2017

**Ne1(59) – 2017**

**CLINICAL GUIDE OF RUSSIAN ASSOCIATION OF GASTROENTEROLOGY AND RUSSIAN ASSOCIATION OF COLORECTAL PROCTOLOGY ON DIAGNOSTICS AND TREATMENT OF ULCERATIVE COLITIS**

**ABDOMINAL WALL RECONSTRUCTION AFTER SURGERY FOR LOCALLY RECURRENT COLON CANCER IN PATIENT WITH LYNCH SYNDROM**

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Surgical resection is the mainstay of treatment for patients with local recurrence of colon cancer. Only an aggressive surgical approach, encompassing en bloc multivisceral resection is necessary to achieve clear margins, affords the best prospect for long-term survival. The involvement of the anterior abdominal wall requires its extensive resection. The closure of defects is challenging surgical problem. Negative pressure wound therapy (NPWT) is the application of suction (negative pressure) to wounds that are healing. NPWT has been used for many years for the treatment of chronic wounds, such as leg ulcers and bed sores. More recently, the system has been modified for use on clean surgical wounds, including skin grafts. In this paper we represent one case of patient who received salvage surgery in our clinic for local recurrence of colon cancer. Vacuum therapy was successfully used to enhance healing process of large abdominal wound.

*Key words: local recurrence, loco-regional recurrence, colon cancer, local relapse, negative pressure wound therapy, vacuum therapy*

**MULTIPLE PRIMARY COLORECTAL CANCER: THE POSSIBILITIES OF MINIMALLY INVASIVE SURGICAL INTERVENTIONS**

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Background: Minimally invasive surgery is a critical component of surgical practice, and the surgical treatment of many colorectal cancers is now performed using minimally invasive procedures. However, the management of patients with multiple primary colorectal cancers remains challenging. Aims: The aim of the study was to reveal the potential of minimally invasive surgery for multiple primary colorectal cancer. MATERIAL AND METHODS: Data on 51 patients with synchronous multiple primary colorectal cancer were studied. Clinical, biological and morphological characteristics of synchronous colorectal cancers were analyzed. RESULTS: 12 of 51 patients underwent minimally invasive surgery of the colon and rectum - laparoscopic and transanal endoscopic resection of the rectum. RESULTS showed that synchronous colorectal cancer prevailed in patients with multiple primary colorectal cancer (63.8%), with tumors localized mainly in the sigmoid (58.75%) and the rectum (58.75%). Minimally invasive approach allowed reduction of the number of postoperative complications by 2.5 times and improvement of rehabilitation of patients. CONCLUSION: Application of modern technologies in treatment for synchronous multiple primary colorectal cancer contributes to improvement of the treatment outcomes.

*Key words: multiple primary synchronous colorectal cancer, minimally invasive surgical interventions*

**INDICATIONS FOR INJECTION OF BULKING AGENTS FOR THE TREATMENT OF ANAL INCONTINENCE**

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The development and surgical methods of treatment of the problem of anal incontinence is relevant today and remains unresolved. Since the beginning of the 1990s attempts of implantation of bulking agents in order to increase the basal pressure in the anal canal were begun. Domestic product "DAM" was used in the study. OBJECTIVE: To determine the indications for injection of bulking agents for the treatment of anal incontinence. Research the possibility of using the drug "DAM", with assessment of treatment outcomes. During a period of 2014 to 2016 there were 30 patients with anal incontinence of various etiologies involved in research. The mean age was 47.5 ± 6.8 years. Injection of bulking agent "DAM" was performed by us in the mucosa of the anal canal in 3 points, and followed by a comparative analysis of the survey after treatment. Average follow-up was 12.1 ± 0.97 months. The study results revealed: a significant improvement of anal incontinence, and the estimation results. We have identified indications for the implementation of bulking agents for correction of anal incontinence, and the estimation results.

*Key words: anal incontinence, lack of anal sphincter, bulking agents*

**MEDIASTINAL EMPHYSEMA AS A COMPLICATION OF COLONOSCOPY**

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Cases of mediastinal emphysema (mediastinal emphysema), as a complication of endoscopic colonoscopy perforation of the colon, according to the publications and given its own experience in the treatment of this rare complication were analyzed.

There were few publications on the perforation of the colon during colonoscopy, with the development of mediasstinal emphysema, pneumomediastinum, pneumothorax. In a scientific literature found no information on the eruption of air through the retroperitoneal space and the mediastinum from perforation of the intestine through the place connected with the lifting him through the natural anatomical connection. Some authors provide proven X-ray of the chest clinical case pneumomediastinum and subcutaneous emphysema in a patient suspected of having ulcerative colitis after outpatient colonoscopy with biopsies, as well as pneumomediastinum with emphysema of soft tissues of the neck after endoscopic polypectomy. The diagnosis was established clinically (fissure, subcutaneous emphysema of the neck), but also the data of X-ray studies. The most life-threatening complication of colonoscopy is a combination of pneumothorax. Mediastinal emphysema, and pneumoperitoneum cannot always be diagnosed properly, and requires immediate diagnosis and surgical intervention. In these cases, it may be a tension pneumothorax, in which is shown an emergency thoracotomy. During the stress pneumomediastinum an adequate drainage of the mediastinum and (if indicated) pleural cavities is performed. Clinical terms of self-resolution of mediastinal emphysema account for an average of 4-6 days in the majority of patients. During colonoscopy balloon dilation of strictures of the colon may also be complications: subcutaneous emphysema and bilateral pneumothorax.

In our practice, there were two clinical cases of mediastinal emphysema at colonoscopy due to perforation of the sigmoid colon in one case, and perforation of the sigmoid colon diverticulum in another. The patients were operated on with a favorable outcome, laparotomy and bowel resection with anastomosis device SEEA-26 were performed.

The perforation of the gut during endoscopy requires emergency surgery. Mediastinal emphysema may be as a complication of colonoscopy and is associated with the air intake from the intestine through the perforation into the retroperitoneal space, and then in the mediastinum. During unassisted pneumomediastinum resorption occurs independent of emphysema in the next day after a balloon puncture.

*Key words: endoscopic colonoscopy, perforation of the colon, mediastinal emphysema*

**THE ROLE OF CYTOREDUCIVE SURGERY (CRS) AND INTRAPERITONEAL INTRAOPERATIVE CHEMOTHERAPY (IICC) IN THE TREATMENT OF PERITONEAL CARCINOMATOSIS FROM COLORECTAL ORIGIN**

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AIM: To assess early results and survival in patients with CRS and IICC strategy.

METHOD: 56 CRC with PC patients underwent CRS+IICC. pT4 stage occurred in 36 (67.2%) pts. N+ status was detected in 36 (65%) cases. In 44 (79%) pts. carcinomatosis was synchronous. PCI was ranged from 1 to 21 (Med3).

RESULTS: Mortality and morbidity rate in postoperative delay was 0 days and 14%, respectively. The median disease-free survival (DFS) was 21 months. Multivariate analysis revealed that PCI (p=0.007) and the presence of extraperitoneal metastases (p=0.009) were independent negative predictors of DFS. The empirical analysis showed that level of PCI more than 8 was the predictor of poor prognosis (p=0.044).

CONCLUSION: It has been shown that poor prognosis factors were PCI more than 8, and the presence of distant extraperitoneal metastases of CRC.

