

ETIOPATHOGENESIS OF INFLAMMATORY BOWEL DISEASE

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Exact description of inflammatory bowel disease (IBD) etiology remains one of the most challenging scientific problem. Current review contains modern perceptions of main factors involved in development of ulcerative colitis and Crohn's disease. Author thoroughly describes role of genetics, particularly autophagy genes polymorphisms, and its use for molecular classification of IBD. Role of separate microorganisms and intestinal microflora composition is described in view of novel data about pathogen-associated molecular patterns' (PAMP) action upon intestinal wall, as well as function of inherent antimicrobial mucosal peptides. The article presents current conception of innate and adaptive immunity role in IBD as well as newly discovered pathogenesis elements – damage-associated molecular patterns (DAMP), inflammasome and microRNA. Perspectives of therapy development is discussed based on these molecular mechanisms

[Keywords: inflammatory bowel disease, ulcerative colitis, Crohn's disease, etiology, pathogenesis, immunology, genetics, biological therapy]

ENDOSCOPIC TREATMENT OF CORROSIVE STRICTURES OF INTESTINAL ANASTOMOSIS

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Strictures of intestinal anastomosis are the complications, which appear both in the short and late postoperative periods.

THE AIM OF THE STUDY. To evaluate the possibility of endoscopic treatment of strictures of intestinal anastomosis.

MATERIALS AND METHODS. 26 patients were included in the study. Complete obliteration of the lumen of the anastomosis was found in 6 patients, strictures with diameter of 2-5 mm in 10 patients, and of 6-9 mm – in 10 patients. The length of the stricture of less than 5 mm were found in 18 patients, 6-9 mm in 4 patients and more than 10 mm – in 4 patients. In 15 patients electric destruction and instrumental bougienage was performed, in 7 – electric destruction and mechanical bougienage, and in 4 – electric destruction, instrumental and mechanical bougienage.

RESULTS. After the electric destruction and the mechanical bougienage in 5 patients the correction of the stricture was achieved in 1 step, in 2 – after several manipulations. After the electric destruction and instrumental bougienage, the correction was achieved in 6 patients in 1 step, and in 9 patients – after a multi-stage treatment. In the case of electric destruction, instrumental and mechanical bougienage (4 patients) manipulation was multistage in all cases. The result of the treatment was considered excellent in 6 patients (width of anastomose is more than 20 mm), good – in 11 patients (15-20 mm), and satisfactory – in 9 patients (10-14 mm).

CONCLUSION. Endoscopic methods are effective in the treatment of strictures of intestinal anastomosis.

[Key words: stricture in the area of the anastomosis, electric destruction, instrumental bougienage, mechanical bougienage]

CAPSULE COLONOSCOPY: INITIAL EXPERIENCE

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AIM OF STUDY. To assess the informational value and validity of colon examination carried out with the help of the PillCam COLON2 endoscopic videocapsule and the quality of colon preparation for videocapsule colonoscopy.

MATERIALS AND METHODS. 18 patients were included into the study. The main groups of indications for videocapsule colonoscopy were determined. The patients were prepared according to the standard method with Fortrans®. For data objectification and for the analysis of findings we used two criteria to assess the quality of the performed examination: completeness of colon examination and its informational value.

RESULTS. Most patients rated the comfort of preparation for the examination as high. The informational value and validity of our method of colon examination used with appropriate patient preparation were high.

CONCLUSION. The method of capsule colonoscopy has high values of sensitivity and specificity. Patient preparation for the examination requires special attention and should be performed using modern recommended medications which ensure high quality intestinal cleansing.

Videocapsule examination may be an acceptable alternative to colonoscopy in certain patients.

[Key words: videocapsule colonoscopy, patient preparation for the examination,

completeness of colon examination, informational value]

UNDETECTED COLORECTAL LESIONS

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AIMS. to determine the number of missed colorectal neoplasia and to evaluate the factors that led to it.

PATIENTS AND METHODS. We prospectively enrolled 387 patients with colorectal adenoma who underwent EMR. Tandem initial colonoscopy and colonoscopy with EMR was carried out within 3 months.

RESULTS. In 47 patients (12 %) previously not identified colorectal polyps were diagnosed. The total number of previously undiagnosed polyps was 81: 37 polyps (45,7 %) had a flat type of growth, 44 (54,3 %) – polypoid. From all primary un recognized primary polyps 33 (40,7 %) had a size less than 5 mm, 39 (48,1 %) – from 6 to 10 mm and 9 (of 11,2 %) – 1.0 cm and more. 53 polyps in 35 patients were adenomas (65,4 %). It was 9,3 % of the total number of patients. Only one case (0,26 % of the total number of patients) of the colon cancer was diagnosed.

CONCLUSION. Colonoscopy is a complex diagnostic method and its results are affected by many factors (quality of bowel cleansing, technique and equipment, applying additional methods of contrasting mucosal, qualification of the doctor, etc.). This should be taken into consideration when evaluating the results of the colonoscopy.

[Keywords: Colonoscopy, Colorectal neoplasia, adenoma, miss colon polyps]

OPTIMIZED SURGICAL APPROACH TO OBSTRUCTED DISTAL COLORECTAL CANCER

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121 patients with obstructed distal colorectal cancer are included in the study. All patients underwent oncological resection, intraoperative bowel decompression and bowel continuity restoration. Straight «End-to-end» colorectal anastomosis with additional application of Tachocomb on suture line was created in 35 (42,35 %) pts. Modified Duhamel procedure was performed in 86 (71,07 %) pts. Modified Duhamel procedure minimizes risk of anastomotic leak, bowel stoma and multistage surgical treatment.

