



STOMACH ULCER IN CHILDREN: CAUSES, CLINICAL PICTURE, DIAGNOSIS AND TREATMENT

Ibatova Sh.M., Ruzikulov N.E., Rakhmonov Yu.A.

Samarkand State Medical University, Samarkand, Republic of Uzbekistan

Gastric ulcer in children is a chronic disease in which the mucous tissue of the gastric walls is damaged. The pathology occurs in isolation or with the involvement of the duodenum and other structures of the gastrointestinal tract (GIT) in the pathological process [1,3,5,7]. Children of middle and high school age suffering from chronic gastritis, duodenitis and other long-term lesions of the digestive system are most susceptible to this form of the disease.

In recent years, gastric ulcers have become noticeably “younger”: if previously the frequency of diagnosed cases did not exceed 1/1000 children, today this ratio is 1/600. Experts explain this by a combination of unfavorable factors, which include poor nutrition, increased psychological stress on growing children, and an unhealthy environmental situation.

Despite the progress achieved in studying the pathology of the digestive organs in pediatric practice, interest in it does not fade due to its high prevalence, frequent complications and early disability, leading to a decrease in the quality of life of children [4,14,18]. According to materials from foreign and domestic statistical studies, peptic ulcer disease is observed in 13% of cases, and combined localization is observed in children. 6% of cases [2,6,13,17].

It is known that the development of diseases of the stomach and duodenum in 40-60% of adults begins in childhood. The peak incidence occurs at 10-13 years of age; boys and girls get sick with approximately the same frequency, and after 10 years, boys get sick much more often. This fact is probably explained by the anticarcinogenic effect of estrogens [8,11,16].

In childhood, the pathology of the gastroduodenal zone has, of course, its own characteristics; the disease is asymptomatic for a long time, often due to the fact that children usually do not pay attention to their health, and therefore often result in complications. Severe acute attacks, rapid course and progression end in severe traumatic operations [1,5,8,9,11,18].

The role of hereditary burden is one of the main risk factors for the occurrence of duodenal ulcer; the disease is transmitted in an autosomal dominant or autosomal recessive manner, not related to gender [3,6,10,12,15].

In recent years, there is no doubt about the etiological and pathogenetic role of *Helicobacter pylori* in the development of the ulcerative process, which was facilitated by the introduction of eradication therapy regimens and the widespread use of modern antiseptics. Despite this, it has still not been possible to resolve the issue of complete cure of the ulcerative process. Frequent use of non-steroidal anti-inflammatory drugs prescribed by doctors to treat various diseases is the most common cause of ulcer formation [12,14,16].

TYPES OF GASTRIC ULCER IN CHILDHOOD

Stomach ulcers can be acute or chronic. Experts also additionally identify the following forms of peptic ulcer:

- acute with bleeding;
- acute with perforation;
- acute with bleeding and perforation;
- acute without bleeding or perforation;
- chronic with bleeding;
- chronic with perforation;
- chronic with bleeding and perforation;
- chronic without bleeding and perforation.

An acute disease can occur in uncomplicated and complicated forms, and a chronic disease can be in the acute phase, incomplete and clinical remission.

Depending on the general clinical signs of gastric ulcers in children, the severity and nature of the symptoms, 4 stages of development of the pathology are distinguished:



- At the first stage, redness and swelling of the mucous membrane is noted with the formation of rounded areas of ulceration of a clear shape, at the bottom of which a grayish-yellow or white coating appears;
 - The second phase is characterized by a decrease in redness and swelling of the mucous tissues, while inflammatory processes are noticeably reduced, and the bottom of the ulcerated areas is cleared of plaque;
 - The third stage is accompanied by the formation of scars, while signs of inflammation and some deformation of the walls of the stomach may persist;
 - The fourth phase is remission, at this stage there is a marked improvement in the child's condition, but in some cases there is an increased formation of acidic liquid.
- There are also typical and atypical forms of pathology, and according to the number of damaged areas, single and multiple types of the diseases.

Causes of Stomach Ulcers in Children

Peptic ulcer disease is a polyetiologic disease, that is, its formation can be influenced by many different factors, both external and internal. Exogenous (external) causes of the development of stomach ulcers in a child include:

- irregular meals with long intervals between meals;
- fast eating with insufficient chewing of hard ingredients;
- excessive consumption of smoked, salted, pickled foods;
- dry food;
- fast food meals;
- binge eating;
- irrational use of medications (antibiotics, hormonal and sedatives, corticosteroids, etc.).

In adolescents, peptic ulcers often develop as a result of active smoking: tobacco smoke and nicotine products irritate the gastric mucosa, which sooner or later leads to tissue ulceration and damage to the walls of the organ.

Internal or endogenous causes may be:

- hereditary predisposition;
- bacterial damage to the gastrointestinal tract, in particular helicobacteriosis;
- various chronic forms of pathologies of the digestive system (gastritis, duodenitis, cholecystitis, etc.);
- acute infectious diseases of the gastrointestinal tract (enteritis, rotavirus);
- increased acidity of gastric juice;
- gastrointestinal motility disorder;
- severe psycho-emotional experiences against the background of general fatigue of the body.

