

Protocol and early results of a retrospective clinical trial in pediatric pancreatitis (PINEAPPLE-R - Pain IN EARly phase of Pediatric Pancreatitis)

Mosztbacher D.¹, Tóth A.², Zsoldos F.³, Szentesi A.⁴, Tóth G.¹, Bereczki Cs.² and Hegyi P.^{4,5}, on behalf of the Hungarian Pancreatic Study Group.

¹ *János Balassa County Hospital, Department of Pediatrics, Szekszárd,* ² *University of Szeged, Faculty of Medicine, Department of Pediatrics and Pediatric Health Center,* ³ *Heim Pál Children's Hospital, Budapest,* ⁴ *University of Szeged, Faculty of Medicine, First Department of Medicine,* ⁵ *Hungarian Academy of Sciences - University of Szeged, Momentum Gastroenterology Multidisciplinary Research Group*

Background: The documented incidence of pediatric pancreatitis is very low; less than 1/100,000 in almost all European countries. According to two major studies, in the USA and in Australia the incidence is 3.6 and 13.2 in 100.000 which suggests that pediatric pancreatitis may not be as rare as reported in Europe.

Aim: Our aim is to investigate the correlation between serum pancreatic enzyme (lipase and amylase) measurements and/or pancreatic imaging (US,CT) with the number of diagnoses of pancreatitis.

Methods: The trial has been internationally discussed and registered at the ISRCTN registry (ISRCTN35618458). Patients under 18 years presenting with abdominal pain at emergency and surgical units were included. Information on patients concerning their clinical symptoms, results of imaging examinations and the laboratory parameters are collected retrospectively. The details of the study are available at <http://pancreas.hu/en/studies/pineapple>. Until now 1647 patients of two pediatric health care centres (County Hospital Tolna and University of Szeged) were analysed.

Results: 5,3% (88/1647) of patients seen in the emergency units had abdominal pain. 26% had nausea, whereas 17% had vomiting. Serum pancreatic enzyme levels (amylase) were measured only in 3 cases (3,4%), whereas transabdominal ultrasound were performed on 50 children (57%). Not surprisingly, pancreatitis cases were not diagnosed.

Conclusion: Our retrospective data analysis clearly showed that the number of serum pancreatic enzyme tests performed in the emergency unit setting are unacceptably low. Data collection from all European countries would be required. An evidence based (EBM) guideline for the necessity of serum pancreatic enzyme tests in pediatric patients presenting with abdominal pain is essential.