[Keywords: colon cancer, obstruction, surgical treatment, intraoperative decompression, primary colorectal anastomosis]

COMPARATIVE EVALUATION OF ULTRASOUND AND X-RAY METHODS OF EXAMINATION IN DIAGNOSTICS OF INTERNAL ANAL INCOMPLETE FISTULAS

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In this study we examine 50 (35 males; aged 23-67; median age 48±12.5) patients with anal incomplete internal fistulas of rectum in period 2011-2013. All patients were on hospital treatment. Ultrasound examination was carried out on SSD-630 and SSD-4000 devices with linear rectal transducer (7.5 MHz) and biplane transducer (5 and 7.5 MHz). Proctofistulography with using perforated intrarectal tube was carried out on 20 patients. All data were compared to intraoperatively revision.

Accuracy in fistula inner opening detection was 94 % by digital rectal examination (DRE), 90 % by ultrasound and 35 % by proctofistulography.

Accuracy of purulent cavity detection was 40 % by ultrasound and 25 % by proctofistulography.

All collected data show us that ultrasound with linear rectal transducer as a primary method of examination of the patients with internal anal incomplete fistulas is the most informative in comparison to X-ray method and in terms of radiation exposure.

[Key words: internal anal incomplete fistulas, ultrasound, proctofistulography]

REPAIR OF THE OF ABDOMINAL WALL AT OPERATIONS ON THE COLON

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The purpose of this report is to analyze of results of one-stage surgical treatment of defects of the abdominal wall with use of synthetic materials at operations on the colon at 74 patients. At 66 patients with earlier made intestinal stoma repair operation with liquidation of stoma were executed. At 6 patients the resection of the colon and hemiorrhaphy were made at earlier exist ventral incisional hernia. At 2 patients the resection of the colon and abdominal wall treated with primary closing of the formed defect. At 55 (74,3 %) patients synthetic mesh prosthesis were to place in retromuscular space, at 15 (20,3 %) in position «on lay», at 4 (5,4 %) patients in position «in-lay». The postoperative death rate making 1,4 %. Wounds complications was at 9 (12,2 %) patients. Relapse of a hernia were observed at 1 patient (1,4 %). The conclusion: Use synthetic mesh prosthesis for restoration of the abdominal wall at operations on the colon did not lead to considerable frequency of postoperative complications.

[Keywords: Incisional hernias, hemiorrhaphy, mesh prosthesis]

COMBINATION OF METRONIDAZOLE WITH CHEMORADIOTHERAPY IN LOCALIZED RECTAL CANCER: A PROSPECTIVE CLINICAL TRIAL

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Metronidazole is a hypoxic radiosensitizer that demonstrated high radiosensitizing efficacy in preclinical trials in solid tumors. The aim of our study is to investigate efficacy of metronidazole combination with chemoradiotherapy for localized rectal cancer.

METHODS. cmrT2-3N0-2M0 rectal cancer patients were included in this prospective randomized clinical trial. All patients received 5x5 Gy radiotherapy with fluoropyrimidines and local hyperthermia on days 3 and 5. Patients Primary endpoints included tumor regression and toxicity, secondary – perioperative complications, sphincter preservation rate, local recurrence and distant metastasis rate.

RESULTS. 44 patients were enrolled: 22 in group A received metronidazole, 22 in group B received standard chemoradiotherapy. 3 (13,7 %) patients in group A and 6 (27,3 %) patients in group B had pCR (p = 0,2622). No grade 4-5 toxicity was observed. 4 (18,2 %) patients in group A and 2 (9,1 %) patients in group B experienced grade 3 toxicity (p = 0,3796). Postoperative complications rate was 22,7 % (n = 5) and 18,2 % (n = 4) accordingly. Sphincter-sparing surgery was performed in 20 (90,9 %) in each group. 1 patient in group A developed a local recurrence.

CONCLUSIONS. In this trial we did not observe any benefits from addition of metronidazole to localized rectal cancer chemoradiotherapy.

[Key words: rectal cancer, chemoradiotherapy, hypoxic radiosensitization, metronidazole]

DO THE PREDICTORS OF RESULTS OF RECTOCELE REPAIR EXIST?

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This study was designed to detection the predictors of rectocele repair results. It included 41 women with 2-3 grade of symptomatic rectocele who were treated by reinforcement of rectovaginal septum with biological implant. Long-term outcomes were evaluated in 6 – 60 months (med. 36). Improvement of rectal evacuatory function noted 35 (85,4 %) of patients (group 1), another 6 (14,6 %) did not mention an improvement of anorectal symptoms after surgery (group 2). Comparative analysis between the groups to reveal the factors influenced on surgical outcomes, such as patient's age, duration of constipation, parity, rectocele depth, descending perineum syndrome, resting and squeeze pressure, resting and squeeze pressure gradient, was conducted. Squeeze pressure and resting/squeeze pressure gradient were significantly higher in patients of 1 group (p<0,01). Other tests failed to show significant difference between the groups. Thus we are suppose to evaluate resting/squeeze pressure gradient as predictor of rectocele repair results.

[Key words: perineal descent syndrome, rectocele]

BOWELANGIODYSPLASIA (CASEREPORT)

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[Key words: angiodysplasia; gastrointestinal bleeding; bowel resection; CT; capsule endoscopy; surgery]

SURGICAL MANAGEMENT OF SEVERE TOTAL CROHN'S DISEASE OF COLON

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[Key words: Crohn's disease, colon, surgery]

MUCOSAL HEALING IS THE MODERN GOAL OF TREATMENT OF ULCERATIVE COLITIS

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[Keywords: ulcerative colitis, clinical remission, mucosal healing]

MODIFIED CLASSIFICATION OF HAEMORRHOIDS

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A widely spread classification of hemorrhoids was published by Goligher in 1961. This classification can be easily reproduced in clinical work. However the modern tendency towards to less invasive treatment of hemorrhoids needs a more detailed description of the disease. Analysis of the previous versions the classification has been made. A modified classification of hemorrhoids taking into account a flexible approach to grade IV hemorrhoids. The total number of the hemorrhoids' patients was 10.1% of all coloproctological patients admitted to State Scientific Centre of Coloproctology in 2014. The modified classification enables surgeons successfully apply less invasive treatment for 38.7% patients with grade IV hemorrhoids.

