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SECONDARY PANCREATIC INSUFFICIENCY IN CHILDREN, WAYS OF CORRECTION

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Underground

The pancreas is often involved to pathological processes in diseases of the stomach, duodenum, gall bladder and bile ducts, due to its functional relationship with the digestive system. According to scientific data, secondary pancreatic insufficiency occurs in 41,8-42,2% of children with gastroduodenal and hepatobiliary pathology [1].

Objectives

Searching for ways of correction of secondary pancreatic insufficiency in children with gastroduodenal and hepatobiliary pathology.

Materials and methods

The subject contingent included 20 children aged 7 to 14 years (8 boys and 12 girls) with chronic gastroduodenal and hepatobiliary pathology who had symptoms of secondary pancreatic insufficiency (on the background of functional dyspepsia - 3, chronic superficial gastritis - 5, chronic superficial gastroduodenitis - 3, chronic erosive gastritis - 2, functional disorders of the gall bladder - 5, chronic cholecystitis - 2), and we rehospitalized to the department of older children of the Uzhgorod City Children Clinical Hospital. In 12 (60.0%) of the surveyed children chronic pathology of the digestive tract, in 8 (40.0%) - functional pathology had been diagnosed. Diagnoses were based on clinical, laboratory data and ultrasound examination of the abdomen, according to existing protocols of Ukraine Ministry of Health. The examination included collection of complaints, history of the disease and life, complete blood count and urine analysis, urine diastase level; measurement of bilirubin level and its fractions, ALT, thymoltest, alkaline phosphatase, α -amylase, total protein, creatinine, urea; blood glucose level; esophagogastroduodenoscopy (in case of pain in the epigastric region); ultrasound of the abdomen (liver, gallbladder, pancreas, spleen), determination of α -1 antitrypsin level and C3

fraction of complement in serum apparatus Turbex. All children had been receiving an enzyme preparation (Mikrazym 10000: 1 capsule 3 times a day during meals, for 14 days) as a supplement to the treatment of the primary disease. Mikrazym is an enzyme preparation with active component of minimicrospheric pancreatin containing pancreatic enzymes (lipase, amylase, protease).

Results and discussion

The main complaints of the children were: pain in 20 children (100%): 13 children (65.0%) complained of epigastric pain, 7 (35.0%) children - pain in the right hypochondrium; abdominal distention - in 10 (50.0%) children, regurgitation - in 12 (60.0%) children, changes in stool (alternating constipation with diarrhea) - in 8 (40.0%) children. Results of blood count and urinalysis in all cases were within reference values. In the biochemical blood analysis (bilirubin and its fractions, ALT, thymoltest, alkaline phosphatase, α -amylase, total protein, creatinine, urea), blood glucose level no abnormalities were found. The results of coprogram indicated a lack of gastric digestion and secretory function of the pancreas: digested muscle fibers - + or ++ in 14 children, neutral fat - + or ++ in 18 children, fatty acids - + or ++ in 14 children, starch - + 12 in children, digested fiber - + or ++ in 10 children; mucus, epithelial cells - small amounts, white blood cells - rare in the sample. α -1 antitrypsin refers to acute phase proteins and inhibits most of proteolytic enzymes, its level is commonly increased in chronic pancreatitis. The results showed that in all children serum antitrypsin level was within reference values at an average $1,72 \pm 0,39$ g / l (allowable fluctuation 1,1-2,3 g / l). Normal α -1 antitrypsin level confirms the secondary character of pancreatic insufficiency in the subject contingent of children.

C3 complement fraction had no deviations from the reference values - $1,81 \pm 0,31$ g / l (al-

lowable fluctuation 0,9-2,1 g / l). Ultrasound of the abdomen diagnosed reactive changes of the pancreas in 14 children (70.0%), that included non homogeneous echostructure (in 8 children –40.0%), a slight increase in body size (5 children – 25.0%) and changes characteristic to the primary disease (thickening of gallbladder walls –in 2 children (10.0%), deformation of the gallbladder in 4 children (20.0%).

After the treatment, which included basic treatment of the primary disease (according to current clinical protocols of medical care to children with diseases of the digestive system) and correction of exocrine pancreatic insufficiency (mikrazym 10,000 units) the following results were revealed.

Positive dynamics of the clinical manifestations of the disease was observed (Fig. 1).

