

The Clinical Case of Crohn's Disease in Child of 3 Years and 7 Months

Ivanova O.N., Berezkina O.N., Meltchanova G.M.,
Kogychova G.V., Sydorova L.E.

ABSTRACT

The paper presents a clinical case of Crohn's disease, diagnosed in 2014 in a child of 3 years and 7 months. This pathology is rare among children (in the Republic Sakha (Yakutia) - 2 cases). Due to the variability of the clinical picture of the disease it is difficult to diagnose.

Keywords: system of histocompatibility, clinical remission, gastroenterology, inflammation, gastrointestinal tract.

INTRODUCTION

Crohn's disease is a chronic nonspecific progressive transmural granulomatous inflammation of the digestive tract. Most often affected the terminal small intestine, so there are synonyms of this disease, as «terminal ileitis», «granulomatous ileitis» etc. In the pathological process may involve any of the digestive tract from the root of the tongue to the anus. Frequency of lesions of the intestine and decreases in the following order: terminal colitis, ileocolic, anorectal form and other forms are also focal, multifocal and diffuse form[1,2,7,12,15,24]. For Crohn's undulating, with exacerbations and remissions. Crohn's disease is detected in children of all age groups. The peak incidence occurring at 13-20 years. Among the cases the ratio of boys to girls 1:1.1 [3-5, 19,23,25]. The etiology and pathogenesis of the disease is unknown. Discuss the role of infection (mycobacteria, viruses, toxins, food, certain medications, considered as the starting moment for the development of acute inflammation. Much emphasis immunological, dysbiotic, genetic factors [7,10,11,16,22]. The relation between the system HLA and Crohn's disease, which often reveal the loci of DR1 and DRw5. Clinical picture of the disease differs the big variety. Beginning of the disease is usually gradual, over many years with occasional outbreaks. The main clinical symptom in children's persistent diarrhea (up to 10 times a day). The volume and frequency of stools depend on the level of destruction of the small intestine - the higher it is, the more often a stool and, accordingly, the heavier the disease. The defeat of the small intestine accompanied with malabsorption syndrome. The stool periodically appears in the blood.

Complications of Crohn's disease are most often associated with the formation of fistulas and abscesses of different localization, ulcer perforation, peritonitis. Possible intestinal obstruction, acute toxic dilation of the colon. In the General analysis of blood reveal anemia (loss of red

blood cells, hemoglobin, hematocrit), reticulocytosis, leucocytosis. When the biochemical analysis of blood find hypoproteinemia, hypoalbuminemia, hypokalemia, reduction of the content of microelements, increased alkaline phosphatase, A2-globulin and C-reactive protein[1,2,7,12,15]. The severity of biochemical changes correlates with disease severity. Endoscopic picture of Crohn's disease is characterized by a great polymorphism and depends on the stage and extent of the inflammatory process. Endoscopically are three phases of the disease: infiltration, ulcers-cracks, scarring.

In phase infiltration (the process is localized in the submucosa of the) mucosa has a type of «quilt» Matt, vascular picture is not visible. Later, erosion type aft with separate superficial ulceration and fibrinous overlays. In phase ulcers-crack identify the individual or multiple deep longitudinal ulcerous defects affecting and muscular layer of the intestinal wall. The intersection of cracks gives the mucous membrane type «cobblestones» [8, 12, 17, 18, 20, 23]. Due to the significant swelling under the mucous membrane, and also defeats the deep layers of the intestinal wall of the bowel lumen narrows. In phase scarring detecting sites irreversible stenoses of the intestines. Characteristic radiological signs (research is usually done with double contrast study) - segmentation lesions, wavy and uneven contours of the intestine. In the colon determine the bumps and sores on the top edge of the segment with preservation of Australia on the bottom. In stage ulcers-crack - type «cobblestones». Diagnosis is based on clinical and anamnestic data and the results of laboratory, tool, morphological studies [13, 21, 26]. Differential diagnosis of Crohn's disease is carried out with a sharp and prolonged intestinal infections of bacterial and viral etiology, diseases caused by protozoa, worms, malabsorption syndrome, tumors, ulcerative colitis and other The most effective medicines believe drugs 5-aminosalicylic acid (mesalazine), sulfasalazin [24, 25]. At the same time should be taking folic acid multivitamin with microelements in the dose of age. In the acute phase of illness and severe complications (anemia, cachexia, damage of joints, erythema and others) prescribed glucocorticoids (hydrocortisone, prednisolone, dexamethasone), less immunosuppressants (azathioprine, cyclosporine).

