FUNCTIONAL GASTROINTESTINAL DISORDERS IN A TERTIARY OUTPATIENT SETTING – A THREE-YEAR PERIOD OUTCOME

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Goal The aim of this study was to evaluate children with functional gastrointestinal disorders (FGIDs) seen by the paediatric gastroenterologist (PG) and their outcome during a three-year period.

Method The study included children with FGIDs who visited the PG at the UHC Zagreb from January 1st 2017 to December 31st 2017 (N=328). This retrospective cohort was followed until December 31st 2019, data was extracted retrospectively from clinical records and their outcomes were assessed. Descriptive statistics and McNemar’s test were used, statistical significance was determined as p < 0.05.

Results About 2/3 of outpatients (222/328) dropped out during the year 2017. The leading diagnosis was functional constipation (90/222 or 40.5%) and more than half of these patients were younger than 11 years (106/222).

Most drop-outs visited the PG only once in 2017 (134/222), but for 33 patients this was a control visit, meaning that 101/222 (45.5%) needed no further subspecialist’s follow-ups after the index visit. During the year 2018 the number of patients who dropped out was 63/106 (59.4%) or 1/5 of the initial group. Finally, 43/328 or 13.1% of children from the initial cohort were still supervised by PG during the year 2019. About half of them had functional constipation (20/43), followed by irritable bowel syndrome (IBS) (12/43) and other functional abdominal pain disorders. Majority of patients were in the adolescent group (28/43). Further, we assessed the severity of symptoms at their last appointment in a subgroup of 227 patients who had one or more check-ups in the three-year period. About half of the patients claimed some improvement (115/227 patients), while 1/5 stated they were symptom-free (49/227). About 1/4 of children reported no change in the severity of symptoms (58/227). The vast majority of patients were correctly diagnosed with FGID, although the type of FGID changed in 13/328 subjects.

In one patient, however, the diagnosis of IBS was reversed to ulcerative colitis. A significant number of children was included in a child psychologist/psychiatrist treatment (74/328 or 22.5%).

Conclusion This survey reveals that almost half of children referred to the PG because of FGID needs only one subspecialist consultation. Less than 15% of children with FGID have persistent complaints lasting three years and requiring prolonged PG follow-ups. Adolescents tend to have more pronounced symptoms difficult to treat, as they were more prevalent in the subgroup followed to 2019 than in the initial 2017 cohort (28/43 vs. 143/328, p <0.001).

This is a one-year follow-up study looking into the nutritional status and the rate of re-hospitalizations in children at the UHC Zagreb, Dept. of Paediatrics who were first evaluated during the nutritionDay (nDay) in November 2018. The aim is to evaluate the accuracy of STRONGkids questionnaires, subjective assessment within nDay survey and anthropometry in detecting malnutrition and possible relation to number of hospital admissions and disease outcomes (for oncology patients) within a year.

The study included 50 patients (mean age 13.48 years ±3.79, 22 males) whose nutritional status was estimated in November 2018. Additional data were collected after the period of 12 months. Mann-Whitney U, Kruskal Wallis and Wilcoxon signed-ranks tests were applied.

A significantly different BMI was found among subgroups categorized through the nDay survey (without risk, at risk, malnourished patients) and among subgroups assessed by STRONGkids (low, medium and high risk for malnutrition) (p1=0.002, p2=0.003, resp.). Post hoc tests showed that statistical significance could be contributed to differences between groups malnourished patients vs. those not at risk within nDay (p3=0.009) and between groups low vs. high and medium vs. high risk defined through STRONGkids questionnaires (p4=0.020, p5=0.004, resp.). In the one-year follow-up period, 28/50 children were re-hospitalized once or several times.

The number of re-hospitalizations was significantly higher for children classified by STRONGkids to have high risk for malnutrition (p6=0.002), as well as for those categorized as malnourished through the nDay survey (p7=0.024). No significant difference in z-score BMI values was found between years 2018 and 2019 (Wilcoxon signed-rank test: p8=0.086).