*Key words: carcinomatosis, colorectal cancer, cytoreductive surgery, intraperitoneal chemotherapy*

**RISK FACTORS FOR DIARRHEA ASSOCIATED WITH CLOSTRIDIUM DIFFICILE, IN COLORECTALOPATHIC PATIENTS**

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*Key words: clostridium difficile infection, pseudomembranous colitis, antibiotic-associated diarrhea*

**MAGNETIC STIMULATION IS A METHOD OF PHYSICAL THERAPY IN COLORECTOPATHIC (review)**

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*Key words: noninvasive magnetic stimulation, anal sphincter dysfunction, pelvic floor muscles, anorectal anal sphincter, chronic constipation*

**MAIN DIRECTIONS OF ORGANIZATION OF A SPECIALIZED COLORECTALPATHOLOGICAL MEDICAL CARE**

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*Key words: noninvasive magnetic stimulation, anal sphincter dysfunction, pelvic floor muscles, anorectal anal sphincter, chronic constipation*

**Ne2(60) – 2017**

**CLINICAL GUIDE OF RUSSIAN ASSOCIATION OF GASTROENTEROLOGY AND RUSSIAN ASSOCIATION OF COLORECTAL PROCTOLOGY ON DIAGNOSTICS AND TREATMENT OF CROHN'S DISEASE**

ONCOLOGICAL ASSESSMENT OF EMERGENCY SURGERY IN PATIENTS WITH COMPLICATED COLORECTAL CANCER

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*Key words: oncological assessment, emergency surgery, complicated colorectal cancer, proctologic cancer*
OBJECTIVE: to evaluate oncological outcomes of surgical procedures performed in emergency conditions for complicated colorectal cancer.

MATERIALS AND METHODS: we studied data of 1096 patients who underwent emergency surgery for complicated colorectal cancer in hospitals of Smolensk during the period from 2001 to 2013. Results of histopathology reports of specimen assessment were analyzed. In 33 (11.5%) of 288 cases of rectal cancer distal resection margin was positive and 102 (35.5%) cases were CRM+.

Tumor growth was also registered at the distal margin in 4 (6%) of 67 patients with rectosigmoid cancer. In the majority of cases (88.1%) the lymph node harvest did not exceed 3 12 or more lymph nodes were assessed in 50 (5.5%) of 888 removed specimens only.

CONCLUSION: The analysis of treatment results revealed that inadequate number of lymph nodes examined as well as R1 resection affected cancer-specific survival.

[Key words: colorectal cancer, emergency surgery, oncological outcome, cancer survival]

FIRST EXPERIENCE IN FULL-SPECTRUM COLONOSCOPY
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Colonoscopy viewing camera leaves regions that are not visualized in detail. Thus development of video-endoscopy systems with wide angle of view is needed. Full-spectrum colonoscopies providing image of Ultra HD 4K quality are now available in Russia.

MATERIALS AND METHODS: Seventy patients were assessed with a full-spectrum colonoscopy. In 51 (72.8%) of them the procedure was performed also for physician's training purposes. Fifteen (21.4%) patients underwent simultaneous full-spectrum and forward-viewing colonoscopies, while in 4 (5.7%) full-spectrum endoscope was used to visualize lesions that were non-assessable with traditional equipment.

RESULTS: Applied full-spectrum colonoscopy for diagnosis resulted in detecting 170 polyps in 51 patients (polyp detection rate was 47.1%). Simultaneous use of full-spectrum colonoscope after forward-viewing equipment led to 9 additional polyps detection in one patient and 23 additional polyps in another one. In 7 patients full-spectrum colonoscopy allowed detection of polyps that were not found by forward-viewing equipment.

CONCLUSION: During full-spectrum colonoscopy inner colonic surface can be visualized with an angle of view of 330° which is twice more than video-capturing area of a standard forward-viewing endoscope. The equipment allows to significantly increase adenoma detection rate.

[Key words: FUSE, full-spectrum colonoscopy, adenoma detection rate (ADR), blind spot]

LAPAROSCOPY WITHIN MULTIMODAL OPTIMIZATION PROGRAMM IN PATIENTS WITH COLORECTAL CANCER
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AIM to assess the efficiency of combination of laparoscopy and protocol of enhanced recovery in patients with colorectal cancer.

MATERIALS AND METHODS: Between 2008-2015 486 patients were randomly allocated into 3 groups. Of them 286 of received perioperative treatment according to enhanced recovery protocol, 191 had routine open procedure (group 1, n=75) and 197 had laparoscopic operation (group 1). Patients underwent the following procedures: right hemicolectomy (n=53), left hemicolectomy (n=32), sigmoidectomy (n=56), abdomino-perineal excision (n=67) and low anterior resection of rectum (n=201), other operation – 58. The following variables were analyzed: operating time, intraoperative blood loss, rate of first failure and defecation, morbidity, wound infections, anastomotic leakage, peritonitis, postoperative ileus, urinary disorders, thrombosis, cardio-pulmonary complications).

RESULTS: Groups were comparable in gender, body mass index, type of operations. Operating time did not differ significantly between groups. Intraoperative blood loss was higher in conventional group. The time of first failure and defecation were better in group 1 and 2. Mortality rate was similar. Morbidity was lower in group 1 and 2 compared with conventional group: wound infection 1%, 3% vs 9%, 1% vs 3%, ileus 1.5% vs 5.8%, peri toneal 2.4% vs 5.8%, 1.5% vs 3.5%, bowel obstruction caused by the adhesions 0%, 6% vs 5.5%. Reoperation rate was 4%, 4.7% vs 5.5%.

CONCLUSION: Combination of laparoscopic surgical treatment and enhanced recovery program provides better results of treatment.

[Key words: laparoscopic operation, colorectal cancer, enhanced recovery]

POST-TRAUMATIC ANAL SPHINCTER INSUFFICIENCY
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2 The Stavropol Stroy Hospital №2
3 Traume Center

AIM: to develop tactics of treatment for post-traumatic anal sphincter insufficiency in emergency surgery.

MATERIALS AND METHODS: 472 patients with anal sphincter insufficiency were treated between 1977-2015. Of them 125 had conservative therapy. Surgical treatment was performed in 347 patients.

RESULTS AND CONCLUSIONS: The success of the rehabilitation of these patients depends on the timely and adequate surgical care at the time of the sphincter injury. 3 degrees of perineal tear are almost always associated with injured obstetrical and only in layers.

Sphincteroplasty without colostomy is indicated in 24 hours after injury, while later admission of hospital requires defunctioning stoma. Gunshot sphincter damage require wound debridement without sphincteroplasty and defunctioning stoma.

[Key words: post-traumatic anal sphincter insufficiency, sphincteroplasty, surgical tactics]

FUNCTIONAL STATE OF THE PELVIC FLOOR MUSCLES IN PATIENTS WITH THE PELVIC PROLAPSE
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Russian Medical Academy of Postgraduate Education, Moscow, Russia

Purpose: the purposes of the present study was to analyze the functional state of the pelvic floor muscles in patients with rectal prolapse and compare it with normal rectal intussusception, with complaints of obstructive defecation.

AIM: the study of the functional state of the pelvic floor muscles in patients with obstructive defecation syndrome (ODS).

MATERIALS AND METHODS: The study included 24 patients with pelvic floor prolapse. Physical examination, anorectal manometry, proctoscopy, filling proctography were performed.

