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Modalities of surgical treatment of advanced rectal cancer

KEYWORDS: Rectal neoplasms; Surgery; Anus praeter naturalis

Surgery plays the most important role in the treatment of advanced rectal cancer. With an appropriate surgical operation the best chances for longer survival and better conditions for adjuvant therapy - radio and/or chemotherapy can be obtained. The objective of this overview is that applied surgical method depends on tumor distance from anocutan line and on T factor. Examined and evaluated patients were under surgical treatment in last four years at the Institute. A total of 50 of 190 operated patients with colorectal cancer had advanced disease (T3/T4). Positive lymph nodes had 21 patients and distance metastasis 16 patients. The results showed that in advanced rectal cancer the most often surgical approach was Milles operation - 27 patients (54%), *anus praeter naturalis* - 16 patients (32%), Dixon operation - 4 patients (8%) etc. 34 patients (68%) had tumor located from 2 to 6 cm from anocutan line (proctoscopically measured). In all cases resection edges were without malignancy marks. The treatment was respected by Institutes' protocol. From our results comes that in advanced rectal cancer the most important factor for selection of operation type is tumor distance from anocutan line.



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Treatment results of advanced cancer of rectum and rectosigmoid

KEYWORDS: Rectum and rectosigmoid neoplasms; Survival rate; Radiotherapy; Surgery; Antineoplastic agents, Combined

In recent years, rectal and rectosigmoid cancer have had an extremely aggressive course. In the sample of 57 treated patients, died or reported dead in the period from 1995 to 2001, there were 2 patients (3.5%) in Dukes A stage, 17 (29.8%) in Dukes B stage, 20 (35.1%) in Dukes C stage and 18 (31%) patients in Dukes D stage. The primary treatment consisted of three dominant therapies: radical surgery (Dukes B 100%, Dukes C 75%), adjuvant chemotherapy (B-35%, C-30%, D-22%) and postoperative radiotherapy (B-23.5%, C-25%). In D stage there were mostly palliative operations with stoma (44%) and radical operations (33%). The greatest progress was made in B (2/17) and C stage (8/20), most often in the liver (29%), in the form of local relapse (17%) and in the lungs (8.5%). The planned treatment was completed in only 26.3% of all patients with disease progression. The results of the total treatment are: in Dukes B stage 2-years survival is 45-50%; 3-years survival is 27-33%; 4-years survival is 18% and 5-years survival is 18% too. In Dukes C stage, 2-years survival is 17-33%, 3-years survival is 8%, 4-years survival is also 8%. In Dukes D stage 2-years survival is 11%, 3-years survival is 5-6%.

Retrospective results of chemotherapy for subpopulation of advanced colorectal cancer patients who had or had not previous primary tumor resection

KEYWORDS: Colorectal neoplasms; Neoplasm metastases; Drug therapy

This report deals with results of 5-FU based chemotherapy in advanced colorectal cancer patients who had or had not resection of their primary tumor. In this retrospective case analysis we used patients' records for the analysis of tumor response, time to progression and survival rate from 1996 to 2000. A total of 16 patients (primary tumor presented in 9 out of 16) were treated with 5-FU based chemotherapy, and all of them were considered as evaluable for analysis. All of them had distant metastases predominantly in the liver and/or lung. Sex distribution was 9 males and 7 females with median age of 60 years (39-74). The treatment included 5-FU 425 mg/m², (days 1-5) and leucovorin 20 mg/m², (days 1-5). The cycles were repeated every 4 weeks until disease progression. The median of applied cycle was 4 (range 1-12). The results in the group with primary tumor were 1 PR, 5 SD and 3 PD. The response rate was 11%. Median time to progression was 5 months (range 1-13) and median survival was 7.5 months (range 2-23). The results in the group without primary tumor were 1 PR, 3 SD and 2 PD. Median time to progression was 4 months (range 1-7+) and median survival was 7 months (range 2-9+). The treatment-related death did not occur. Chemotherapy was not interrupted in any of the patients due to toxicity. The number of analyzed patients was not sufficient to draw a conclusion. Nevertheless, it seems that the presence of primary tumor did not influence on the treatment outcome.



