

## Incidence and Clinical Manifestations of Acute Rheumatic Fever from 1995 to 2016 in Latvia

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**Introduction.** Rheumatic fever (RF) is an autoimmune disease which follows group A streptococcal infection in predisposed children (*Guilherme, 2015*). Although in European countries RF is in the field of rare disease group, it still remains the leading cause of acquired heart disease around the world and should always be considered in the differential diagnosis. In Latvia, new cases of RF are still taking place, diagnostic laboratory tests for RF are not currently available, a diagnosis remains a clinical decision, based on the Jones criteria; therefore, it is so important to evaluate clinical features of acute RF.

**Aim, Materials and Methods.** The aim of the research was to estimate the incidence and to describe the clinical characteristics of acute RF among children in Latvia from 1995 to 2016.

A retrospective descriptive study included 96 children diagnosed with RF from 1995 to 2016 at Children's Clinical University Hospital. The RF diagnosis was confirmed according to Jones criteria (1992). We analysed the case histories of children under 18 years of age, evaluating demographic data, patient history, primary clinical findings, compliance with the Jones criteria and duration of hospitalisation. Statistical analysis was performed using Microsoft Excel and IBM SPSS Statistics programmes.

**Results.** Between 1999 and 2003 incidence of RF was stable - 2.1/100.000 children per year, started to drop to 0.9/100.000 in 2008. In the period from 2011 to 2016 the incidence rate was 1/100.000 children over a period of six years. From 96 RF patients, 64.6% (n = 62) were boys, 35.4% (n = 34) were girls. Mean age at the time of diagnosis - 10.45 years, median - 10 (IQR 5-15), modal age - 13, minimum 4 and maximum 17 years. Mean length of stay was 29 days. Patients presented with carditis in 85% (n = 82) of cases, most common they had mitral valve and multivalvular (MV + AV) lesions both in 41.5% (n = 34) of cases. AV and TV lesions were in 6.1% of cases (n = 5), carditis without valvular disease were in 4.8% of cases (n = 4). Polyarthrititis was diagnosed in 42.7% (n = 41) of patients and Sydenham's chorea - 16.7% (n = 16). 10.4% (n = 10) presented with erythema marginatum and one patient had subcutaneous nodules. Of the minor criteria most common were - arthralgia - 81.3% (n = 78), elevated inflammatory markers - 79.2% (n = 76) and fever 61.5% (n = 59).

**Conclusions.** In Latvia RF refers to a group of rare diseases similar to other European countries. For the period 2011-2016 the incidence of RF was one case per 100.000 children over a period of six years. RF most commonly occurs in school-aged children and boys are more affected by the disease. Clinical presentation is typical with cardiac (85%), polyarticular (42.7%) and neurological involvement (16.7%).