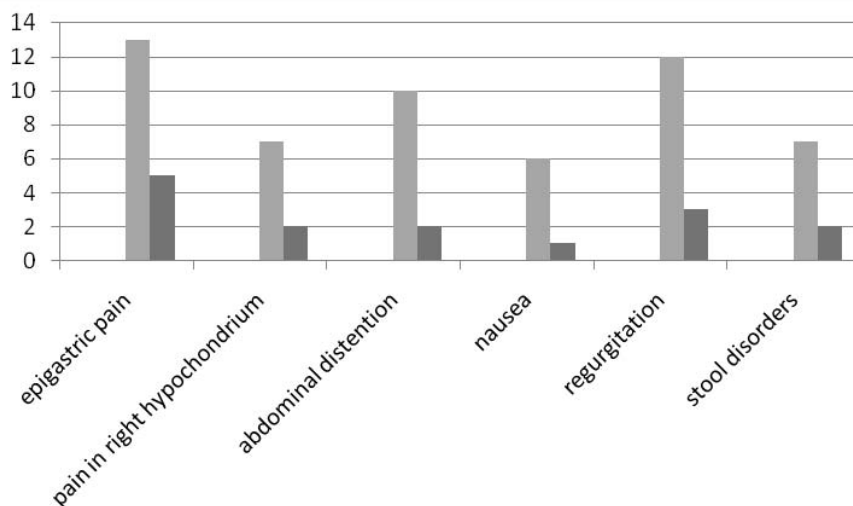


Fig. 1. Dynamics of clinical symptoms of secondary pancreatic insufficiency

Thus, severity of pain decreased: complaints on epigastric pain were registered in 13 children (65.0%) before, in 5 (25.0%) children after the treatment, complaints on pain in the right upper quadrant – in 7 (35.0%) cases before and 2 (10.0%) after the treatment. Severity of dyspeptic syndrome (abdominal distention, nausea, regurgitation) had also decreased, defecation disorders after treatment were recorded only in 2 (10.0%) patients

instead of 7 (35.0%). No side effects or intolerance to mikrazym 10,000 were recorded. Analysis of the coprogram after two-week course treatment of the primary disease and the mikrazym 10,000 therapy points to improvement of secretory function of the pancreas – digested muscle fibers were found only in 5 children (++), neutral fat – in 3 children (+), fatty acids – in 3 children (+) starch – no cases, digested fiber – in 7 children (Fig. 2).

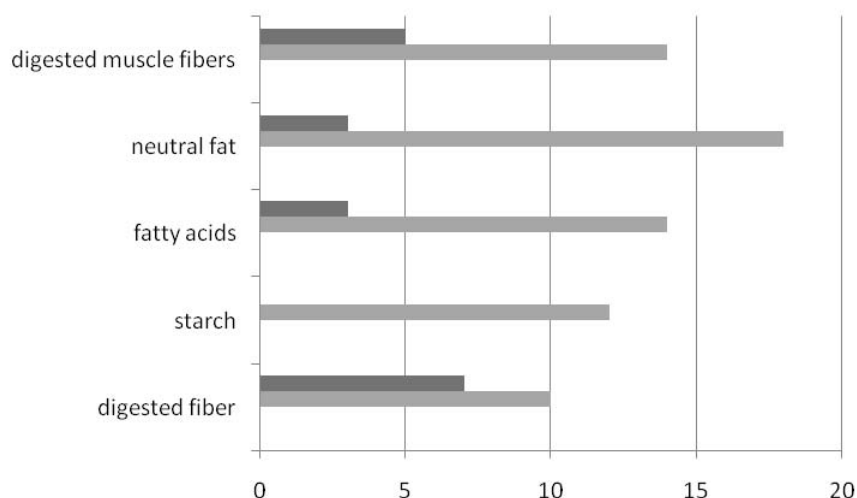


Fig. 2. Stool changes in secondary pancreatic insufficiency



Indicators of α -1 antitrypsin and complement C3 fraction after treatment tended to decrease, but no significant changes were found. Ultrasound of the abdominal cavity, performed after treatment showed no significant changes, except of normalization in pancreas echostructure.

Conclusions

On the basis of data obtained it can be seen that mikrazym 10000 is effective and safe for correction of secondary pancreatic insufficiency that occurs in children with functional and organic disorders of the digestive tract. Positive effects include regression of clinical symptoms and reduction of steatorrhea.

Summary

Objectives. Searching for ways of correction of secondary pancreatic insufficiency in children with gastroduodenal and hepatobiliary pathology.

Materials and methods. The subject contingent included 20 children aged 7 to 14 years (8 boys and 12 girls) with chronic gastroduodenal and hepatobiliary pathology who had symptoms of secondary pancreatic insufficiency.

Result. The article presents an analysis of the results of clinical observation of children with secondary pancreatic insufficiency on the basis of digestive tract pathology, who received mikrazym 10000 in addition to the basic treatment. It had been proved that the drug is effective for correction of the secretory function of the pancreas in patients.

Conclusions. On the basis of data obtained it can be seen that mikrazym 10000 is effective and safe for correction of secondary pancreatic insufficiency that occurs in children with functional and organic disorders of the digestive tract. Positive effects include regression of clinical symptoms and reduction of steatorrhea.