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Surgical treatment of the patients diagnosed with colon and rectal cancer with infiltration of adjacent organs

The surgery of neoplasm of the last part of colon

KEYWORDS: Cancer; Colon; Drug therapy

KEYWORDS: Neoplasms; Colon; Surgery

From 1991 to 1994, 190 patients with colon and rectal cancer were operated in the Institute of Oncology and Radiology of Serbia. Majority of the tumors were localized on rectum (55), on sigma (16) and anal canal (6). The most frequently performed operation was Milles (38); 7 patients had post-operative complications and 2 exitus were recorded. Ten patients in this group had infiltration of the adjacent organs: rectum (5), coecum (91), transversal colon (1), sigma (1), and anal canal (1). Infiltrated organs were uterus and ovary (4), vagina (1), bladder (2), small intestine (1), and abdominal wall (1). Preoperative therapy was applied in 2 patients (RT) and postoperative in 5 patients (RT 2; HT 2; RT+HT 1). Surgical treatment was indicated in this group of patients too with improve the quality of life and to prolong survival.

In this paper the authors present their experiences in surgical treatment of neoplasm in the last part of colon. We collected data from patients' records and surgery protocols from 1995 to 1999. In this period 246 patients with the colon cancer were operated in our Institute. There were 85.37% patients who had the first operation while 14.63% patients were operated earlier from the same reasons. In the first group of patients, there were 65.24% selective operations and 34.76% patients were operated as emergencies. In 163 cases the tumor was located in sigmoid colon, in rectosigmoid colon and rectum (66.26% of 246 operated patients). The ratio between male and female was 1.3:1. Eighty percent of operated patients were older than sixty years. The rate of cancer occurrence was 50% in sigmoid colon, 10% in rectosigmoid and 40% in rectum. The choice of surgical technique depended on the clinical stadium of disease and general condition of the patients. We performed colon resection in 67% of patients, colon resection and T-T anastomoses were done in 50% of cases, Hartmann operation in 21%, and in 27% of patients the rectum was excised. There were radical operations with systemic lymphadenectomy in 78.90% of the total number of patients. The post-operation mortality rate was 6.75%, in case of emergency condition it was 14.29% and for elective operation was 3.51%.



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Therapeutic modalities and survival rate of patients with colorectal carcinoma in stages C and D

KEYWORDS: Colorectal neoplasms; Drug therapy; Survival rate

Rectal and rectosigmoid carcinoma in Dukes stages C and D have very poor prognosis. In the group of 57 patients that were treated and died in oncology out-patient department of the health center Leskovac from 1995 to 2001, 20 (35%) patients were in stage C and 18 (31.6%) in stage D. Methods of surgical and oncological treatment have great impact on survival rate. The best results were achieved after palliative surgical treatment, with or without stoma. Average survival rate in stage C was 28 months and in stage D 10-11 months. After postoperative radiotherapy with palliative surgery survival rate was 37 months in D stage and 14-15 in stage C. Complete chemotherapy showed much better results than incomplete one. After complete chemotherapy survival rate was 26-27 months and after secondary chemotherapy was 34 months. Incomplete chemotherapy (1-3 regimens) was without therapeutic response. Average survival rate for Dukes stage C was 16-17 months and for stage D was 11 months.

Dermatomyositis as a predictor of disease relapse in rectal cancer: a case report