[Key words: Haemorrhoids, Haemorrhoidectomy, Doppler-guided Transanal haemorrhoidal dearterialization with Mucopexy, Classification]

SUBCUTANEOUS EXCISION OF PILONIDAL SINUS (SINUSECTOMY): FIRST EXPERIENCE

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Objective: to assess results of sinusectomy in treatment of patients with pilonidal disease.

Materials and Methods: treatment results of 41 patients with pilonidal sinus (PS) who underwent sinusectomy were analysed. Study included patients without previous radical surgery for PS, without active inflammation of PS and patients with not more than one secondary fistula opening. There were 31 males (75%) and 10 females (25%). Mean age was 25±6.8 years (range: 17-39).

Results: Mean follow-up after surgery was 10.5 months (from 3 to 28). The median time of hospital stay was 3,8±0.79 days (from 3 to 7 days). The median time to return to work was 13.4±1.8 days (from 10 to 16 days). At the time of evaluation complete wound healing was observed in 38 (96.6%) patients. Healing time ranged from 30 to 65 days (40.6±8.7). The overall recurrence rate was 7%. Postoperative complication were found in 6 (14.6%) patients (1 patient had bleeding, 5 patients had necrosis of the skin bridge in the early postoperative period).

Conclusion: Sinusectomy is a radical, less traumatic treatment of chronic pilonidal disease. Low severity of postoperative pain syndrome, early return to work and good cosmetic effect are the benefits of this method as compared to traditional surgical methods in patients with pilonidal disease.

[Key words: pilonidal sinus, surgical treatments, sinusectomy]

CLINICAL AND BIOCHEMICAL EVALUATION OF THE EFFECTIVENESS OF FAST TRACK PROTOCOL IN ELECTIVE COLORECTAL SURGERY

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The purpose of this randomized study was to estimate the effectiveness and safety of fast track protocol in elective colorectal surgery.

MATERIAL AND METHODS. 498 patients requiring elective major colorectal surgery were randomized to conventional group (200 patients had a traditional perioperative therapy) and multimodal group (298 patients were managed with application of elements of Fast Track protocol).

The following data were analyzed: complications rate, the time of patient's mobilization, time of the drainages and catheters removal, first flatus and defecation, volume of infusion, urine output and postoperative hospital stay. The evaluation of serum lactic acid concentration and chemiluminescent analysis of serum and erythrocytes were performed.

RESULTS. The groups were similar in terms of age (average age was 65,3±11 years). Septic wound complications and anastomotic leakage rates were similar in both groups. Ileus was more common in conventional group. Four patients of conventional group had significant bleeding caused by stress gastric ulceration. First flatus occurred faster in Fast Track group. The application of Fast track protocol prevented the changes of lactic acid concentration and contributed to normalization of chemiluminescence levels.

CONCLUSION. The application of multimodal optimization program significantly decreased the complications rate and facilitated early hospital discharge.

[Key words: fast track, colorectal cancer]

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THE INFLUENCE OF POSTOPERATIVE ADHESIONS AFTER EMERGENCY COLECTOMY WITH STOMA FORMATION ON THE RECONSTRUCTIVE SURGERY

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Colectomy in emergency setting frequently required formation of the end colostomy and lead to the intraabdominal adhesions

AIM: to investigate the peculiarities of adhesions after emergency colectomy and their influence on the choice of reconstructive operation approach

PATIENTS AND METHODS: Reconstructive surgeries was performed in 189 patients after emergency colon resections with colostomy. Of them 77 (40.7%) were operated through parastomal laparotomy, 90 (47.6%) via the midline incision and 22 (12.4%) were undergone laparoscopic assisted reconstruction of bowel continuity.

RESULTS: Mortality was 1/189 (0,5%). Adhesiolysis lasted 50,9±27,8 min for the midline access, for the parastomal access 37,3±23,22 min, laparoscopic assisted adhesiolysis took 88,7±35,6 min.

Conclusion parastomal access associated with

[Key words: bowel resection, colostomy, adhesions, reconstructive procedure]

SOME WAYS TO PREVENT INTRA-AND EARLY POSTOPERATIVE COMPLICATIONS IN PATIENTS WHO WERE OPERATED ON COLON

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[Key words: infusion therapy, crystalloid solutions, balanced polyionic solutions]

COAGULATION ABNORMALITIES IN COLORECTAL SURGERY

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This article tells about changes in hemostasis due to various factors (27 patients after radiochemotherapy, simultaneous operations on liver and

intestines in patients with metastases of colorectal cancer – 24 patients, colorectal cancer surgery – 24 patients). The evaluation of hemostatic factors and clinical data could prove instability in hemostasis in various groups and the possibility of either thromboembolic or hemorrhagic complications. The majority of abnormalities was proven to be in simultaneous operations on colon and liver, especially extensive liver resections. The coagulation profile should be continuously monitored when you deal with thromboembolism prophylaxis.
[Key words: hemostasis, colorectal cancer, metastases in liver, thromboembolism prophylaxis, fraxiparine]

RESULTS OF RADICAL OPERATIONS FOR THE LOCALLY ADVANCED COLORECTAL CANCER, COMPLICATED BY LARGE BOWEL OBSTRUCTION

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AIM: to evaluate results of radical surgeries for locally advanced colorectal cancer, complicated by large bowel obstruction (LBO).

PATIENTS AND METHODS: the retrospective analysis of results of radical surgery of 339 patients with the locally advanced colorectal cancer, complicated by LBO was done. The compensated intestinal obstruction was observed 11,5%, (n=39), sub compensated 61,4% (n=208) and decompensated 27,1% (n=92).

RESULTS: The three-year survival of patients with colon or rectal cancer was 78,4% and 59,7%, .