Key words: secondary pancreatic insufficiency, children mikrazym.

Вторинна панкреатична недостатність у дітей, шляхи корекції

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Резюме. В статті подано аналіз результатів клінічного спостереження за дітьми з вторинною панкреатичною недостатністю на фоні патології травного тракту, які в доповнення до базового лікування отримували препарат мікразим 10000. Доведено, що препарат є ефективним для корекції секреторної функції підшлункової залози у даного контингенту хворих.

Ключові слова: вторинна панкреатична недостатність, діти, мікразим.

REFERENCES

1. Dominguez-Munoz J.E. Pancreatic enzyme therapy for pancreatic exocrine insufficiency / JE Dominguez-Munoz // Curr Gastroenterol Rep. 2007. Vol. 9. P.116–122.
2. Dominguez-Munoz JE. Pancreatic exocrine insufficiency: diagnosis and treatment / JE Dominguez-Munoz // J Gastroenterol Hepatol. 2011. Vol. 26(suppl 2) P.12–16.
3. Kadiyala V., Suleiman S.L, Conwell D.L. Pancreatic exocrine insufficiency: part 2 of 2: pancreatic exocrine insufficiency / V.Kadiyala, S.L.Suleiman, D.L.Conwell // Gastroenterol Endos News. 2012. October (special edition). P.1–11.
4. Банадига Н.В. Панкреатична недостатність у дітей з патологією травної системи / Н.В. Банадига, О.М. Дутчак, І.О. Рогальський, А.І. Банадига, О.Н. Яцків // Современная педиатрия. 2011. №3(37). С. 115–118.
5. Белоусов Ю. В. Гастроентерология детского возраста: Учебник / Ю.В. Белоусов. – Київ, 2007. – 440 с.
6. Марушко Ю.В. Ферментні препарати для корекції екзокринної панкреатичної недостатності у педіатричній практиці / Ю.В. Марушко, Т.В. Гищак // Современная педиатрия. 2009. №6(28). С. 118–122.



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SIGNIFICANCE OF PRENATAL CARE COURSE IN THE POSTNATAL NEWBORNS WITH SOCIAL ADVERSE MEDICAL HISTORY

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Introduction

Prenatal health care is a complex, continuous and preventive care of the pregnant woman. In midwifery care it is the most important part of future population (Eliasova, 2008). One of the roles of prenatal care is:

- ensuring physiological course of pregnancy
- minimize or eliminate risks to the development and fetal growth
- promote a woman in such activities, which positively influence the course of delivery
- minimize the risks that may affect the course of pregnancy birth
- mentally and physically prepare a woman in childbirth.
- Prenatal care in midwifery aims to:
- separate providing of prenatal care by a midwife at the physiological conditions of pregnancy,
- collaboration with a woman, family and community in terms of health counselling and education in the survival of pregnancy, education on parenting, meeting needs and addressing their lack of midwives,
- providing information on early pregnancy diagnosis and diagnosing of pregnancy,
- monitoring during pregnancy, performing basic screening examinations,
- implementation of the basic screening to detect risk and pathological pregnancies. The disclosure of these factors is important to tell a doctor about them and work closely with him,
- course leadership in psychophysical childbirth preparation for pregnant women and for accompanying people,
- working with a pregnant woman and her family for creating birth plan (prepared according to the Concept of midwifery-number : 10973/2006 - 00).

Aim of work

We try to highlight impact of prenatal care on the postneonatal period of newborns and their further development using statistical analysis.

Research samples and methodology

Research samples consisted of newborns from socially disadvantaged backgrounds:

- newborns from socially disadvantaged backgrounds in childbirth group A = experimental group
- newborns from socially disadvantaged backgrounds in childbirth group B = control group.

Group A (experimental sample) included 50 newborns of respondents, which operates a midwife through health - educational action and implementation of prenatal care in their natural environment. Control group B included 50 newborns of respondents whose pregnancies took place without the interaction of midwives in their natural environment. Selection of respondents in this group was subjected to the control so that we ensure intactness of both groups. To properly evaluate the impact of a midwife and antenatal care implemented at postneonatal period of newborns, we focused on the selection of indicators that can be objectively measured and evaluated. Another condition for the establishment of indicators was the possibility of verifying the data from medical documentation. The data were processed in the statistical program SPSS 15.0 by the *descriptive* methods (descriptive characteristics, average graph and Eta to compare a numerical variable in two samples, cross tables, cumulative bar graph, the Cramer V contingency factor to compare categorical variable in two samples) and *inductive statistics* (ANOVA for the numeric variable, Chi2-test of independence for imperative). Because the two random samples were large enough ($n_1 = n_2 = 50$), we used parametric methods, including