KEYWORDS: Dermatomyositis; Rectal neoplasms; Prognosis

The case history of a 70-year-old male patient is described who initially manifested rectosigmoid cancer and underwent the left hemicolectomy 1995. Adjuvant chemotherapy with 5-FU-FA was performed due to Dukes C stage. Since 1996, the patient has suffered from fatigue and proximal muscular failure. At the beginning of 2000 a fever of 39°C occurred, and he lost 13 kg of weight in one month. He also experienced the muscle pain and progressive functional muscular impairment. Laboratory examination showed sedimentation rate of 70/h, creatine kinase 3222 U/l (ref. 15-130), LDH 1094 (ref. 320 U/l). Neurological examination revealed a hypotrophy of proximal skeletal musculature with weakness of proximal groups. Electromyography showed myopathic changes: low amplitudes and shortage of polyphasic potential. The rheumatologist diagnosed dermatopolymyositis. The patient was treated with corticosteroids and azathioprine. After six months of treatment, and a transient response, pelvic pain and further deterioration of general condition occurred. In June 2001, the oncologist found an elevation of tumor marker: CA 19-9 was 87.5 µg/ml (0-33) with normal values of CEA 1.5 µg/ml. Pelvic recurrence was found by colonoscopy and ultrasound examination, as well as hepatic metastases. The patient underwent palliative surgery in the mid of August. Due to poor general condition of patient no systemic therapy was recommended. Two-thirds of males older than 40 years having dermatomyositis are claimed to have a malignancy. We described a patient with a clinical course of both diseases, where development of dermatomyositis predicted the recurrence of the rectal cancer.



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Clinical characteristics of early postoperative course in locally advanced and preoperatively irradiated rectal cancer

KEYWORDS: Rectal neoplasms; Radiotherapy; Neoadjuvant treatment

Multidisciplinary, neoadjuvant therapeutic approach in treating of locally advanced rectal cancer is an evident trend in contemporary oncology. The basic tendency is analysis of early postoperative course of preoperatively irradiated patients with advanced local spreading of the disease in relation to classically operated patients for the same disease at our department. A group of 35 preoperatively irradiated patients and the group of 32 patients who were not preoperatively irradiated were analyzed. The following clinical parameters were taken into consideration of early postoperative status: number of days spent in intensive care department-postoperatively, type and length of use of antibiotics, presence of septic temperatures, volume of hemorrhagic drain content in the first 48h, early operative interventions due to complications, secondary healing of laparotomy wound, time (days) of postoperative establishing of peristalsis and beginning of feeding *per os*, duration of postoperative hospitalization. There was no significant difference in majority of parameters between preoperatively irradiated patients and these who were not irradiated. However, noteworthy and significant is a result that preoperatively irradiated patients had less inclination to infective complications in postoperative course, both general and the local, while the total postoperative time they spent in hospital was longer (later establishment of peristalsis).

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Summary of the treatment of advanced colorectal cancer with 5-FU-LV protocol in the oncological out-patient center in Loznica from 1996 to 2000

KEYWORDS: Colorectal neoplasms; Drug therapy; Fluorodeoxyuridylate

Chemotherapy with 5-FU 425 mg/m²/24 h days 1-5 and Leucovorin 20 mg/m²/24 h in 4 week intervals was applied in twelve patients with metastatic colorectal cancer. Ten patients had metastatic disease in the liver, one had only pulmonary metastases and one had metastatic sites both in lung and liver. Response of metastatic sites was followed by chest X-rays and abdominal ultrasound examination. The number of cycles applied ranged from 1 to 9 (three patients had only 1 cycle, three patients 2 cycles, two patients 3 cycles, two patients 4 cycles, one patient 6 cycles and one patient 9 cycles). The median number of cycles was 2.5. Patients receiving 4-6 cycles had temporary disease stabilization followed by progression. One patient who received 9 cycles had a sustained stabilization. None of the patients achieved an objective response. Progression occurred after a mean of 1.6 cycles. Toxicity was mild and there were no treatment delays either because of toxicity or subjective intolerance. In conclusion the whole group patients is characterized by a very short time to progression.



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Initial CA19-9 values, Lewis-phenotype and secretory status in colorectal patients