Congenital structural abnormalities of the stomach and other digestive organs can have a certain influence on the formation of peptic ulcers.

Symptoms of Peptic Ulcer in Childhood

The main symptom of a stomach ulcer in children is pain that periodically occurs in the upper abdomen and epigastric region, especially on an empty stomach. In some cases, so-called painful hunger attacks can occur at night when the child is sleeping. As a rule, after eating, the discomfort goes away; sometimes taking medications that reduce the production of hydrochloric acid helps reduce discomfort.

Other symptoms of gastric ulcer formation in children may include:

- belching with air or acid;
- frequent heartburn;
- noticeable decrease in appetite;
- flatulence, dyspeptic symptoms;
- regular constipation;
- unstable, rapidly changing mood (so-called emotional lability);
- sleep disturbance;
- anxiety;
- nausea, sometimes accompanied by vomiting;
- bad breath.

Long-term peptic ulcer disease can lead to weight loss, deterioration of hair, nails, teeth and skin.

Diagnosis of Peptic Ulcer Disease in Childhood

The primary action is a thorough physical examination, during which the patient's complaints are clarified, the clinical manifestations of the pathology are assessed, anamnesis data is collected and risk factors for the disease are determined.

In the future, a number of instrumental and laboratory diagnostic procedures are shown, which, depending on the indications and necessity, may include:



- general clinical blood test;
- blood biochemistry;
- general clinical urine analysis;
- fecal occult blood test;
- bacteriological culture of stool;
- study of the acidity level of gastric secretions;
- testing for the presence of *Helicobacter pylori* infection in the body;
- endoscopic examination of the stomach.

Treatment of Peptic Ulcer in Children

Conservative treatment of gastric ulcers in children includes:

- taking medications whose action is aimed at eliminating the infectious agent, reducing the secretory activity of the stomach, reducing the concentration of gastric juice, eliminating inflammatory processes, etc.;
- adherence to a strict diet with fractional meals;
- bed rest for at least 1 week;
- reasonable limitation of physical activity;
- exclusion of negative emotional experiences;
- physiotherapeutic methods of influence (electrophoresis, magnetotherapy, etc.);

Conservative therapy lasts quite a long time and is justified only for uncomplicated forms of the disease. It is most often carried out in a hospital setting, home observation is possible if the child feels satisfactory, the necessary medications are taken on time and in full, and the diet plan is followed.

In the presence of complications, surgical treatment is indicated

Indications for surgical intervention may include:

- peritonitis;
- stomach bleeding;
- ulcer perforation;
- penetration – extensive spread of the infectious and inflammatory process to neighboring organs and structures;
- formation of tumors in the stomach.

The decision on the need for surgical treatment of peptic ulcer in children is made individually in each specific case at a specially assembled consultation.

Prognosis of the Disease

Uncomplicated forms of pathology can be successfully completely corrected, provided that the child and his parents carefully follow medical recommendations.

For peptic ulcers with complications, the prognosis depends on the volume and type of treatment performed.

Prevention of Disease

Measures to prevent gastric ulcers in childhood include:

- adherence to a rational diet, avoiding potentially harmful foods and drinks (soda, snacks, fast food, etc.);
- avoiding smoking in adolescence and beyond;
- timely and correct treatment of various gastrointestinal diseases;
- reduction of stress factors.

Peptic ulcer disease can develop in a child at any age, but most often it is diagnosed in adolescents from 12 to 17 years old. This is a fairly serious disease that requires constant medical supervision and decisive measures on the part of parents. A stomach ulcer imposes certain restrictions, requires adjustments to the child's lifestyle and nutrition, and can pose a real threat to the health and even life of children. It is very important to immediately consult a doctor at the first signs of gastrointestinal dysfunction, without expecting the symptoms to disappear on their own. Otherwise, this may lead to emergency hospitalization followed by surgical treatment.

REFERENCES

1. Baranov A.A. *Clinical and functional features of chronic gastroduodenitis in children from high-risk groups for the development of duodenal ulcer. Author's abstract. dis cand. honey. Sci. Perm 2006. P. 25.*
2. Belousov A.S., Shulga N.I. *Peptic ulcer disease in children. Current issues in pediatrics and childhood surgery. Jubilee materials. scientific-practical conf. M 2002. pp. 7-9.*