[Key words: colorectal cancer, large bowel obstruction, surgery]

MAGNETIC RESONANCE IMAGING IN THE DIAGNOSIS OF PERIANAL FISTULAS (LITERATURE REVIEW).

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[Key words: magnetic resonance imaging, perianal fistulas, classification, diffusion-weighted MR imaging]

SURVEILLANCE AFTER CURATIVE SURGERY OF COLORECTAL CANCER

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The surgery is the primary treatment option for colorectal cancer. Most of 60000 new patients with colorectal cancer (detected annually in Russia) undergo surgery. Unfortunately 20% of these patients will develop a recurrence. Diagnostics of early asymptomatic recurrences or distant metastases increases the rate of following curative surgical resections and therefore improves the survival of these patients. Now available such diagnostic procedures as: measuring of tumor markers titres in blood, endoscopic, ultrasound and radiographic methods.

Optimal regimen of follow-up, it's frequency and intensity has not been fully defined. Several randomized trials and meta-analyses studied how particular schedules of follow-up affects the survival of patients with colorectal cancer after primary curative resections. Available current surveillance guidelines from major oncology groups have some differences in using procedures, frequency and intensity of follow-up tests. There is also considerable controversy about the cost-effectiveness of different surveillance regimens after the treatment for primary colorectal cancer.

[Key words: surveillance, follow-up, colorectal cancer]

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NORMATIVE PARAMETERS OF THE ANAL SPHINCTER FUNCTION MEASURED WITH NONPERFUSION ANORECTAL MANOMETRY

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PURPOSE. To define normative values of the functional state of the anal sphincter using nonperfusion water manometry with WPM Solar (MMS, Netherlands)

MATERIALS AND METHODS. 53 patients with colon adenomas before polypectomy were examined. All patients had no any complaints of fecal incontinence and outlet obstruction (0 points by Wexner incontinence scale and 0 points by outlet obstruction of State Scientific Centre of Coloproctology scale). Female were 23 (43,4 %), mean age 51,4 ± 11,1 years. Male were 30 (56,6 %), mean age 65,1 ± 15,9 years. There were assessed: rest and squeezing anal pressure, cough test, push test.

RESULTS. We have got following normal values for female: resting pressure 41-63 mm Hg, maximum squeezing pressure 110-178 mm Hg, average squeezing pressure 88-146 mm Hg, maximum cough pressure 76-126 mm Hg, minimal pressure during push test 28-52 mm Hg. with relaxation for 19-40 %. Normal values for male: resting pressure 43-61 mm Hg, maximum squeezing pressure 121-227 mm Hg, average squeezing pressure 106-190 mm Hg, maximum cough pressure 45-175 mm Hg, minimal pressure during push test 19-43 mm Hg (relaxation 20-60 %).

CONCLUSION. There were detected normative values of the anal pressure and pressure during functional tests to use in assessment of anal sphincter function.

[Key words: anal sphincter, pelvic floor, anorectal manometry]

FUNCTIONAL RESULTS OF VERTICAL REDUCTION RECTOPLASTY IN IDIOPATHIC MEGARECTUM SURGICAL TREATMENT

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AIM. to assess the results of vertical reduction rectoplasty (VRR) in idiopathic megarectum surgical treatment.

MATERIAL AND METHODS. In 2006-2014 11 patients (20–65 years, 6 male) with idiopathic megarectum underwent VRR. Loop ileostomy was performed in all cases. Ileostomy was closed in 9 patients.

RESULTS. Before surgery 8 (72,7 %) of 11 patients had complaints of constipation, bowel movement only after laxatives or enemas was possible in 6 (54,6 %). 4 (36,4 %) patients had fecal incontinence. All patients had gut transit time more 96 hours. Maximum tolerated volume (VMT) was 340-1470 (806,7 ± 363,1) ml, average VMT/PMT was 46,3 ± 27,9 ml/mmHg; reflex contraction response of the rectum wall (RCR) was detected in 1 patient only. There was no mortality and severe complications after surgery. In two cases, we had complications after stoma closure – rectovaginal fistula and indeterminate proctitis, required conservative treatment for both. Significant improvement and satisfaction were detected in 8 (88,9 %) of 9 patients, whom stoma was closed. Defecation without any assistance possible in all 9 patients (p<0,05). Complaints of constipation persists in 1 (11,1 %) patient (p<0,05) and fecal incontinence – also in 1 (p>0,05). VMT was 300,0 ± 144,7 ml, (p<0,05), VMT/PMT – 15,1 ± 12,2 ml/mmHg (p<0,05), RCR was noted in all patients. No one patient had detected sexual or urological impairment.

CONCLUSION. VRR allows improving patient condition and rectal function and could be used in idiopathic megarectum surgical treatment.

[Key words: idiopathic megarectum, idiopathic megacolon, vertical reduction rectoplasty]

A COMPARISON OF THE IMMUNOCHEMICAL TEST COLON VIEW HB AND HB/HT WITH GUAIAEC TEST IN THE DIAGNOSIS OF COLORECTAL NEOPLASM LOCALIZATION

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THE AIM OF THE STUDY. To compare new generation immunochemical test (FIT) with traditional guaiac test (FOB) in detection of fecal occult blood

MATERIALS AND METHODS. A cohort of 300 patients referred for colonoscopy was examined by two different tests for FOB: quick test (CV) (FIT test for hemoglobin (Hb) and hemoglobin/haptoglobin (Hb/Hp) complex) and (guaiac test for Hb). Three fecal samples were tested and all subjects were examined by diagnostic colonoscopy with biopsy verification. The performance indicators (sensitivity (SE), specificity (SP), positive predictive value (PPV), negative predictive value (NPV) and area under the curve (AUC)) were calculated for both tests using three endpoints (adenoma (A), adenoma/carcinoma (A/AC) and carcinoma (AC)).

