

The aim of the study is to analyze modern screening methods for CRC. Early detection of CRC among the population has 2 directions: detection in high-risk groups and in formally healthy people, without any symptoms. The high-risk group includes persons with a family history of CRC (relatives of the first degree); patients suffering from IBD for 10 years, people with severe obesity. Screening of high-risk individuals begins at age 40, for the remaining individuals from age 50.

The most well-known test - FOBT - detection of small amounts of occult blood in the intestinal contents. It is performed at home: for 3 days before the test follow a diet without animal protein, and then take 2 samples of feces for 3 days. The test should be repeated annually. Another method of immunochemical examination of feces for occult blood - FIT - is more convenient, does not require a special diet, it requires a smaller number of fecal samples. The methods reduce the risk of death from CRC by 15%, in addition, FOBT and FIT reduce the incidence of CRC by 20% by diagnosing large polyps and their subsequent removal by colonoscopy.

In case of positive tests for occult blood, patients should be examined additionally. The second method of screening is sigmoidoscopy, which is performed once every 5 years and reduces mortality from CRC by 60%. If a polyp or tumor was found during this method, a colonoscopy is performed. The combination of FOBT and sigmoidoscopy can reduce the risk of death from CRC by 80%. Colonoscopy is marked as the gold standard among screening methods in some countries. Periodic colonoscopies can prevent cancer in 76-90% of patients with large polyps. Colonoscopy in a healthy population is performed once every 10 years, and in patients with small polyps or solitary adenoma without severe dysplasia - once every 3 years. In patients with hereditary non-polyposis CRC colonoscopy is performed at intervals of 1-2 years.

Among the promising methods of screening and diagnosis - virtual colonoscopy - spiral computed tomography with very thin sections and 3-dimensional image. The sensitivity of the new method in the diagnosis of polyps more than 1 cm is 90%, and the specificity is 96%. The duration of the study is 10 minutes. Of the new methods, we note the fecal test for DNA. The exfoliated epithelium of the colon is isolated from the feces, DNA is extracted and its mutation analysis is performed using a panel of biological markers APC, P53, Ras, Bat-26. These data allow to differentiate adenomas with malignancy.

Thus, screening can potentially reduce the incidence of CRC. Evidence-based quality standards need to be developed at each stage of the screening process, disseminate inexpensive, easy-to-use clinical methods and implement them at the national level

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FEATURES OF THE CLINICAL COURSE OF OSTEOARTHRITIS IN PATIENTS WITH COMORBID NON-ALCOHOLIC STEATOHEPATITIS AND OBESITY

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Today, non-alcoholic fatty liver disease (NAFLD) is one of the most common diseases in hepatology, which leads to poor quality of life, reducing its duration. An important problem is the comorbidity of NAFLD with obesity (Ob) and osteoarthritis (OA), which is characterized by a burdening syndrome. Osteoarthritis of large joints is a common comorbid pathology on the background of Ob. The urgency of the problem of studying OA is due to the high prevalence of OA, the rapid development of functional disorders and disability of people of all ages.

The aim was to find out the features of the clinical course of osteoarthritis depending on the presence of comorbid diseases: non-alcoholic steatohepatitis and obesity. 140 patients with NASH, OA, obesity or with their combination were examined including 30 patients with OA and normal weight (BMI = 21 – 25 kg / m²), 80 patients with OA, NASH and obesity (BMI higher than 30 kg / m²), 30 patients with NASH and obesity without OA (BMI > 30 kg / m²). The average age (63.1 ± 5.3) years. The control group consisted of 30 healthy individuals with normal body weight, including 12 men and 18 women.