3. Islamova D.S., Gaffarov U.B., Ibatova Sh.M. Assessment of the nature of acid formation in children with duodenal ulcer and primary chronic gastroduodenitis using intragastric pH-metry // *Problems of pediatric and pediatric surgery in the XXI century*. Beshkek. – 2014. P. 53.
4. Islamova D.S., Shadieva Kh.N., Togaev I.U., Ibatova Sh.M., Mamatkulova F.Kh. Complicated course of duodenal ulcer in children of senior school age: causes, diagnostic criteria. // *Problems of biology and medicine*, 2017, No2 (94) pp. 51-53.
5. Sh.M. Ibatova, F.Kh. Mamatkulova, N.B. Abdukadirova, H.M. Oblokulov, F.A. Achilova. The effectiveness of apricot oil in children with rickets. // *Scientific and practical journal "Questions of science and education"*, Moscow, 2019, No. 27 (76), -P.40-46.
6. Ibatova Sh. M., Mamatkulova F. Kh., Ruzikulov N.Y. The Clinical Picture of Acute Obstructive Bronchitis in Children and the Rationale for Immunomodulatory Therapy. *International Journal of Current Research and Review*. Vol 12 Issue 17. September 2020. - P.152-155.
7. Ibatova Sh. M., F. Kh. Mamatkulova, N. B. Abdukadirova, Yu. A. Rakhmonov, M. M. Kodirova. Risk Factors for Development of Broncho-Ostructive Syndrome in ISSN: 2776-0979, Volume 4, Issue 11, November, 2023 294 Children. *International Journal of Current Research and Review*. Vol 12. Issue 23 December 2020. -P. 3-6.
8. Ibatova Sh.M., Mamatkulova F.Kh., Rakhmonov Y.A., Shukurova D.B., Kodirova M.M. Assessment of the Effectiveness of Treatment of Rachit in Children by GasLiquid Chromatography. *International Journal of Current Research and Review*. Vol 13, Issue 06, 20 March 2021. -P.64-66.
9. Sh.M. Ibatova, F.Kh. Mamatkulova, D.S. Islamova. Efficiency of combined application of apricot oil and aevit as a regulator of lipase activity of blood serum in children with vitamin D-deficiency rickets. *Journal of Critical Reviews*. // ISSN2394-5125. VOL 7, ISSUE 11, 2020. P.1266-1274.
10. Ibatova Sh.M., D.T.Rabbimova, E.S.Mamutova, N.B.Abdukadirova, M.M.Kadirova. Gas-chromatographic appraisal of application of apricot oil and aevit in complex therapy of vitamin D- deficiency rickets in children. *International Scientific Journal Theoretical & Applied Science*, 24.04.2019, Philadelphia, USA, P.333-336.
11. Sh.M. Ibatova, N.Q. Muhamadiev, Sh.O. Axmedov, S.N. Muhamadieva Improvement of Vitamin D-deficient rachitis treatment in children *International Journal of Medicine & Health Research*. - 2015. - V.1. - N 1. - P. 1-5.
12. Ibatova Sh. et al. (2018). Correction of some lipid metabolism in children with rickets by the combined use of apricot oil and aevita. " *Proceedings of the XXXIV International Scientific and Practical Internet Conference "Trends and Prospects for the Development of Science and Education in the Context of Globalization"*. Collection of scientific papers Pereyaslav-Khmelnytsky, 2018. -P.589-593.
13. Ibatova Sh. M., Mamatkulova F. Kh., Ruzikulov N.Y. The Clinical Picture of Acute Obstructive Bronchitis in Children and the Rationale for Immunomodulatory Therapy. *International Journal of Current Research and Review*. Vol 12 Issue 17. September 2020. - P.152-155.
14. Ibatova Sh. M., F. Kh. Mamatkulova, N. B. Abdukadirova, Yu. A. Rakhmonov, M. M. Kodirova. Risk Factors for Development of Broncho-Ostructive Syndrome in Children. *International Journal of Current Research and Review*. Vol 12. Issue 23 December 2020. - P. 3-6.
15. Ibatova Sh.M., Mamatkulova F.Kh., Rakhmonov Y.A., Shukurova D.B., Kodirova M.M. Assessment of the Effectiveness of Treatment of Rachit in Children by GasLiquid Chromatography. *International Journal of Current Research and Review*. Vol 13, Issue 06, 20 March 2021. P.64-66.
16. Sh.M. Ibatova, F.Kh. Mamatkulova, D.S. Islamova. Efficiency of combined application of apricot oil and aevit as a regulator of lipase activity of blood serum ISSN: 2776-0979, Volume 4, Issue 11, November, 2023 295 in children with vitamin D-deficiency rickets. *Journal of Critical Reviews*. // ISSN2394-5125. VOL 7, ISSUE 11, 2020. P.1266-1274.
17. Ibatova Sh.M., Baratova R.Sh., Mamatkulova F.Kh., Ergashev A.Kh. State of immunity in chronic obstructive pulmonary disease in children. *Asian Journal of Multidimensional Research (AJMR)*. Vol.10, Issue 3, March, 2021. P. 132-136.
18. Sh.M. Ibatova, F.Kh. Mamatkulova, N.Y. Ruzikulov, Yu.A. Rakhmonov. Bronchoo structive syndrome in children: prevalence and difficulties of differential diagnostics. *ACADEMICIA: An International Multidisciplinary Research Journal* 2021, P. 87-92.