RESULTS. Colonoscopy (and biopsies) disclosed normal results in 114 (38.0 %) subjects, A in 91 (30.3 %) cases and AC in 95 (31.7 %) patients. For the combined A+AC endpoint, the HS test had SE of 58.3 % and SP of 96.5 % (AUC=0.774), while the CV test had 97.2 % SE and 85.8 % SP (AUC=0.916) (p=0.0001). For the A endpoint, the difference between HS and CV was even more significant, AUC=0.637 and AUC=0.898, respectively (p=0.0001). For the AC endpoint, the HS test had SE of 85.3 % and SP of 96.5 % (AUC=0.909), while the CV test had 100.0 % SE and 85.1 % SP (AUC=0.925) (p=0.0001).

CONCLUSION. The ColonView test can be represented as a rapid test in the screening program for colorectal cancer.

[Key words: colorectal neoplasia screening, immunochemical test, the guaiac test]

ENDOSCOPIC AND ULTRASOUND COLONOSCOPY PARALLELES IN DIVERTICULAR DISEASE.

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PURPOSE. This study aimed to determine role colonoscopy and ultrasound colonoscopy for diagnosing of a diverticular perforation or chronic infiltrate.

MATERIALS AND METHODS. Medical records (colonoscopy, ultrasound colonoscopy) of 23 patients operated for chronic complications of diverticular disease (group 1 – chronic diverticulitis, group 2 – chronic infiltrates) were reviewed.

RESULTS. This study identified ultrasound criteria of the diverticular perforation, three types of chronic infiltrates. Detection of pus with a probability of 100 % identifies the diverticular perforation. The absence of pus with a probability of 67 % identifies the absence of the diverticular perforation. A significant correlation was found between the chronic infiltrates and extracolonic compression (p=0.0189). Detection of extracolonic compression, luminal narrowing, fixation with a probability of 100 %, 88 % and 82 % resp. identifies the chronic infiltrates. The absence of these signs with a probability 56 % (extracolonic compression), 53 % (luminal narrowing), 58 % (fixation) resp. identifies the absence of the chronic infiltrate.

CONCLUSION. We recommend ultrasound colonoscopy in patients with diverticular disease of the colon who have not had endoscopic signs of the diverticular perforation or chronic infiltrate.

[Keywords: diverticular disease, colonoscopy, ultrasound colonoscopy]

ROBOTICALLY ASSISTED PROCEDURES IN RECTAL CANCER SURGERY

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OBJECTIVES. Provide a short-term follow-up analysis after endoscopic colorectal surgery (laparoscopic and robotically-assisted) procedures in patients with rectal surgery.

MATERIAL AND METHODS. Results of 240 colorectal surgeries performed at City Hospital #40 between January 2013 – February 2015 were analyzed. Of them 104 were performed robotically (Da Vinci robotic system). Current paper provides an analysis of short-term outcome of endoscopically-treated patients with rectal cancer (47 laparoscopic vs. 50 robotically-assisted).

RESULTS. There were no significant difference between laparoscopic and robotically-assisted cases. Analyzed criteria were: volume of intraoperative blood loss, length of hospital stay, time of first bowel movement after procedure, conversion rates, major surgical complications in early postoperative period, quality of TME.

CONCLUSION. Short-term postoperative and oncologic outcome in laparoscopic and robotically assisted rectal cancer surgery did not demonstrate significant difference. High definition of visualization in 3D quality, significant advantage of robotic device technical potential and console convenience for surgeon provides high quality, precision and safety of surgery comparing with conventional laparoscopic technique.

Robotically assisted surgery in rectal cancer treatment considered as an effective, safe and perspective modality.

[Keywords: minimally-invasive surgery, laparoscopic surgery, robot, rectal cancer, surgical treatment, robotically-assisted surgery]

DEZARTERIZATION OF INTERNAL HEMORRHOIDS OF HEMORRHOIDS DISEAS: THE CHOICE OF METHOD – FOR AND AGAINST. WHETHER CORRECTION F THE VENOUS COMPONENT OF PATHOGENESIS?

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The article presents a comparative clinical and economic outcomes of dezarterization of internal hemorrhoidal by endovascular (Emborroid technique) or transrectal dezarterization with a mucopexy (HAL-RAR) with and without reception of the micronized purified flavonoid fraction (Detralex). It is shown that both ways a dezarterization are pathogenetically reasonable, modern methods of treatment of patients with chronic hemorrhoids, equivalent to decrease in arterial inflow to internal hemorrhoidal and are comparable by efficiency, but the choice of a way of treatment has to depend on the form of the hemorrhoids, its stage and clinical manifestations. Correction of the venous component of the pathogenesis of hemorrhoids by Detralex can improve results the early postoperative period after transanal dezarterization and long-term results of treatment, after an endovascular procedure, and after transanal HAL-RAR intervention.

[Keywords: hemorrhoids, transanal dezarterization, mucopexy, endovascular dezarterization, micronised purified flavonoid fraction]

SURGICAL TREATMENT CONGENITAL ANORECTAL MALFORMATIONS IN INFANTS

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The original article presents the experienced treatment of 104 children aged from 6 month to 3 years with high anorectal malformations corrected by the most modern surgical techniques – laparoscopic video-assisted anorectoplasty (Georgeson's procedure). The treatment results were evaluated and the encountered complications analysis is presented.

[Keywords: high anorectal malformations, laparoscopic anorectoplasty]

RESULTS OF THE OPTIMIZED PERIOPERATIVE CARE PROTOCOL IMPLEMENTATION IN PATIENTS WITH ELECTIVE COLON RESECTION

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PURPOSE. To estimate short – term results of the optimized perioperative care protocol implementation in patients who had surgery for uncomplicated colon diseases.

PATIENTS AND METHODS. 114 patients were included in the prospective randomized trial. 60 of them were included in main group where optimized protocol(OP) was applied and 54 – traditional care group (TCG) as a control one. There was no significant difference in terms of age, gender, BMI, ASA status and type of surgery between the groups. To evaluate an efficacy of the protocol such parameters as complication rate, pain at POD 5 by VAS, postoperative stay and hospital stay were estimated.