RESULTS: Frequency of functional disorders of defecation (FDD) according to objective methods of study patients with ODS at high and amounts to 64.7%. In this case, there are no differences in the frequency FDD in patients with a combination of rectocele and enterocele compared to patients with only rectocele.

There were no correlation between the frequency of anorectal dysfunction syndromes, functional disorders of defecation, disasynergy defecation, inadequate propulsions, high-resolution manometry, sphinctermetry, pudendal nerve conductivity

EXPERIENCE OF SURGICAL TREATMENT OF COLORECTAL CANCER WITH LIVER METASTASES
Cherkesov M.F., Dmitriyev A.V., Grishin V.S., Ponomarev A.A., Starcevic Y.M., Melikova G.S.Rostov State Medical University, Rostov-on-Don, Russia
AIM: to compare results surgery of colorectal cancer with resection or radiofrequency thermoblation of liver metastases.

MATERIALS AND METHODS: Fifty seven patients were included into study. In first group (n=24) liver resection was performed simultaneously with primary tumor surgery; in the second group (n=33) patients underwent local thermal destruction of metastases.

RESULTS: Postoperative complications developed in 2 (8.3%) patients of group I and 4 (12.1%) in group II. In group II, the postoperative in-hospital mortality rate was 5.8% (2 patients) due to failure of colon anastomosis with fecal fistula. The disease-free period in group I was 14,4±3,2 months. The 3-year survival rate was 39%, with the median survival of 32,5 months. In group II, the median survival was 27 months.

CONCLUSION: Resected liver metastases should undergo resection, if there are no adverse factors. This study shows that liver resection is a more effective treatment than radiofrequency thermablation.

[Key words: colorectal cancer, liver metastases, liver resection, radiofrequency thermoblation]

IMPROVEMENT OF THE METHODOLOGY OF MINIMINvasive METHOD FOR THE TREATMENT OF CHRONIC HEMORRHOIDS
Exner N., Sereiski V.A., Voronzh, V.V., Konkin A.A., Muzikov A.V., Voronzh N.N., Shurenko State Medical University, Voronzh, Russia
AIM: to improve results of lateral ligation of internal hemorrhoids.

MATERIAL AND METHODS: Results of 422 lateral ligation of hemorrhoids were analyzed. The average age of the patients was 42 t±7.3 years, 263 (67.8%) patients had third or fourth degree of hemorrhoids and 159 (38.1%) patients underwent lateral ligation of the mesorectum and submucosa of the lower rectum with the aim to close ligation of the vessels and lifting hemorrhoidal tissue complex was suggest and used for III-IV degree hemorrhoids.

RESULTS: Applying early postoperative period complications not requiring reinterventions developed in 5 patients. In the late period good results were obtained in 87.3% of patients.

CONCLUSION: Suggested modified lateral ligation in the treatment of chronic hemorrhoids is minimally invasive, simple and low cost. It extends the indication of this method for hemorrhoids of advanced stages.

[Key words: hemorrhoids, rubber band ligation, hemorrhoidal artery ligation, recto-anal repair]

APPLICATION OF FECAL TRANSPANTATION IN THE TREATMENT OF NO-CLOSTRIDIA ANTIBIOTIC-ASSOCIATED COLITIS
First Saint Petersburg State Medical University, Saint-Petersburg, Russia

This observation from practice shows modern possibilities of diagnostics and treatment of antibiotic associated gut infection in patient in cancer.

[Key words: antibiotic associated diarrhea, fecal transplantation, pseudomembranous colitis]
CLOSTRIDIUM DIFFICILE INFECTION: CLINIC, DIAGNOSTICS AND TREATMENT (review) Sath A.L., Akhatsia S.I., Sukhina M.A., Sukhov O.I. State Research Institute of Microbiology and Virology, Moscow, Russia. [Key words: clostridium difficile infection, pseudomembranous colitis, antibiotic-associated diarrhea, clostridial infection]

COMPLICATIONS OF COLONOSCOPY (review) Semekin E.I., Trushin S.N., Kuikov E.P., Bazyov S.V., Lukhan R.V. Ryzan State Medical University, Ryazan, Russia. [Key words: colonoscopy, risk factor, complication, treatment]

GASTRO-INTESTINAL MELANOMA (review) Titov K.S., Dolgoplyatov I.A., Aksenov Z.M., Atroshchenko A.O. Moscow Health Department Clinical Research Center of Moscow, Moscow, Russia. [Key words: primary melanoma, gastrointestinal tract, surgery, anti-tumor therapy]

MICROSATELLITE INSTABILITY IN COLORECTAL CANCER (review) Tsykov A.S., Shlygin Yu.A., Akhatsia S.I., Shubin V.P., Kashnikov V.N. State Scientific Centre of Coloproctology, Moscow, Russia. [Keywords: colorectal cancer, microsatellite instability, Lynch syndrome, BRAF gene]

No2(60) – 2017 Supplement

LOW-VOLUME PEG PLUS ASCORBIC ACID AS BOWEL PREPARATION FOR COLONOSCOPY USING MORNING-ONLY DOsing REGIMEN COMPARED TO STANDARD Split-Dosing: MULTICENTER SINGLE-BLIND RANDOMIZED PARALLEL-GROUP CONTROLLED STUDY Veselov V.V., Solodov A.V., Vasil' yuk V.B., Gorbennak A.V., Mertsinkov I.L., Smirnitskii V.I., Shcherbakov P.V. 1 State Scientific Center of Colonoproctology, Moscow, Russia. 2 Federal State Budgetary Educational Institution of Higher Education «Yaroslavl State Medical University» of the Ministry of Healthcare of the Russian Federation, Department of Pharmacology, Yaroslavl, Russia. 3 ZAO Outpatient hospital Complex, St. Petersburg FGBOU VPO «Military Medical Academy named for CM. Kirov» of the Ministry of Defence of the Russian Federation, Saint Petersburg. 5 Research Institute of Cardiology and Research Institute of the Ministry of Health of the RK, Army, Kazakhstan. 6 City Clinical Hospital № 26, St. Petersburg. 7 FGBI «Federal Scientific and Clinical Center of Physical and Pharmacological Medicine FMB» of Russia, Moscow. 8 Banner Health, Phoenix, Arizona, USA. Bowel cleansing before the colonoscopy: is the difference between the last dose of purgative and colonoscopy is no longer than 2-4 hours. Morning-only dosing of polyethylene glycol solution (PEG) prior to colonoscopy versus standard split-dosing with nocturnal pause may be more acceptable for patient. Aim. To compare the efficacy, safety and tolerability of morning-only dosing regimen of 2 liter PEG plus ascorbic acid solution (PEG + Asc) 2 L to split-dose PEG + Asc 2 L for bowel preparation prior to colonoscopy. METHODS. This was a multicenter prospective endoscopy-blind randomized non-inferiority study comparing morning-only to split dosing with nocturnal pause regimen of PEG + Asc 2 L (MPEG) versus the split-dose preparation prior to colonoscopy. The primary endpoint was successful colon cleansing where «Success» represented grades of bowel cleansing A and B according to Hirvell's Colon Cleansing Scale® (CCS). Clinically relevant non-inferiority margin was set at −15% with one-sided significance level of 5%. Secondary endpoints were general satisfaction/acceptability of patients with the preparation for colonoscopy, as well as compliance and safety of the study drug. RESULTS. Overall 145 patients from 6 centers were enrolled in the study and randomized into two groups: 72 (70) each. ITT analysis showed successful colon cleansing in 94.3% in the morning-only group versus 91.4% in the split-dose group. An estimated treatment difference was 2.9%, 95% lower confidence limit for the difference =−6.7% with the prespecified non-inferiority margin =−15% (p for non-inferiority <0.001). Furthermore 71.4% of patients had the highest Grade A colonic cleansing according to HCSG in each group. In patients in the morning-only intake group, the time to first bowel movement following the first litter of PEG + Asc 2 L was shorter, with a median of 1.06 hours, compared with 1.58 hours in the split-dose group (p<0.001). Nearly all of the patients treated in the morning-only dosing group (98/97%) and in the split-dose group (67/70) received the study medication as planned. In general, the study drug was well tolerated in patients of both groups. At least one treatment-emergent adverse event was reported by 58.8% of patients in the morning-only dosing group and by 91.4% of patients in the split dosing group. The most frequently reported adverse events were typical gastrointestinal disorders (53.5% of patients) and changes in laboratory tests (12% of patients). No serious adverse events were reported in this study. CONCLUSION. Morning-only dosing regimen of PEG + Asc 2 L is non-inferior to split-dosing regimen in terms of colon cleansing and is safe and convenient for use as a bowel preparation prior to colonoscopy.