A negative impact of NASH and obesity on the course of OA compared with the course of OA in persons with normal body weight consists of a significantly lower frequency of stage I (2,4

times, $p < 0,05$) and higher frequency of III (4,6 times, $p < 0,05$) OA radiographic stage, higher chance of OA progression from stage I to stage III (OR = 4,88 95 % CI [1,09-21,81, $p < 0,05$]); reliably lower occurrence of mono-osteoarthritis (3,1 times, $p < 0,05$) and higher incidence of poly-osteoarthritis (7,1 times, $p < 0,05$) with an increased chance of involvement of more joints (OR = 7,50 95 % CI [1,71-32,96, $p < 0,05$]), higher intensity of pain syndrome (by WOMAC) (OR = 2,81; 95 % CI [1,28-6,15, $p < 0,05$]), joint stiffness (2,2 times) and a higher chance of its progression (OR = 2,19; 95 % CI [1,04-4,59, $p < 0,05$]), higher exacerbation rate during the year (2,7 times, $p < 0,05$) (OR = 2,63; 95 % CI [1,01-6,81, $p < 0,05$]), a higher incidence of severe OA (OR = 9,75; 95 % CI [1,27-75,05, $p < 0,05$]), lower frequency of first stage FJF (2,3 times, $p < 0,05$) and higher frequency of II and III degrees of FJF (1,5 and 4,4 times, respectively, $p < 0,05$), higher total chance of FJF progression (OR = 4,69; 95 % CI [1,05–21,01, $p < 0,05$]), which progress with the increase in the degree of obesity ($p < 0,05$), the degree of IP ($p < 0,05$) due to a significant imbalance in the metabolism of connective tissue components ($p < 0,05$).

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FORMATION OF THE SIGMOIDORECTAL SEGMENT INTESTINAL WALL IN THE FETUSES OF THE THIRD TRIMESTER OF INTRAUTERINE DEVELOPMENT

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The main macroscopic and microscopic signs of the sigmoidorectal segment in fetuses and neonates are considered the following structures: narrowing of the intestinal tube in the point of transition of the sigmoid colon into the rectum; lack of evagination and epiploic appendages within the sigmoidorectal segment; the place of transition of the sigmoid colon strips into the solid longitudinal muscular layer of the rectum; the semicircle available in the form of a fold of the mucous membrane located transversally to the axis of the intestine. Practical value of the above anatomical facts is discussed in the scientific literature (A.E. Bharucha et al., 2007; F. Bretagnol et al., 2006; B.N. Zhukov, 2000). Nevertheless primary (absolute) signs of differentiation between the sigmoid and rectum should be peculiarities of the myo- and angioarchitectonics of the wall of the colon distal portions (P. Kovalsky et al., 2008), which is confirmed by the results of our research.

Objective of the research is to study histotopographic peculiarities of the sigmoidorectal segment in fetuses of the third trimester. The study was conducted on 31 specimens of the 7-9-month fetuses (305,0-420,0 mm of PCL) using a complex of morphological investigation methods. Histological examination of the sigmoidorectal segment wall found that mucous membrane in 7-month fetuses is thicker than in 8-9-month of the intrauterine development. A number of blood vessels are indicative of the vascular plexuses available in the submucous basis within the borders of the sigmoidorectal transition. According to D.W. Fawcett et. al., (1994), submucous plexus is involved into the regulation of the local intestinal secretion, absorption and muscular contraction. The loose fibrous tissue of the submucous basis penetrates partially into the muscular membrane of the initial portion of the peritoneal part of the rectum. The data obtained in our research correlate with the statement suggested by A. Shafik, et. al., (1999) concerning anatomical borders of the sigmoidorectal segment. The muscular layer of the sigmoidorectal segment in 7-month fetuses is more than a half of the wall thickness in comparison with the mucous membrane. But in the term of 8-9 months of the intrauterine development the muscular layer of the sigmoidorectal transition becomes thinner again. In 9-month fetuses certain groups of fibers in the muscular layer are partially interrupted by the layers of the loose fibrous tissue, which is indicative of enlargement of the intestinal diameter that advances the growth of the mucous membrane.

Therefore, histological transformations of the sigmoidorectal segment are indicative of the formation of the sigmoidorectal sphincter: the mucous and submucous membranes of the sigmoidorectal transition look like evagination in the intestinal lumen, the blood vessels form vascular plexuses in the submucous membrane of the sigmoidorectal transition. The circular layer of the muscular membrane in the sigmoidorectal transition is thicker than the longitudinal layer.