RESULTS. no significant difference in complication rates between the groups was obtained (1 – OP, 4 – in TCG; $p=0.15$). Pain score at POD 5 was significantly higher in TCG (1.8 ± 0.2 points in OP, 3.3 ± 0.2 points TCG; $p=0.001$). Post operative hospital stay was shorter in OP (4.6 ± 0.1 days) than in TCG (10.1 ± 0.9 days) ($p<0,001$). Length of stay in OP was 6.9 ± 0.2 day vs. 15.0 ± 1.0 days in TCG ($p<0,0001$).

CONCLUSION. The proposed optimized protocol is effective and safe method of postoperative care in patients with un-complicated colon disease.

[Key words: colon rectal surgery, optimized perioperative care protocol, traditional care]

ABOUT INFLUENCE OF TACTICS OF TREATMENT BY OBSTRUCTING COLONIC CANCER ON THE REMOTE RESULTS

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The aim of research were comparison of the remote results at two variants of treatment obstructing colonic cancer. 105 patients was include in the main group with performance at the first stage of treatment of unloading loop colostomy and performance of radical operation at a second stage together with stoma closure. The control group including 115 patients with performance at the first stage of an obstructive resection of a colon with formation of the terminal colostomy defined initially as radical intervention and performance of restorative operation with liquidation of colostomy on second. Local recurrence in the main group observed at 5,1 % patients, in control – at 13,7 %. The remote metastasizes are accordingly at 7,1 % and 13,7 % patients. The five years' cumulative survival rate in the basic group making 69,4 %, in control 50,9 %, nonrelapse survival rate was 65,3 % in the main group and 48,1 % in the control.

[Keywords: obstructing colonic cancer, colostomy]

THE DIAGNOSTIC FEATURES OF THE SUPERSHORT FORM OF THE HIRSCHSPRUNG'S DISEASE IN CHILDREN

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The aim of the study was to improve the results of diagnosis of children of Hirschsprung's disease with supershort form. The work is based on the observation of 152 patients with supershort form of disease. All patients before surgery, carried out a survey in the near and distant postoperative periods. The emergence of chronic constipation in children beyond the traditional conservative therapy, may be associated with supershort form of Hirschsprung's disease. Hirschsprung's disease with supershort form has its own distinctive radiographic signs, in some cases, directly opposite the long forms.

[Keywords: Hirschsprung's disease; supershort form]

CLINICAL AND STATISTICAL DATA TO SURGICAL TREATMENT OF CHRONIC HEMORRHOIDS BY DIFFERENT METHODS

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AIM. To evaluate effectiveness of suggested separate closed hemorrhoidectomy.

Patients and methods 151 (female – 75 (49,7 %), patients with hemorrhoids at mean age of $46,5 \pm 1,6$ yrs were allocated into 3 groups depending on the type of surgery: I (n=67) – surgery by Milligan-Morgan, II (n=57) – Ferguson surgery, III (n=27) – separate closed hemorrhoidectomy.

RESULTS. Operating time was – $22,5 \pm 2,3$ min in group I, $43,8 \pm 3,2$ min in group II, $29,4 \pm 2,8$ min in group III. The need of opioids in group I was $2,1 \pm 0,2$ days, in group II – $1,8 \pm 0,3$ days, in group III – $1,1 \pm 0,2$ days. Post-operation hospital stay: I group – $7,7 \pm 0,48$ days, II group – $7,4 \pm 0,28$ days, III group – $5,6 \pm 0,46$ days. Duration of disability: I group – $17,2 \pm 1,5$ days, II group – $15,3 \pm 1,6$ days, III group – $13,5 \pm 0,9$ days.

CONCLUSION. Suggested surgery in more effective methods Thus, after surgery by Selivanov in comparison with patients been undergone for Milligan-Morgan or Ferguson in terms of need of postoperative analgesia ($p<0,05$), post-operation hospital stay ($p<0,05$), duration of disability ($p<0,05$).

[Key words: chronic hemorrhoids, surgical treatment, statistics, disability]

VAAFT: PRELIMINARY RESULTS OF TREATMENT OF COMPLEX ANAL FISTULAS WITH DIFFERENT METHODS OF CLOSURE OF INTERNAL FISTULA OPENING

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AIM. To analyze preliminary results of video-assisted anal fistula treatment (VAAFT) with closure of internal fistula opening by endorectal mucosal-submucosal flap or with ligation of intersphincteric fistula tract (LIFT).

MATERIALS AND METHODS. A prospective single-center study included 19 patients who underwent VAAFT. Included were 4 (21 %) patients with high transsphincteric fistula, 14 (73,7 %) with suprasphincteric, and 1 (5,3 %) with posttraumatic extrasphincteric fistula. Patients with inflammatory bowel diseases were not included. In 14 (73,7 %) cases internal fistula openings were closed by endorectal mucosal-submucosal flap, in 5 (26,3 %) cases the connection of fistula tract with rectum was terminated by LIFT.

RESULTS. No mortality occurred. Median follow-up was 11 months (range, 2-23). At fistuloscopy phase of operation localization of the internal fistula openings was identified in 68,4 % of cases. Totally complete healing of fistula tract was observed in 13 (68,4 %) patients. Success rate was 71,4 % (10/14) after VAAFT with closure of internal fistula opening by endorectal mucosal-submucosal flap and 60 % (3/5) after VAAFT combined with ligation of fistula tract through the intersphincteric space. No recurrences in patients with complete healing of fistula occurred. No patients reported any incontinence postoperatively.