DIFFERENTIAL DIAGNOSTICS OF LIVER HYPERECHOIC LESIONS Berdnikov S.N., Shkolov V.N., Sinukova G.T., Goodald E.A., Ablaev M.G., Kalinin A.E., Kudashkin A.E., Amir P.P., Kulin E.V. 1 Federal State Budget Institution (FSBI) N.N.Bolshoi Russian Cancer Research Center (RCRC), Moscow, Russia. 2 Grozny republican oncological center, Moscow, Russia. PURPOSE. Use of elastography and elastography in differential diagnostics of liver hyperchoic lesions (hemangiomata and colorectal cancer metastases) MATERIALS AND METHODS. 180 patients examined due to liver hyperchoic lesions. All patients underwent elastography in manual compression mode, ultrasound examination in the acoustic radiation force impulse (ARFI) mode and in shear wave velocity (SVW) mode. RESULTS. According to the data from elastography in manual compression mode in patient's group with colorectal liver metastases in 71% cases lesions were rigid. In patient's group with hemangiomata in 88% cases lesions were soft. According to the data from elastography in the ARFI mode in patient's group with colorectal liver metastases in 71% cases lesions were rigid. In group of patients with liver hemangiomata in 88% cases lesions were soft. According to the tumor tissue elasticity data in patients with colorectal liver metastases RSVW was high − 3.34 m/sec (range 1.4-4.22 m/sec), median of RSVW was 3.38 m/sec. In patient's group with liver hemangiomata RSVW was the lowest − 1.07 m/sec (range 0.75-3.86 m/sec), median − 0.93 m/sec. Comparative analysis of ARFI and SVW modes for colorectal liver metastases (n=110): 98% sensitivity, 98% accuracy, 100% positive predictive value. Comparative analysis of ARFI and SVW modes for liver hemangiomata (n=70): 94% sensitivity, 94% accuracy, 100% negative predictive value. Comparative analysis for ARFI and SVW modes for colorectal liver metastases (n=110): 100% sensitivity, 100% accuracy, 100% positive predictive value. Comparative analysis for ARFI and SVW modes for liver hemangiomata (n=45): 94% sensitivity, 100% accuracy, 100% negative predictive value. Elastometry data for liver malignant tumors detection were more informative when RSVW threshold level was 2.0 m/sec (if more than 2.0 m/sec then malignant tumor, if less than 2.0 m/sec then benign tumor). 94% accuracy, 97% specificity, 92% negative predictive value. [Key words: elastography, elastometry, ARFI (Acoustic radiation force impulse), SVW (Shear wave velocity), RSVW (rate of spreading of a transverse wave)]

SHEARWAVE ELASTOGRAPHY IN THE LIVER METASTASES DIAGNOSIS DURING MULTIPARAMETRIC ULTRASOUND Burevskov A.V., Mirov T.G., Smolensky, State Medical University, Russian Ministry of Health, Smolensk, Russia. PURPOSE OF THE STUDY. Analysis of the possibility of a shearwave elastography (2D-SWE) approach in the diagnosis of metastatic liver damage within the framework of multiparametric ultrasound. MATERIALS AND METHODS. A survey of 95 patients with liver metastases with a primary focus: 28 (29.4%) – lung cancer, 31 (32.6%) – malignant neoplasm of the stomach (SNO), 9 (9.5%) – pancreatic cancer, 9 (9.5%) – colorectal cancer. All patients underwent imaging with a dedicated liver agent, 6-18 months after surgical treatment.) The use of multiparametric ultrasound (3-mode, shearwave elastography and ultrasound with contrast enhancement) was mandatory in the patient examination algorithm. RESULTS. The results of 3-mode, color Doppler mapping and SWE are important for evaluating non-invasive or invasive nature of metastases growth. AUC=0.889 (95% CI 0.879-0.957), indicating very good quality. The predictive value of SWE increased with dynamic observation of patients: AUC=0.981 (95% CI 0.944-0.997), which indicated a very good quality. CONCLUSION. The criteria for noninvasive and invasive growth of the metastatic process in the liver parenchyme with SWE are developed, it is important for preoperative planning. Prognostic significance of shearwave elastography in multiparametric ultrasound increases with increase of proportion of patients for more than 6 months. [Keywords: metastatic liver metastases, elastography, contrast enhanced ultrasound]

CONTRAST-ENHANCED ULTRASOUND IMAGING OF COLORECTAL LIVER METASTASES Milor D.A., Shcherbatov S.O., Borisov D.A., Kornienko A.L., Solovjev Y.A., Lazhin M.V.P. Hertsen Moscow Oncology Research Institute – Branch Of The National Medical Research Radiological Centre Of The Ministry Of Health Of Russian Federation, Moscow. At present, aggressive surgical approach in combination with peroperative chemotherapy allows to extend indications for surgical intervention in patients with metastatic colorectal cancer, since only a radical liver resection provides better long-term survival. Contrast enhancement imaging techniques are important before considering treatment options to identify patients with resectable and potentially resectable metastases. Our study evaluated the qualitative and quantitative parameters of thedynamic enhancement pattern of liver metastases. This review will be analyzed the results of liver contrast-enhanced ultrasound studies in 104 patients with secondary colorectal liver metastases before primary tumor resection, as well as the monitoring of systemic chemotherapy and post-ablation follow-up to access treatment response. [Key words: liver contrast-enhanced ultrasound, metastatic colorectal cancer, ultrasound contrast agent, liver metastases]

ULTRASOUND CRITERIA FOR THE DIFFERENTIAL DIAGNOSIS OF INFLAMMATORY BOWEL DISEASE IN CHILDREN Pytov M.I., Galina Ya.A., Demina A.M. Russian Medical Academy of Continuing Professional Education, Moscow, Russia. Morozov Children's City Clinical Hospital, Moscow, Russia.
SIMULTANEOUS AND STAGED RESECTIONS FOR SYNCHRONOUS COLORECTAL LIVER METASTASES: META-ANALYSIS
State Scientific Centre of Coloproctology, Moscow, Russia

BACKGROUND: Synchronous colorectal cancers with synchronous liver metastases have been changed in recent years. Simultaneous resections performed more often.