The prognosis for recovery is unfavorable, for life - depends on the severity of the illness, the character of its course, the presence of complications. It is possible to achieve long-term clinical remission.

Thus, Crohn's disease is a severe disease with variable flow. Currently in the Republic of Sakha (Yakutia) has two children with the diagnosis of Crohn's disease. This clinical diagnosis was a girl aged 3 years and 7 months in 2014.

Objective: To present a clinical case of Crohn's disease in girls 3 years and 7 months



MATERIALS AND METHODS

The analysis of two case histories Children clinical hospital № 2 and National centre of medicine № 1 Pediatric centre was done.

RESULTS

The Girl - child from the first pregnancy occurring without features. Childbirth for 38 weeks, operative. Breastfeeding to 2.5 months. Psychomotor and physical development is age appropriate. The child is sick from 10.11.2013. Feces is blood-streaked. The divisional pediatrician prescribed «smectite», the diagnosis is not installed. 13.11.2013 deterioration, bowel movement is regular with blood and child was hospitalized to the regional hospital with clinical diagnosis: enterocolitis unclear etiology. The girl received treatment: Ceftriaxone, Mezim Forte, Linex, Arbidol, ampicillin, loperamide. The child's condition deteriorated. Parents arrived to Yakutsk to hospitalize at children's clinical hospital №2. Child was diagnosed with acute gastroenterocolitis, moderate severity. Toxicosis, exicosis 1 degree. The child had a feces bacteriological analysis, sowing negative. In the General analysis of the blood was a high rate of sedimentation rate up to 42 mm/h, decrease in hemoglobin to 107 g/l, platelets to 414. In feces coprogram: erythrocytes 37-43-45 in sight. The girl received treatment: infusion therapy for two days, amikacin, smecta, Gidromet, Bifidumbacterin, furazolidone. After treatment, the child was discharged home. After a week there has been a sharp deterioration: a temperature of 39 degrees, diarrhea with blood stains 4-5 times a day. The child is sent to Yakutsk to the National centre of medicine № 1 Pediatric centre, where the reception was held with the surgeon and sigmoidoscopy. In the study Protocol is the following: in the bowel lumen scarlet blood, mucous intestines swollen and hyperemic, with hemorrhagic lesions 0.2 sm. After consulting the child was sent to Children's clinical hospital №2. Girl was diagnosed with Adenovirus enterocolitis moderate severity. Mixed infection. Acute intestinal infection of unknown etiology with gymocolit moderate severity and treatment: sylfperazon, trichopol, suprax, bromhexine. In the blood is the ESR to 60 mm/h, hemoglobin g/l, thrombocytosis to 438. The child examined by a gastroenterologist. Conclusion gastroenterologist: nonspecific ulcerative colitis. On 4.02.14 the child's state is seen as a serious, due to gymocolit. February 5, 2014 she was transferred to the gastroenterology Department of the National centre of medicine № 1 Pediatric centre, where she stayed for 5 days and got the following treatment: baktisubtil, salofalk, microclysters with hydrocortisone, Kreon, smectite and infusion therapy. There is an improvement of the patient and 10.02.2014 child is transferred by agreement in the National centre of health children of



Russia in gastroenterology Department for further diagnosis. In the National centre of health children of Russia diagnosis of Crohn's disease was confirmed.