CONCLUSION. Our experience showed that effectiveness of this sphincter-sparing method for patients with complex anal fistulas exceeds 2/3 of cases. Anorectal manometry and subjective evaluation of continence score by Wexner scale confirmed that VAAFT did not affect function of anal sphincter. In the study, we did not find significant differences in the frequency of good outcomes depending on options of termination of connection of fistula tract with rectum. Because of small sample, it requires further study which method is the best for closure of internal fistula opening.

[Keywords: anal fistula; surgical treatment; minimally invasive procedure; VAAFT]

FEATURES OF THE DEVELOPMENT OF LAPAROSCOPIC REVERSAL OF HARTMANN'S PROCEDURE IN PATIENTS AFTER ACUTE OBSTRUCTIVE COLON RESECTION IN THE REGIONAL HOSPITAL

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A comparison of the results of reconstructive operations in the first 14 (control group) and 17 subsequent (study group) operated by laparoscopic assisted method were performed.

With the same wound length ($p = 0.365$), duration of surgery, blood loss and time of adhesiolysis were significantly lower in patients of the main group. Patients in the control group had more postoperative complications, reoperations. Introduction of laparoscopic reversal of Hartmann's procedure characterized by a long learning curve and a high level of complications. Improving the results of operations achieved by reducing the volume of adhesiolysis and optimization the method of anastomosis, as well as the implementation of interventions by one endoscopic surgeon.

[Keywords: colostomy, laparoscopic reversal of Hartmann's procedure]

ILEAL POUCH COMPLICATIONS AND IMPACT OF THEM ON FUNCTIONAL OUTCOMES AND QUALITY OF LIFE IN PATIENTS WITH ULCERATIVE COLITIS (LITERATURE REVIEW)

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[Key words: ulcerative colitis, ileal pouch, functional outcomes, quality of life]

RECONSTRUCTIVE TECHNIQUES IN RECTAL CANCER SURGERY

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This article discusses the gradual solution of problems encountered in the development of sphincter saving procedures for rectal cancer, as well as modern approaches to prevention of low anterior resection syndrome – the sum of symptoms negatively impacting the quality of life of patients after surgical treatment.

[Key words: rectal cancer, sphincter saving operations, ARS, J-pouch, coloplasty, baker-type]

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THE RESULTS OF COMPARATIVE RANDOMISED STUDY SIDE-TO-END VS. STRAIGHT COLORECTAL ANASTOMOSIS AFTER LOW ANTERIOR RESECTION

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INTRODUCTION. This paper presents the results of randomised study comparing short-term and functional outcome after creating side-to-end vs. straight anastomosis after low anterior resection for rectal neoplasia.

PATIENTS AND METHODS. During 2012-2014 86 patients were randomised for creating side-to-end (study group) or straight (control group) anastomosis. All the patients were temporary defunctioned. Before and 1, 3, 6 months after stoma closure anal manometry, ballometry were provided to all the patients as well as Wexner score and FIQL-test.

RESULTS. Six patients (3 in each group) were excluded from the study for different reasons. Both groups were matched in demography data, primary tumor location (height from the anal verge). Morbidity rate did not differ significantly: 14.6 % vs. 20 % ($p=0.57$) for study and control groups, respectively. The median Wexner score was 5 vs. 7 points ($p=0,033$) in groups 1 month after stoma closure and 4 vs. 5 points ($p=0,006$) 3 months after stoma closure. In the main group frequency of bowel movements per day was less after 1 month ($5,8 \pm 0,14$ vs. $6,4 \pm 0,15$ ($p=0,006$)), 3 months ($3,7 \pm 0,1$ vs. $4,2 \pm 0,1$ ($p=0,003$)) and 6 months ($2,54 \pm 0,1$ vs. $3,0 \pm 0,10$ ($p=0,0002$)) respectively. According to FIQL-test the results in the main group for sub-scales lifestyle, depression/self perception and embarrassment were better.

CONCLUSION. Functional results after low anterior resection with side-to-end anastomosis are better comparing to straight colorectal anastomosis according to the frequency of bowel movements per day and Wexner score during 6 months follow-up after stoma closure. Besides, quality of life after side-to-end anastomosis creation is better according to FIQL test.

[Key words: low anterior resection syndrome, side-to-end anastomosis, functional results]

EVALUATION OF CELLULAR IMMUNITY AND QUALITY OF LIFE IN PATIENTS WITH DIFFERENT FORMS OF IRRITABLE BOWEL SYNDROME

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AIM. To evaluate changes in the status and psycho-emotional status of cellular immunity in patients with irritable bowel syndrome.

MATERIALS AND METHODS. The analysis included 25 patients with irritable bowel syndrome (IBS). Age ranged from 22 to 67 years (mean age $47,82 \pm 17,78$ years), mostly women – 21 (84 %). 14 (56 %) patients had IBS-C, 7 (28 %) – IBS-D, 1 (4 %) patient – mixed IBS, 3 patients (12 %) – unclassified IBS. Peripheral blood cells were investigated with flow cytometer FC-500.

RESULTS. Almost all patients showed a tendency to anxiety and depression according to all questionnaires. 5 (71,4 %) patients with IBS-D showed reduction of CD3-CD16 + 56+ (absolute figures), 3 (42,9 %) – the ratio of decline in values CD4 + / CD8 +, 3 (42,9 %) patients had an increase number of T-cytotoxic lymphocyte phenotype CD3 + CD8 +. In patients with IBS-C 3 (21,4 %) had elevated levels of T lymphocytes CD3 +, 4 – CD8 + T cells, and 4 patients (28,6 %) had increased value of CD4 + / CD8 +. Half of the patients showed reduction of CD3-CD16 + 56+ (absolute figures).

CONCLUSION. Clinical subtype of IBS does not affect the state of cell-mediated immunity. There is the relationship between the state of cellular immunity and psycho-emotional status.

[Key words: Irritable bowel syndrome, quality of life, psycho-emotional status, cellular immunity]

COMBINED LAPAROSCOPIC SURGERY IN METASTATIC COLORECTAL CANCER

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AIM. Assess feasibility of combined laparoscopic surgery in metastatic colorectal cancer.