AIM. To analyze the short-term and long-term outcomes two alternative surgical strategies: 1) simultaneous resections for colorectal cancer and synchronous colorectal liver metastases; 2) conventional surgery for the primary tumor during the initial operation. After time, the liver resection was performed at a second operation.

METHODS. A meta-analysis for pre-operative resections for colorectal cancer and synchronous colorectal liver metastases and staged surgery. Tumor localization, spread and number of metastases, extent of operation, blood loss, length of hospital stay, postop mortality, complication rates, overall survival rates were analyzed.

RESULTS. The analyzed 12 articles, 432 cases patients with synchronous colorectal liver metastases (0.0044) metastasis were more often in patients in group of staged resections. Major hepatectomy was also performed more often in group of staged resections. There were no significant differences in blood loss and postoperative mortality rates (p>0.05). Complication rate in group of simultaneous resections was lower than in group of staged resections (OR=0.8, 95%CI: 0.7-1.0, p=0.48). 3- and 5-year overall survival rates were similar in both groups: 54% ± 5%, and 37% ± 8%, respectively (p=0.007).

CONCLUSION. Simultaneous resection of the primary tumor and the minor liver resection or extended hepatectomy in selected patients didn’t adversely affect on complications and mortality rates in equal to long-term outcomes compared to staged resection.

An important limitation of the present study is the bias and heterogeneity in compared groups due to retrospective data over the 20-year period.

[Key words: colorectal cancer, synchronous liver metastases, simultaneous resection]

EXPERT SYSTEM FORECAST OPERATIONAL RISK ASSESSMENT EFFECTIVE IMPLEMENTATION OF SIMULTANEOUS OPERATIONS
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Donetsk National Medical University named after M.Gorky, Donetsk

PURPOSE: To develop a computer-aided system for the clinic expert operational risk forecasting system (EOFRS) to clarify evidence, conduct pre- and post-operative period and prove the effectiveness of the implementation of the SOP in patients with various diseases (UCD) and surgical pathology of abdominal cavity (SAP). MATERIALS AND METHODS. For the period from 2012 to 2015 surgical treatment 986 patients with pathology of the colon. Results of treatment of 127 (12.8 %) patients with SAP complexacon abscesses of the peritoneum. Among the patients ranged from 35 to 97 years. With regard to non-tumor pathology of the colon was operated on 51 (40.1 %) patients; tumor – 76 (59.9 %). A combination of various complications (2 or more) was performed in 21 (16.5 %) patients.

RESULTS. Clinical complications in patients under consideration are different from that after the implementation of standard procedures on the colon. Among the postoperative complications, which amounted to 3.2 % in patients who underwent PSB should be noted: seroma with suppurating wounds – 3 cases of pneumonia – 2, infiltration of the abdominal cavity – 1 in fatal outcomes were not.

CONCLUSION. EORFS provides effective coordination of surgical pathology in the perioperative period, the prevention of intra – and postoperative complications, as well as the implementation of effective targeted intensive therapy in these patients, allowing in all cases to reduce complications while maintaining simultaneously the surgical radicalism and to abandon a combined stage because of very high risk of complications and possible fatal outcome in 13 % patients.

[Key words: expert operational risk forecasting system, simultaneous surgical treatment]

TO THE PROBLEM OF SURGICAL TREATMENT FISTULA ANUS AND RECTUM
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PURPOSE: Examine the results of surgical treatment of fistulas of the anus and rectum.

MATERIALS AND METHODS. Generalized material surgical treatment of 53 patients with different types of fistulas of the anus and rectum during the period 2010-2015 based colorectaloplastic ORKTVU center. We used clinical, laboratory and instrumental methods of investigation according to generally accepted standards of coloproctology.

RESULTS. We used an individualized approach, which, along with the known operations: seton, Gabriel-1, Gabriel-2, and used more modern methods of radical surgical procedures, taking into account «case» building the wall of the rectum: 1) mucocutaneous flap; 2) mucocutaneous flap (constituting of mucosal and submucosal layers and inner circular smooth muscle layer of the gut); 3) methods of radical plastic surgery were performed in 39 (73.6 %) patients with transpharyngeal and extraperineal fistulas. Among them by the method of V.M.Mastyuk (1990) – 16 (34.6 %) patients.

CONCLUSION. The standardized protocol in patients under consideration is different from that after the implementation of standard procedures on the colon. The results indicate the feasibility of application in surgical pathology transanal plastic interventions with the movement of mucous-submucosal or mucosal-mucosal flap and improved our known procedures.

[Key words: anal fistula, rectum fistula]

INFLUENCE OF DEFUNCTIVATION COLOSTOMY AFTER LOW ANTERIOR RESECTION FOR RECTAL CANCER ON EARLY POSTOPERATIVE PERIOD
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The AIM of this study was to evaluate the influence of defunctioning colostomy after low anterior resection for cancer on early perioperative period and effectiveness of Fast Track protocol.

MATERIALS AND METHODS. Retrospective analysis of medical records of 186 patients with rectal cancer who underwent anterior resection of the rectum in our department was done. All patients were allocated into two groups – defunctioning colostomy (DFC) (70 patients, 37.2 %) and defunctioning colostomy with fast track protocol (46 patients, 24.6 %).

RESULTS. Age, sex, comorbidities had no effect on decision about a preventive colostomy. The main reason for preventive colostomy was a middle-rectum location of a tumor. Preventive colostomy didn’t affect the course of early postoperative period in groups. Defunctioning colostomy effectively prevent catastrophic consequences of Anastomotic leakage and didn’t compromise Fast Track protocol.

CONCLUSION. Defunctioning colostomy did not reduce postoperative anastomotic leak rate, but mitigate consequences of an anastomotic leakage. Defunctioning colostomy did not affect the course of early postoperative period and Fast Track protocol.

[Key words: defunction stoma, colorectal cancer, optimization of perioperative care]

STANDARDIZED ENHANCED RECOVERY PROTOCOL IMPROVES OUTCOMES AFTER COLORECTAL RESECTIONS IN ELDERLY PATIENTS
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To evaluate the influence of standardized enhanced recovery protocol on the results of oncological colorectal resections in elderly (75 years) patients.

METHODS. Retrospectively, 134 patients (in retrospectively review of results of 700 in 2009-2016. During 2009-2013 (220 procedures, 45 among the elderly) only sporadic components of enhanced recovery were used. In 2014-2015 (354 surgeries, 83 among the elderly) new surgical team developed and started to implement a standardized enhanced recovery protocol (185 procedures, 51 among the elderly) the protocol was systematically used in every patient. Short-term surgical results were analyzed.

RESULTS. General, implementation of enhanced recovery protocol led to mild but statistically significant improvement of short-term results. Only postoperative hospital stays decreased significantly. However, we observed a dramatic improvement of short-term results after the implementation of enhanced recovery protocol among the elderly patients.

CONCLUSION. The standardized protocol in elderly patients under consideration is different from that after the implementation of standard procedures on the colon. The results indicate the feasibility of application in surgical pathology colorectal plastic interventions with the movement of mucous-submucosal or mucosal-mucosal flap and improved our known procedures.