REFERENCES

1. Adler G. Bolezn' Krona i jazvennyj kolit [Crohn's Disease and ulcerative colitis]. Moscow: Medicina, 2001, 527 p.
2. Alieva Je.I. Adler G. Rumjancev V.G. Bolezn' Krona u detej [Crohn's Disease in children] Pediatrija [Padiatria]. 2001, №6, pp.75-79.
3. Andush T. Shtange Je.F. Hefler D. Keller-Stanislavski B. Sluchai ser'eznyh pobochnyh jeffektov, predpolozhitel'no svjazannye s primeneniem infliksimaba (remikejda) v Germanii.[So Cases of serious side effects, presumably associated with the use of infliximab (Remicade) in Germany]. Gastrojenterologija Sankt-Peterburga [Gastroenterology St. Petersburg].2004, № 2-3, pp. 1215-1218.
4. Belousova E.A. Jazvennyj kolit i bolezni Krona [Ulcerative colitis and Crohn's disease]. Tver': Triada, 2002, pp.128-130.
5. Berens R. Buderus Sh. Keller K.M. Osten-Saken fon der I. Bolezn' Krona i jazvennyj kolit u detej i podrostkov [Crohn's disease and ulcerative colitis in children and adolescents] Dr. FalkPharmaGmbH [Dr. FalkPharmaGmbH]. 2006, №4, pp.48-49.
6. Valenkevich L.N. Klinicheskaja jenterologija[Clinical enterologie]. Saint Petersburg: 2001, 288 p.
7. Vodilova O. V. Klinicheskie osobennosti bolezni Krona u detej i principy diagnostiki [The clinical features of Crohn's disease in children and the principles of diagnosis]: avtoref. diss. ... kand.med.nauk. Moscow, 2004, 25 p.
8. Gastrojenterologija detskogo vozrasta. Prakticheskoe rukovodstvo po detskim boleznyam [Children's Gastroenterology. A practical guide to childhood illnesses] pod redakciej S.V. Bel'mera i A.I. Havkina. Moscow: Medpraktika, 2003, pp. 225-249.
9. Ipatov Ju.P. Baranova A.A. Klimanskoj E.V. Rimarchuk G.V. Luchevye metody issledovaniya [Radiation methods]. Moscow: Medicina, 2002, pp. 140-179.
10. Kliniko-luchevaja diagnostika bolezni Krona s lokalizaciej v tonkoj kishke [Clinical and radiological diagnosis of Crohn's disease with localization in the small intestine] pod red. N.J Petuhova, L.M. Portnoj, V.A. Isakov. Radiologija-praktika [Radiology practice]. 2004, №4, pp. 8-17.
11. Mazankova L.N. Vodilova O.V. Kurohtina I.S. Lebedeva S.V. Vozrastnye osobennosti klinicheskikh projavlenij bolezni Krona u detej [Age peculiarities of clinical manifestations of



- Crohn's disease in children] *Russkij medicinskij zhurnal* [Russian journal of medicine]. 2005, V. 14, №3, pp. 1-4.
12. Nespecificheskij jazvennyj kolit u detej i podrostkov [Ulcerative colitis in children and adolescents] *Rossijskij pediatričeskij zhurnal* [Russian pediatric journal]. 2002, №2, pp. 16-18
13. Parfenov A.I. Bolezn' Krona: K 70-letiju opisanija terminal'nogo ileita. [Crohn's Disease: the 70th anniversary of terminal ileitis description] *Consilium medicum*. [Consilium medicum]. 2002, Issue 2, pp. 33-38.
14. Petuhova N.J. Sluchai bolezni Krona tonkoj kishki, diagnostirovannye pri pomoshhi kontrastnogo preparata «Entero-VU» [Cases of Crohn's disease of the small intestine diagnosed with using contrast agents «Entero-VU»]. *Vestnik rentgenologii i radiologii* [Herald of rentgenology and radiology]. 2005, №5, pp. 61-64.
15. Petuhova N. J. Sovremennye vozmozhnosti rentgenologicheskoy diagnostiki vospalitel'nyh i opuholevyh zabolevanij tonkoj kishki: avtoref. dis. ... kand.med.nauk [Modern possibilities of x-ray diagnostics of inflammatory and neoplastic diseases of the intestine]. Moscow, 2002, 28 p.
16. Portnoj L. M. Petuhova N.Ju. Sovremennaja luchevoj diagnostika v gastrojenterologii i v gastrojenteroonkologii [Modern x-ray diagnosis in gastroenterology and gastroenterooncology] Moscow: Vidar-M, 2001, 302 p.
17. Portnoj L.M. Isakov V.A. Kazanceva I.A. Sovremennaja luchevoj diagnostika bolezni Krona tonkoj kishki [Modern radiological diagnosis of Crohn's disease of the small intestine] *Vestnik rentgenologii, radiologii* [Herald of rentgenology and radiology]. 2001, №5, pp. 10-16.
18. Portnoj L.M. Stashuk G.A. K voprosu o sovremennyh vozmozhnostjah rentgenologicheskoy diagnostiki zabolevanij tonkoj kishki s pomoshh'ju preparata «Jentero-V'ju» [To the question of modern possibilities of x-ray diagnostics of diseases of the small intestine with the help of the drug, which is rather view] *Vestnik Rentgenologii i radiologii* [Herald of Rontgenology and radiology]. 2001, №1, pp. 10-19.
19. Sitkin S.I. Mesalazin v terapii vospalitel'nyh zabolevanij kishechnika. Farmakokinetka i klinicheskaja jeffektivnost [Mesalazine in the treatment of inflammatory bowel disease. Farmacocinetica and clinical efficacy] *Gastrojenterologija Sankt-Peterburga* [St. Petersburg Gastroenterology] 2002, №1, pp. 15-19.
20. Fedulova J.N. Prognoz techenija i ocenka jeffektivnosti lechenija nespecificheskogo jazvennogo kolita u detej [Prognosis of effectiveness evaluation and treatment of ulcerative colitis in children]: avtoref. diss. ... kand.med.nauk . Moscow, 2003, 25 p.