MATERIALS AND METHODS. Combined surgery for metastatic colorectal cancer has been conducted in 232 patients in Rostov Research Institute of Oncology since 2009. Distant metastases localized in liver in 235 patients, in uterine adnexa – 79, lungs – 9. 37 of all combined operations were laparoscopic: 14 liver resections, 1 hemihepatectomy, 8 supravaginal hysterectomies with adnexectomy, 5 panhysterectomies, 9 thoracoscopic lung resections.

RESULTS. Benefits of laparoscopic surgery were: decrease in the number of postoperative complications by 3 times. Combined surgery in lung metastases in our practice was thoracoscopic only.

CONCLUSION. Combined laparoscopic surgery for metastatic colorectal cancer facilitates expanding the range of surgical interventions.

[Key words: metastatic colorectal cancer, laparoscopic surgery]

CLOSURE OF ILEOSTOMY: 48 HOURS OF HOSPITALIZATION

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Aim of our study is to analyze results of management patient with ileostomy closure. Our protocol is based on enhanced recovery principles. From March 2013 to June 2015 we performed 32 closure of ileostomy. The mean age of the patients was $59,5 \pm 8,9$ years, the middle body-weight index was $25,9 \pm 4,0$ kg/m². The mean duration of the stoma fusing procedure was 70 ± 29 min. The mean hospital stay was $3,8 \pm 2,5$ days. 23 (71,9 %) patients were dismissed in 48 hours after the surgery. In post-surgical period wound infection developed in 3 (9,3 %) patients. Acute intestinal obstruction was noticed in 2 (6,2 %) patients; anastomotic leakage was diagnosed in 1 case after manual anastomosis, in the other case after stepler anastomosis.

We can conclude that in special conditions the dismissal of patients in 48 hours after surgery is safe and preferred type of management. Introduction of this protocol of the patient management is clinically important and provides better quality of surgical care to the patients.

[Key words: colorectal cancer, ileostomy, closure]

ANALYSIS OF THE QUALITY OF PREPARATION CHILDREN TO COLONOSCOPY

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OBJECTIVE: We compared the quality of preparing children for colonoscopy using different lavage drugs.

MATERIALS AND METHODS: We made retrospective analysed 50 cases of children after bowel cleaning. 27 children used lactulose, 14 patients – macrogol 4000 and 9 patients used sodium phosphate. The quality of bowel preparation we was determined by the Boston scale, 6-9 points meant good the degree of cleaning of the mucous. Also, the children were assessed subjectively tolerability of a 10-point visual analog scale.

RESULTS: Mean point of preparation was $7,1 \pm 1,8$. The lowest score had the children used Duphalac. Left colon was clean worse to compared to the cross and the right parts, without difference between the lavage drugs. A enema addition for preparation showed a slight improvement only in the group Duphalac, without different of quality cleansing the colon of other drugs using. Poorly prepared were 12 % of patients. The children determined subjective of comfort of preparation procedures the range of «good – satisfactory». The children suffered Dufalac worse than Fortrans and Fleet Phospho-soda & Conclusion. Therefore, high-quality preparation for colonoscopy was achieved 88 % of patients, the average score was 7.1, with the advantage of drugs Fortrans and Fleet Phospho-soda. The subjective evaluation of the patients was significantly worse in Duphalac, adverse reactions were observed in 6 % of children, without difference of the method of preparation. Considering the data on efficacy and safety, macrogol (Fortrans) is the best choice in preparing children for the study of colonoscopy.

[Key words: lavage bowel, preparation for colonoscopy, children, colonoscopy, macrogol, Fortrans, lactulose, Duphalac, enema]

PREDICTION OF THE SURGERY IN CROHN'S DISEASE

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OBJECTIVE. To identify the predictors of the need for surgery in Crohn's Disease (CD).

MATERIALS AND METHODS. Two hundred two patients with CD were included and prospectively followed for up to 5 years. Predictors of the need for surgery were determined by the Method of logistic regression. The database consisted of 303 qualitative and quantitative variables.

RESULTS. Independent predictors of the need for surgery were identified to be: penetrating form with the strictures, (B4) at the diagnosis ($\beta=1,74$ Wald test=2,203, OR=5,7, 95 % CI=1,21-26,84), moderate dilatation (30 to 45 cm) of the intestinal lumen according to MRE ($\beta=2,56$, Wald test=3,215, OR=12,98, 95 % CI=2,76-61,09), and colon involvement on MRE ($\beta=3,85$, Wald test=2,487, OR=47,15 95 % CI=2,26-983,68).

CONCLUSION: Several predictors of the need for surgery in CD were identified. Predictive model allows the identification of a high percentage of cases, the need for bowel resection during the first year after diagnosis and may be useful for practical specialists to identify patients with unfavorable course of the disease.

[Key words: Crohn's disease, prognosis, predictor, surgery]

SYNDROME MAYER-ROKITANSKY-KUSTER-HAUSER WITH A CONGENITAL DEFECT OF RECTOVAGINAL SEPTUM (CASE REPORT)

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[Key words: syndrome Rokitansky-Kuster, rectovaginal septum, malformation]

METHODS OF ANASTOMOTIC LEAKAGE PREVENTION. A SYSTEMATIC REVIEW

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[Key words: low anterior resection, anastomotic leakage]

COLORECTAL ANASTOMOTIC FAILURE. CURRENT STATE OF THE PROBLEM (STUDY REVIEW)

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[Key words: colonic anastomosis, anastomosis failure, risk factors, prevention, diagnosis, treatment]

FECAL MICROBIOTA TRANSPLANTATION – PERSPECTIVES OF USE IN BOWEL DISEASES (REVIEW)

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[Key words: Clostridium difficile, pseudomembranous colitis, fecal microbiota transplantation, antibiotic-associated diarrhea]