[Key words: defunction stoma, colorectal cancer, optimization of perioperative care]

THE EFFICACY AND SAFETY OF THE NEW DRUG FISSARIN IN CLINICAL TRIAL FOR THE TOPICAL TREATMENT OF THE ACUTE ANAL FISSURE ASSOCIATED WITH CHRONIC HEMORRHOID DISEASE
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AIM. To prove primary efficacy of Fissarin in comparison with Reif Adiann for anal fissure therapy and to confirm previously received safety data.

METHODS. A randomized, open, controlled, comparative clinical trial in parallel groups with active center, open-label (Fissarin) was conducted at 18 clinical centers in Russia, 188 patients participated. Patients with deep and superficial anal fissure in combination with chronic hemorrhoids were eligible for participation in trial. Patients administered investigational drugs 2 times a day for 28 days. Efficacy primary endpoint assessed as part of patients with full healing of anal fissure and epithelization on Day 28 from start of therapy. Also pharmacokineticians research was performed: concentration of Veldiprenin blood plasma was assessed. Safety assessment was performed based on frequency and character of registered adverse events.

RESULTS. Efficacy analysis showed statistically significant differences in favor of investigational drug in comparison with comparator.
on efficacy primary endpoint—part of patients with healing of anal fissure at Day 28. Difference of parts of patients between group of investigational drug and comparator in full data population (with replacement of masked data) was 24.5% (2.5% two-sided confidence interval 95% for the difference, p < 0.001). No serious adverse events were reported during trial. Pharmacokinetics analysis based on nifedipine concentration in plasma showed that observed concentration of nifedipine in plasma after single rectal and topical use are significantly lower than therapeutic range. Most common adverse events observed during trial were gastrointestinal tract reactions and reactions at investigational drug application site. No serious adverse events, no serious unexpected adverse drug reactions or cases of death were registered during trial. Influence of Fissano on results of clinical blood tests, biochemical blood tests, general analysis and ECG were registered during trial. 'Cure' in this study was defined as complete resolution of topical use, is an effective, safe drug for local therapy of chronic, acute anal fissure in combination with a chronic hemorrhoids. Fissano achieved more than 40% superiority in comparison with Rehf Advans based on anal fissure epithelialization at Day 28 of treatment.

[Key words: Fissano, anal fissure, hemorrhoid, nifedipine, lidocaine, clinical trial]

EXTENSIVE COLONIC INTUSSUSCEPTION CAUSED BY TUMOR OF THE CecUM, A SIMULATED SIGMOID COLON CANCER

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[Key words: Intussusceptions, colon cancer, subtotal colectomy]

UNUSED EPIDERMAL CASTES OF PRESHRAL SPACE (clinical cases)
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[Keywords: preshral cyst, small pelvic tumor, cyst removal]

PRIMARY COLONO-GASTRIC FISTULA (clinical case)
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INTRODUCTION. The gastro-colic fistula: a common definition of a pathological communication between the stomach and colon. This pathology is a rare complication. Fistula can be primary (spontaneous) or secondary (traumatic) and can be suspected in the presence of symptoms such as: vomiting, obstructive colitis, bloody stools, which can be suspected due to the barium enema. Computer tomography and endoscopy (colonoscopy, gastroscopy) in combination with biopsy also have a certain diagnostic value. Clinical case: We present a case report of gastro-colic fistula in a 64-year-old man patient with colon adenocarcinoma. Symptoms and clinical examination did not reveal typical signs of this complication. Colonoscopy revealed abnormal communication between the colon and stomach. It was confirmed by gastroscopy and computed tomography. Biopsy verified colon adenocarcinoma. The patient underwent radical surgery. Morphological study confirmed colon adenocarcinoma with fistula formation into the stomach.

CONCLUSION. Morphological confirmation of the neoplasm grows from the originating organ (colon) to the other (stomach) with the formation of pathological fistulous tract allows the diagnosis of primary colono-gastric fistula. This definition makes clear the mechanism of the fistula’s formation and indicates the localization of the primary tumor.

[Key words: gastro-colic fistula, adenocarcinoma of the colon]

POSTOPERATIVE PREVENTIVE TREATMENT OF CROHN’S DISEASE (review)
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[Keywords: Crohn’s disease, recurrence, treatment]

EFFICACY AND SAFETY OF VEDOLIZUMAB IN CROHN’S DISEASE (review)
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[Key words: Crohn’s disease, inflammatory bowel disease, vedolizumab, anti-CD3 integrin monoclonal antibody, safety, efficacy]

No 4(62) - 2017

HAND-ASSISTED LAPAROSCOPIC SURGERY FOR THE CANCER OF THE LEFT COLON AND RECTUM – AN IDEAL OPTION OF MINIMALLY INVASIVE SURGERY? SINGLE CENTRE EXPERIENCE WITH 459 CASES

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BACKGROUND/OBJECTIVE. Hand-assisted laparoscopic surgery (HALS) has been introduced into clinical practice almost three decades ago, very soon after the introduction of conventional laparoscopic surgery (minimally invasive) and open surgery. Despite a good piece of data in the medical literature, the clear place of this kind of laparoscopic surgery today is not easy to delineate. Our study aimed to review single centre experience in treating patients with left colon and rectal cancers using HALS.

METHODS. This study was a retrospective analysis of prospectively collected data of 459 patients undergoing hand assisted laparoscopic colorectal surgery for left colon and rectal cancer, in a single centre (Kaipeda University Hospital, Lithuania), National Cancer Institute, from January 1, 2006 to December 31, 2018. All consented patients with confirmed invasive cancer of left colon and rectum undergoing HALS were included in the analysis.

RESULTS. The patients’ mean age was 64.14 ± 9.75 years. Female and male ratio was similar: 232 (50.5 %) versus 227 (49.5 %). The mean length of postoperative hospital stay was 6.7 (from 2 to 34) days. There were 5 (1.1%) conversions to open surgery. Histological examination revealed mean lymph node harvest to be 15 ± 2.1% from 8 to 90. Stage I, II and III cancer was similar in distribution accounting for 133 (28.9%), 139 (30.3%), 151 (33.9%) patients respectively and 36 (7.8 %) patients with stage IV. 244 (53.2 %) patients underwent surgery for the cancer of the left colon (sigmoid colectomy or left hemicolectomy), and 215 (46.8 %) patients underwent surgery for rectal cancer. Postoperative complications occurred in 28 (61.1 %) patients, eight of them (1.7 %) needed reoperation (laparotomy) because of anastomotic insufficiency and intraduodenal abscesses. Two (0.4 %) patients died during 30 day postoperative period.

CONCLUSION. In our experience, HALS was very reliable and feasible minimally invasive surgical technique for the cancers of left colon and rectum, related with short learning curve and excellent oncological clearance, short operating time and low number of postoperative complications. It may be used as a standard approach for this type of pathology, or as a safe bridge from open to conventional laparoscopic surgery.

[Key words: laparoscopic colectomy, hand-assisted laparoscopic surgery, conventional laparoscopic surgery, colorectal cancer]

INCIDENCE OF TOXIN – PRODUCING STRAINS OF CLOSTRIDIUM SPP. AMONG MEDICAL STAFF IN COLOPROCTOLOGY DEPARTMENT

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INTRODUCTION. The spread of microorganisms of the genus Clostridium in the population is 15 %. This phenomenon has not been studied in coloproctology department in Russia. AIM: To estimate the spread of toxin – producing strains of Clostridium spp. among the medical staff in coloproctology department.