Re-hospitalized oncology patients (11) were additionally analysed in respect of their disease status: favourable outcome (disease regression; 8/11) vs. unfavourable outcome (progression or unchanged state; 3/11). No difference was observed in the initial BMI between these groups (Mann-Whitney U test: p9=0.921), and no significant change in their BMI during this period was observed in either group (Wilcoxon signed-rank test: p10=0.161, p11=0.593).

Patients categorized as malnourished both with STRONGkids and nDay survey had significantly lower BMI than the rest of subjects. Our data support the hypothesis that malnourished patients have a higher rate of re-hospitalizations. Within the observational period, re-hospitalized patients neither improved nor worsened their nutritional status according to the BMI z-scores. We were not able to connect the nutritional status of oncology patients with their disease outcome after one year, perhaps due to a rather small sample or short time of follow-up.

EVALUATION OF CHANGES IN NUTRITIONAL STATUS IN RE-HOSPITALIZED CHILDREN

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Refractory Cyclic Vomiting Syndrome in a Child with Chiari Malformation Type II

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Introduction Cyclic vomiting syndrome (CVS) is a chronic disorder characterized by recurrent episodic attacks of intense
MYCOPLASMA PNEUMONIAE INFECTIONS WITH ATYPICAL DEVELOPMENT IN CHILDREN – CASE PRESENTATION

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Introduction Lower respiratory tract infections are considered a common cause responsible for morbidity and mortality among children, and Mycoplasma pneumoniae is identified to be responsible for up to 40 per cent of community-acquired pneumonia in children greater than five years of age [1] and also in 20% of adult cases [2].

Extrapulmonary manifestations have been reported either due to spread of infection or autoimmune mechanisms [1]. A case report on necrotizing pancreatitis was issued by Yang et al., 2015 [3].

Case 1. A 9-year old boy was admitted to our hospital presenting with an acute febrile illness lasting for four days associated with a generalised, centripetal rash and macrohaematuria. He had been previously treated with azithromycin for three days. Past medical history revealed that tonsillectomy was performed at 5 years of age and the diagnosis of hypoacusis perceptiva was made. On initial assessment he appeared well, alert and conscious. He was subfebrile (37.6°C), with a maculopapular confluent rash on the trunk and proximal parts of lower limbs. Initial investigation revealed elevated sedimentation rate (54 mm/h), leukocytosis (16.7 x 10^9/L), normal hemoglobin level and normal total red cell count. The patient had slightly elevated bilirubin (total bilirubin 65.8, conjugated 44.6 μmol/L), elevated AST (342 U/L), ALT (345 U/L), and GGT (534 U/L). His renal function and electrolyte panel was normal. Chest X-ray was normal without any lesions in the lungs. Urine investigation revealed macrohemia, proteinuria with active urinary sediment (dysmorphic erythrocytes and erythrocyte casts). On ultrasonic kidney were normal with hyperchogenic parenchyma, diminished corticomedulal differentia. Because of proteinuria (total protein 2829 mg/24 hours, albumin 1394 mg/24 hours), and hematuria, kidney biopsy was performed. On light microscopy we found mesangihypercellularity, interstitial fibrosis and tubular atrophy (focal). On IF microscopy there was a poorly expressed granular deposit of IgM on the glomerular basement membrane (GBM) with no IgA, IgG, C1q, C3 and C4 immune deposits. On electron microscopy the GBM was of variable width (113 to 670 nm, average 303 nm, SD 164). In the thicker part of GBM lamelation was present. Podocytes were normal. The pathohystologic exam was consistent with Alport syndrome. Mycoplasma serology was consistent with acute infection, with Mycoplasma IgM positive (26.3 U/mL), and negative IgG.

Case 2. A 15-year old male adolescent was admitted to hospital with symptoms of abdominal pain lasting for two weeks, with no nausea or vomiting, and normal stool passing. The boy was living with his mother, who had been diagnosed with neurofibromatosis, in an atypical family situation of divorced parents.

Physical examination showed abdominal pain in the left upper quadrant, also spreading to the back and lumbar region. Initial laboratory analysis showed a slight increase in serum amylase (140 U/L) and lipase (518 U/L). The C-reactive protein was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT).