

## An Update of a Single Center Review in the Management of Acute Appendicitis in Children: 2000–2016

*Mohits Kakars*<sup>1,2</sup>, *Agnese Rekevica*<sup>2</sup>, *Arnis Engelis*<sup>1,2</sup>,  
*Aigars Petersons*<sup>1,2</sup>

<sup>1</sup>*Rīga Stradiņš University, Department of Paediatric Surgery, Latvia*

<sup>2</sup>*Children's Clinical University Hospital, Department of Paediatric Surgery, Latvia*

**Introduction.** Acute appendicitis is the most common surgical disease managed in the paediatric population. Emergency appendectomy has been a “surgical dogma” in the management of acute appendicitis (AA) for more than a decade. Recently, the pathogenesis and management of AA has changed substantially with improved antibiotic regimes, advances in diagnostic techniques, initial non-surgical management and in selected cases operative. Since 2010, conservative therapy has been initiated as the primary treatment of AA at this center.

**Aim, Materials and Methods.** The aim of this study was to find out the incidence and management results of patients with primary diagnosis of AA and measure the rate of complicated appendicitis. This single center study included the retrospective data analysis from the medical records between 2000 and 2016. The data were analyzed using descriptive and statistical methods.

**Results.** During the analyzed time period, 4230 children were hospitalized with the primary diagnosis of AA. A decreasing trend in the number of hospitalized patients was observed between 2000 and 2014. An increase in complicated appendicitis was also observed from the year 2010 onwards; however, the overall percentage remains unchanged. In the period between 2000 and 2009, only 3% underwent successful conservative treatment, while the success rate increased to 29% in the 2010–2016 period.

**Conclusions.** During the entirety of the study, there was a gradual rise in the total number of patients. The total number of appendectomies has gradually decreased recently. Although the incidence of perforated appendicitis is increasing, it is still under the 30% limit. In our opinion, the above-mentioned changes correlate to the increasing number of patients being treated non-surgically.