METHODS AND MATERIALS. There were analysed 39 of intraluminal faeces. The material was examined for the presence of glutamate dehydrogenase, toxins A and B of C diffice using the immunochromatographic method. To detect microorganisms a matrix-activated laser desorption ionization time-of-flight mass spectrometry technique was used. RESULTS. In 34 (86.9 %) of the samples A and B of C diffice were in 28 (71.8 %) of 39 samples. We have identified the culture of the genus Clostridium in 24 (61.5 %) of the 39 samples of intraluminal faeces. 17 (70.8 %) of these samples had positive tests for C diffice toxins and 7 (29.2 %) was negative. In addition to C. diffice (3) others Clostridium were identified: C perfringens (17), C butyricum (3). C sporogenes (2), C sporogenes (2), C sporogenes (2). C diffice was identified in 3 (7.7 %) cases. The spread of Clostridium microorganisms in medical staff is almost 5 times higher than in the population. Professional activity is a risk factor for the spread of toxic strains of the genus Clostridium.

[Key words: clistidium difficile infection, pseudomembranous colitis, antibiotic-associated diarrhea, clostridial infection, medical staff, toxin – producing strains]

EXPERIENCE OBTAINED IMPROVES RESULTS OF LAPAROSCOPIC END STOMA CLOSURE

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Comparative analysis of laparoscopic reversal procedure after Hartmann’s operations on the left half of the colon from 46 patients completed by the single surgeon for 3 year period. The study confirmed that growing number of procedures allowed to expand indications for laparoscopic approach for restoring the continuity of the large intestine. It also decrease the time of intervention, reduces duration of operating wounds, blood loss and rate of intra-abdominal complications.

[Key words: colostomy, laparoscopic recovery operations, surgeon’s experience]

APPLICATION OF THE FIT FOR DETECTION OF COLORECTAL PATHOLOGY. EXPERIENCE OF YAROSLAVL REGION

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AIM: To determine the effectiveness and diagnostic value of FIT «Colon View Hb and HgbHb» («Colon View»).

METHODS AND MATERIALS. The study included 588 patients who underwent FIT «Colon View Hb and HgbHb» («Colon View»).

RESULTS. When performing a three-time «Colon View» the diagnostic accuracy of the procedure increased for both – for hemoglobin (sensitivty – 92.86 specificity – 73.17) and for hemoglobin-haptoglobin complex (sensitivty – 68.1 specificity – 63.41), p<0.05. However, only 39.4 % of patients with a positive «Colon View» test agreed to undergo a colonoscopy.
EXTRAVASCULAR ABDOMINOPERINEAL EXCISION OF THE RECTUM: SHORT-TERM OUTCOMES IN COMPARISON WITH CONVENTIONAL SURGERY
Regional Oncological Center of Krasnodar, Krasnodar, Russia
AIM To compare short-term outcomes of extravascular abdominopерineal excision (ELAPE) of the rectum with laparoscopic and open abdominal approaches and to investigate the abdominopерineal extrusion.
METHODS A total of 90 patients who underwent APE for rectal cancer were screened between 2013 and 2015. Patients of the first group (n=42) underwent ELAPE, subgroup 1a (n=18) - with laparoscopic approach, 1b (n=24) - laparotomy. Potentially eligible patients were assigned to the 2nd group (n=48) - conventional APE, subgroup 2a (n=21) - with laparoscopic approach and b group 2 in terms of blood loss (192.4 ± 97.6 ml vs 307.1 ± 58.4 and 322.3 ± 175.4 ml). The postoperative complications rate was lower in the 1st group compared with the 2nd (2.7% vs 22.9%, p=0.001). The ELAPE group demonstrated less need in postoperative analgesia and shorter postoperative recovery period. The rates of inadvertent intraoperative bowel perforation in the 1st group were significantly lower than it was in the 2nd group (2.4% vs 16.7%, p=0.024). The circumferential resection margin involvement rate was lower in the ELAPE group compared with the conventional APE group (4.8% vs 22.9%, p=0.015).
CONCLUSION: The ELAPE for rectal cancer patients is safe, and is associated with lower postoperative complications rate, circumferential resection margin involvement rate, and intraoperative bowel perforation rate compared with the conventional APE group. Laparoscopic ELAPE has advantages in operative blood loss, duration postoperative analgesia and postoperative recovery over conventional APE with open abdominal approach.
[Keywords: Rectal cancer, Surgical treatment, Extravascular abdominopерineal excision, Short-term outcomes]

EFFECTIVENESS OF HERBAL MEDICINES FOR THE TREATMENT OF POSTOPERATIVE PERINEAL WOUNDS
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AIM The problem of treatment of postoperative wounds of the anal canal and perineum does not lose its relevance to the present time. Operated patients are concerned about finding new drugs for conservative treatment of postoperative perineal wounds.
In the State Scientific Centre of Coloproctology, from December 2015 to January 2017, a study was conducted to evaluate the effectiveness of the Gem drug for the treatment of postoperative perineal wounds.
METHODS. The study included 82 patients diagnosed with a chronic anal fissure, hemorrhoids, fistulas of the rectum. The main group (1) consisted of 40 patients who were treated with Gem, control group (2) - 42 patients were treated with water-soluble ointments for topical application.
The evaluation methods included clinical examination, proctometry, cytological examination of print smears, quality of life of patients on the QoL SF-36 scale before surgery, at discharge and on the 28th day after surgery. In all groups, measures were taken, homogeneous in terms of key indicators. RESULTS The quality of life and the intensity of the pain syndrome in the early postoperative period did not have statistically significant deviations in the patients of the main and control groups.
Clinical evaluation of the course of the wound process with the use of the Gem drug showed that the duration of hyperemia already decreases on the second day of the postoperative period from 35.4 ± 6.3 to 31 ± 4.9 cm (p=0.001).
In the patients of the main group, in a cytological study, a significant decrease in the inflammatory wound reaction was revealed from 59.5 ± 10% as early as the 15th day after surgery (p<0.001).
CAUTION: Mortality and complications are also lower in both groups: 1% vs 2% (p=0.03) and 30% vs 45% (p=0.03), respectively. Median bloodloss in cases of major liver resections was lower than in analogous operations in local group, 345 ml vs 600 ml (p=0.007), respectively. There was no difference in mortality and complications rates between major liver resections in both groups: 0 ± 4% (p=0.98) and 52 vs 48% (p=0.5), respectively. Rates of acute hepatic insufficiency were similar in both groups of major liver surgery: 4 vs 11% (p=0.36).
Median postoperative hospital stay was also similar in both groups of major liver surgery: 19 (15-27) vs 19 (11-27) days (p=0.1).
CONCLUSION: Simultaneous operations, requiring economical resections are indicated in cases of synchronous metastases of colorectal cancer in the liver. Major synchronous liver surgery is not contraindicated.
[Keywords: Local treatment of postoperative perineal wounds, a plant preparation, methods for assessing the course of the wound process]

