cause of the pain. However, most researches showed that heart disease is not the leading cause of chest pain. In the chest there are many other organs rather than the heart that can cause the pain. The etiology of chest pain can be idiopathic, musculoskeletal, psychological, respiratory, gastrointestinal, cardiac and any other. While examining a child with chest pain a doctor must be aware of the most frequent chest pain causes and in the same time be able to exclude conditions that require hospitalization or emergency interventions. Although very rare in children, acute myocardial infarction requires emergent intervention. Most of the published cases of myocardial ischemia in children are linked with specific conditions - anomalous origin of left coronary artery from pulmonary artery, nephrotic syndrome, familial hypercholesterolemia, Kawasaki disease and other.

The aim of this research was to determine the number of patients with cardiac causes of chest pain. The research included 96 patients admitted to pediatric cardiology ward in the last 5 years. Diagnostic processes included ECG, chest X ray, cardiac enzyme levels, ECHO and other methods used according to patient’s anamnesis and clinical findings. In 17 out of 96 patients we found that the cause of pain was cardiac, in 32 out of 96 was idiopathic, in 14 out of 96 was musculoskeletal, in 16 out of 96 was respiratory illness, in 8 out of 96 was psychogenic, in 4 out of 96 was gastrointestinal and there are some other causes found in 5 out of 96 patients. The most frequent cardiac cause of chest pain that we find was mitral valve prolapse (7/17) and arrhythmias (5/17). Less frequent causes were high arterial pressure (3/17) and myocarditis (2/17). Our results confirmed previously published data on this topic. Nevertheless pediatric patients with chest pain should be carefully examined and the cause of the chest pain should be found whether it is cardiac or non–cardiac type.