21. Chizhikova M.D. Sivash Je.S. Parfenov A.I. Bolezn' Krona (terminal'nyj ileit): kliniko-rentgenologicheskaja diagnostika i lechenie [Crohn's Disease (terminal ileitis): clinical and x-ray diagnostics and treatment] Jeksperimental'naja i klinicheskaja gastrojenterologija.[Experimental and clinical gastroenterology]. №1, 2002, pp. 91-93.
22. Shherbakov P. L. Vospalitel'nye zabolevanija kishechnika u detej. Bolezn' Krona i nespecificheskij jazvennyj kolit [Inflammatory bowel disease in children. Crohn's disease and ulcerative colitis] Detskij doctor [Children's doctor]. 2000, №4, pp. 22-26.
23. Ali S.I. Paediatric Crohn's disease: a radiological review / S.I. Ali, H.M.L.Carty // European radiology. - 2000. - Vol. 10. - P. 1085-1094.
24. Accuracy of enteroclysis in Crohn's Disease of the small bowel: a retrospective study / L.C. Cirillo, L.Camera, M. Della-Noce [et al.] // Europy Radiology - 2000. - #10. - P. 1894-1898.
25. Endoscopic and bioptic findings in the upper gastrointestinal tract in patients with Crohns disease/ M.Alcantara, R. Rodrignez, L.M. Potenciano [et al.] // Endoscopy. - 1993. - Vol. 25, # 4.- R. 282-286.
26. Paerregaard A. H.// Chronic inflammatory bowel disease in children. An epid study from eastern Denmark 1998-2000 / A. H. Paerregaard//UgeskrLaeger. – Denmark, 2002. - #23- R.34-45.

The authors:

Ivanova Olga N., Head of Department of Pediatrics and Pediatric Surgery, MI NEFU, Yakutsk, Russia, 89142906125, e-mail: olgadoctor@list.ru

Berezkina Olga N., doctor of gastroenterology department PC RH number 1- NCM, Chief out-of-staff gastroenterologist MH Republic Sakha (Yakutia), Yakutsk, Russia, 8 (4112) 39-55-78 e-mail: yacenkogm@mail.ru

Melchanova Galina M., head of gastroenterology department PC RH number 1- NCM, doctor of the highest category, Yakutsk, Russia, 8 (4112) 39-55-78, e-mail: yacenkogm@mail.ru

Cidorova Lydia Y., doctor IBDO DGKB number 2, Yakutsk, Russia, 8 (4112) 43-06-11, e-mail: dgkb@mail.ru

Kozhukhova Zhanna V., doctor IBDO DGKB number 2, Yakutsk, Russia, 8 (4112) 43-06-11, e-mail: dgkb@mail.ru.