SIMULTANEOUS RESECTIONS FOR SYNCHRONOUS COLORECTAL CANCER LIVER METASTASES
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SIMULTANEOUS RESECTIONS for colorectal cancer by liver and colorectal surgery has an actual issue in patients with colorectal cancer with synchronous liver metastases. The aim of this study is to compare short-term outcomes of patients with synchronous colorectal liver metastases treated by simultaneous or staged surgery.
METHODS. 172 suitable patients were treated in State Scientific Centre of coloproctology named after A.N.Ryzhik, Moscow, Russia between January 2013 and February 2017. Simultaneous colorectal and hepatic resections were performed in 128 patients; 44 patients underwent delayed hepatectomy. Short-term outcomes were compared in patients who underwent simultaneous colorectal and hepatic resection and staged surgery depending on the demographic, clinical and morphological characteristics and type of operations.
RESULTS: Median numbers of metastases in both groups were significantly smaller in the group of simultaneous operations: 2.5 vs 3.2 cm (p=0.034) and 2 vs 3.5 (p=0.001), respectively.
Major liver resections were rarely performed in group of simultaneous operations: 20% vs 61% (p=0.0001). Mortality and complications rates were similar in both groups: 1% vs 2% (p=0.98) and 30% vs 45% (p=0.08), respectively. Median days after surgery were also similar in both groups: 14 (12-21) vs 14 (12-21) days (p=0.6), respectively.
In all cases of major liver resections in group of simultaneous operations was lower than in analogous operations in local group, 345 ml vs 600 ml (p=0.007), respectively. There was no difference in mortality and complications rates between major liver resections in both groups: 0 ± 4% (p=0.98) and 52 vs 48% (p=1.0), respectively.
Median postoperative hospital stay was also similar in both groups of major liver surgery: 19 (15-27) vs 19 (11-27) days (p=0.1).
CONCLUSION: Simultaneous resections for colorectal liver and colorectal cancer has a high diagnostic value of strain elastography and made a unique perspective method for detection of occult malignancy in large rectal lesions.
[Keywords: synchronous colorectal liver metastases, liver resections, colorectal cancer, Simultaneous resections]

ON APPLICATION OF MECHANICAL COLORECTAL ANASTOMOSIS AFTER ANTERIOR RESECTION AND LOW ANTERIOR RECTAL RESECTION
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AIM To evaluate results of anterior (AR) and low anterior resection (LAR) for rectal cancer with stapler anastomosis. MATERIALS AND METHODS. 141 patients aged from 33 to 84 years were included into study. Of them 60 patients had low anterior resection. RESULTS: The AR was developed in 7 (3% of 7) and LAR in 63 (3.7% after AR) between P03 and 7 days (p=0.05).
CONCLUSION: Mechanical preparation of the colon, precise techniques of mobilization of the rectum and mesorectum, prevention of tension on suture line, compliance with the application techniques of mechanical anastomosis, control of its integrity, considering of risk factors allow to produce a secure suture and are important in prevention of anastomosis leakage.
[Keywords: mechanical colorectal anastomosis, low anterior rectal resection, anterior rectal resection]

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2 Russian Medical Academy of Continuous Professional Education, Moscow, Russia
AIM To assess results of colorectal surgery (CRS) and intraperitoneal intraoperative chemotherapy in IC patients with colorectal cancer and RC patient (PCR) recurrence (PCR) of colorectal origin.
METHODS. 78 patients with PC were treated by colorectal surgery (CRS) and intraoperative chemotherapy with mitomycin C (20 mg/m2). In 57 (75 %) pts. carcinomatisos was synchronous. The mean follow-up of PCR – 3 (2-12) months. In 15/76 (20%) pts. there was potential recurrence. RESULTS: Complications occurred in 15 (20%) pts. Mortality rate was 1,3%. The first PCR was developed in 34 (45%) pts. The median time after first surgery – 11 (9-19) months. 15 (56%) pts. were undetermined by RI and ICC status was achieved in 10 cases. The second PCR registered in 8 (18) pts. after last CCG-resection. Mean time was 12 (6-20) to (3-37) months. In 6 (8) pts. CCG operation was performed.
CONCLUSION: The disease-free survival (DFS) and overall survival (OS) was 20 and 36 months, respectively. The 1-, 3-, 5-year OS and DFS rate was 84, 31% and 8%, 46 %, 24%, respectively. The first PCR was statistically significantly higher patients with PCR – 37 and 38 months, respectively (p=0.029).
CONCLUSION: Combined treatment approach for patients with PC from colorectal origin achieved low postoperative morbidity andmortality, and it provided good long-term survival in our patients. PCR in CRC is possible in colorectal cancer, being feasible in selected patients and improve survival.
[Keywords: carcinoma, colorectal carcinoma, colorectal cancer, colorectal surgery, intraperitoneal chemotherapy]
THE ROLE OF NEUTROPHIL-TO-LYMPHOCYTE RATIO (NLR) IN THE DIAGNOSIS OF LOW COLORECTAL ANASTOMOSIS LEAKAGE
State Scientific Centre of Coloproctology, Moscow, Russia Russian Medical Academy of Postgraduate Education, Moscow, Russia

Anastomotic leakage (AL) following surgical interventions associated with total mesorectal excision (TME) and formation of fistula is the most common and dangerous complication of this kind of intervention, its incidence is 17%.

OBJECTIVE: Determine diagnostic value of Neutrophil-to-Lymphocyte Ratio (NLR) in the diagnosis of low colorectal anastomosis leakage after low anterior resection (LAR).

Patients and methods: 100 patients with epithelial tumors of rectum in the period 2013-2016 year underwent surgery – LAR with colorectal anastomosis and preventive stoma. In patients without clinical symptoms/radiological study was performed in order to identify asymptomatic AL on day 7 after the surgery. An incidence of AL, difference in the levels of NLR in patients with AL and consistent anastomosis, we also assessed sensitivity, specificity, positive (PPV) and negative predictive value (NPV) of these markers.

RESULTS: AL was diagnosed in 20% (20/100); in 11% (11/100) with clinical manifestations, in 9% (9/100) – without them (contrast leakage according to X-ray examination). In the group of patients with anastomotic leakage, the median of NLR differed from that in patients without compromised integrity of anastomosis at both postoperative day 3 (7.1 vs 5.7, respectively; (t-test) p=0.042) and postoperative day 6 (8.8 vs 4.4, respectively, (t-test) p=0.004).

Conclusion: an incidence of anastomotic leakage was 20%, but only 11% of the patients had clinical manifestations. Changes in the level of NLR in the postoperative period correlated with the fact of AL.

[Keywords: low anterior resection, colorectal anastomosis, anastomotic leakage, Neutrophil-to-Lymphocyte Ratio]

INDOCYANINE GREEN INTRAOPERATIVE FLUORESCENCE ANGIOGRAPHY AS PROPHYLAXIS OF COLORECTAL ANASTOMOTIC LEAKAGE (a systematic review)
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[Keywords: fluorescence angiography, indocyanine green, anastomotic leakage, colorectal surgery]

COMPLICATED CROHN’S DISEASE IN ADOLESCENTS: FEATURES, INDICATIONS FOR SURGICAL TREATMENT, DIFFICULTY OF TRANSITION OF CARE (review article)
Shcherbakova O.V., Podzunbnyi I.V., Kozlov M.Y.
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[Keywords: Crohn’s disease; adolescents; complications; surgery; transition of care]