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MORPHO-FUNCTIONAL FEATURES OF DIRECT RHEOINTESTINOGRAPHY TO ASSESS DECOMPENSATED ENTEROPATHY

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The choice of medical management in patients with urgent diseases of the abdominal cavity, despite a number of modern equipment, continues to be based on the development of new and applied clinical and instrumental research methods [1,2,3]. After all, the volume of surgical procedure and its consequences completely depend on the rapid and pathogenetically substantiated intra-abdominal assessment of the occurrence and progression of acute enteropathy [4, 5].

The aim of the study was to investigate the effectiveness of using direct rheointestinography to assess the degree of decompensation of acute enteropathy.

Materials and methods of research. The work is based on the results of experimental studies (24 white rats), which were performed in strict compliance with

general ethical standards and principles of animal experiments. To study the effectiveness of direct rheointestinography to assess the degree of decompensation of acute enteropathy in experimental animals. Acute segmental occlusive vascular insufficiency of the small bowel was modeled. Studies of the destructive process in the segment of the small intestine were carried out after 1, 2, 4 hours. Laboratory, instrumental, morphometric and statistical research methods were used.

Results of the research. The course of acute segmental vascular occlusion of the small bowel in experimental animals after 60 minutes of modeling the pathological process was characterized by the presence of significant reserves of the mucosa, which was reflected in reduced crypts from 166 ± 9.14 to 145 ± 6.92, separately reduced mucosal height from 521 ± 39.42 μm to 492 ± 34.37 μm while preserving the epithelium by 96 ± 0.52%. After 2 hours, the preservation of 85 ± 7.68% of the epithelium of the mucous membrane was observed in conditions of reducing the number of crypts to 128 ± 6.83 and reducing the height of the mucousa to 434 ± 22.36 μm. Simulation of four-hour acute occlusive vascular insufficiency of small bowel leads to irreversible damage to the mucous membrane and was characterized by preservation of the epithelium of the mucous membrane by only 36 ± 0.32%, reducing the number of crypts to 58 ± 4.39 and significantly reducing mucus height 258 ± 19.53 μm.

The use of direct rheointestinography has also revealed objective changes depending on the duration of acute segmental occlusive vascular insufficiency of the small bowel. After 1 hour from the moment of modeling, a decrease in the amplitude of the rheointestinogram from 0.41 ± 0.03 Ohm to 0.36 ± 0.03 Ohm and the rheological index from 2.64 ± 0.19 to 2.38 ± 0.14 and an increase in vascular tone of the intestinal wall from 12.08 ± 1.09% to 13.66 ± 1.19% and the index of peripheral resistance from 25.61 ± 2.03% to 28.36 ± 2.09%. Two-hour ischemia of the small bowel is characterized by a significant decrease in the rheographic index to 2.09 ± 0.18 and an increase in the index of peripheral resistance to 31.94 ± 2.34%. At four-hour ischemia, a progressive deepening of the destructive process in the segment of the small bowel was observed, which was characterized by a sharp decrease in the amplitude of the rheointestinogram to 0.08 ± 0.006 Ohm and rheological index to 0.43 ± 0.03 and an increase in peripheral resistance index of 3 to 48.382 ± against the background of increasing the rate of vascular tone of the small bowel wall to 22.92 ± 1.49%.

Conclusion.

1. The use of direct rheointestinography allows to objectify the negative trends in the course of acute segmental vascular occlusion of the small bowel.

2. A sharp decrease in the amplitude of the rheointestinogram to 0.08 ± 0.006 Ohm and the rheological index to 0.43 ± 0.03 and an increase in the index of peripheral resistance to 48.382 ± 3.26% against the background of increasing the rate of vascular tone of the intestinal wall to 22.92 ± 1.49% indicates the irreversibility of acute segmental enteropathy.

References

1.Matthew Diamond, John Lee, Christina A LeBedis. Small Bowel Obstruction and Ischemia. Radiol Clin North Am.2019 Jui;57(4):689-703. DOI:10.1016/j.rcl.2019.02.002.

2.Florian Kuhn, Tobias S Schiergens, Ernst Klar. Acute Mesenteric Ischemia.Visc Med.2020.Aug;36(4):256-262. DOI:10.1159/000508739.

3. Karthik Gnanapandithan, Paul Feuerstadt. Review Article: Mesenteric Ischemia. Curr Gastroenterol Rep.2020 Mar 17;22(4):17. DOI:10.1007/s11894-020-0754-x.

4. Mohammed Al-Zubaidi, Nicholas Bayfield, Shelbin Neelankavil. Strangulated small bowel obstruction complicating totally extra-peritoneal laparoscopic inguinal hernia repair. BMJ Case Rep.2020 Feb 5; 13(2):e232780. DOI:10.1136/bcr-2019-232780.

5. Maria Asuncion Acosta-Merida, Joaquin Marchena-Gomez, Pedro Saavedra-Santana, Jose Silvestre-Rodriguez, Manuel Artiles-Armas, Maria Mar Callejon-Cara. Surgical Outcomes in Acute Mesenteric Ischemia: Has Anything Changed Over the Years? World J Surg.2020 Jan;44(1):100-107. DOI: 10.1007/s00268-019-05183-9.