KEYWORDS: Colorectal neoplasms; Tumor markers; Lewis blood-group system

Investigation included 84 patients with advanced colorectal cancer and control group of 29 healthy individuals. CA19-9 was determined in serum and saliva using commercial tests (IMx Abbott). The results were correlated with the patients Lewis (Le) phenotype and secretory status. Le(a) and Le(b) were determined by haemagglutination method using monoclonal antibodies (sifin), and secretory status by inhibition haemagglutination method. Among patients, there were 88.1% secretors and 11.9% non-secretors, and in control group there were 75.9% secretors and 24.1% non-secretors ($p > 0.05$). CA19-9 in saliva of overall patients was 2889.50 U/ml, and in control group it was significantly higher, i.e. 20120.73 U/ml ($p < 0.01$). CA19-9 in patients secretors saliva was 754.13 U/ml, and 18691.29 U/ml in saliva patients non-secretors ($p = 0.0021$), while in control group, 1062.23 U/ml ($p = 0.04$) in secretors' saliva and 80018.88 U/ml in non-secretors' saliva ($p = 0.0026$). Lewis-phenotype distribution in patients was 7.1% Le(a+b-), 59.6% Le(a-b+) and 33.3% Le(a-b-). CA19-9 in serum of all patients, was 4425.00 U/ml, in serum of patients secretors 4165.16 U/ml, in non-secretors 6347.81 U/ml and the highest values of CA19-9 (6638.89 U/ml) obtained in Le(a-b-) secretory patients. The lowest CA19-9 values were found in Le(a-b-) secretory patients 2455.91 U/ml in serum and 121.05 U/ml in saliva, while in remained other patients obtained values were 4985.61 U/ml and 1058.00 U/ml respectively ($p = 0.0029$). Results show that CA19-9 values differ significantly between secretors and non-secretors, as well as between varying Lewis phenotypes. Lewis-phenotype and secretory status determination is required for proper result interpretation. Since CA19-9 is a monosialosyl Le(a) blood group antigen, CA19-9 measurement is useful for Lewis positive patients, but it is not useful for Lewis negative ones. DU-PAN-2 measurement should be performed in Lewis negative patients.

Multiple primary malignant neoplasms or radiation-related secondary neoplasms?

KEYWORDS: Endometrial neoplasms; Rectal neoplasms; Radiotherapy

About 11.6% patients diagnosed as primary endometrial cancer had multiple malignant neoplasms: 6.6% of these neoplasms occurred together with the breast cancer, 2.2% with ovarian carcinoma, 0.7% with stomach carcinoma, and 0.7% with rectum carcinoma. Epidemiological study during the 14-year period shows that 11% patients diagnosed with endometrial cancer had double and 0.6% had triple primary malignant neoplasms. It is important to consider patients having undergone pelvic irradiation to be in highly risky group for the development of colorectal cancer. Among women with either cancer of the cervix or uterine corpus, the risk of developing the second cancer rose with increasing duration of follow-up, reaching an excess of 61 and 34% respectively, after 20 years. The expression period for radiation-induced solid tumor appeared to continue for the end of life. Women who were under 30, or over 50 years of age when irradiated were at greatest absolute risk for developing a second cancer. A 57-year old patient, in whom abdominally-perineal resection by Milles, due to invasive adenocarcinoma of rectum stage Dukes B, was performed, was treated at our department. Disease stage required adjuvant treatment. Anamnestic data indicated that 14 years ago total hysterectomy with bilateral adnexectomy was performed, due to Adeno-Ca *endometrii infiltrativum*, in clinical hospital Kragujevac. Post-operative irradiation therapy was applied. External beam radiotherapy of TD 30 Gy was applied in 18 fractions, one fraction per day (field size 15x15 cm) and intraluminal brachytherapy to the total dose of 34 Gy in four fraction, one fraction per week (Buchler HDR, CS 137, to the therapeutic active length 1.2 cm). During pelvic irradiation the patient had acute complications on small intestine and bladder. Making the plan of irradiation, therapeutic field practically would be repetition of the same field. We decided for adjuvant chemotherapy, 5FU-LV (6 cycles). The patient is regularly followed-up. All findings are normal as well as the CT of the small pelvis. Considering the former period between occurrence of these two neoplasms, the question is still open: whether it is radiation-related secondary neoplasms (literature data show that the interval between irradiation and the diagnosis of colorectal cancer was mean of 20 years, with higher risk for irradiated women under 30 and over 50 years) or double primary neoplasm (which in 11% occurs in women with primary endometrial cancer).



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The incidence of colorectal cancer in the region of the municipalities of Loznica, Krupanj, Ljubovija and Mali Zvornik, in the period of 1996 - 2000

The role of full colonoscopy in the patients with radically resected colorectal cancer

KEYWORDS: Colorectal neoplasms; Epidemiology; Registries

KEYWORDS: Colorectal neoplasms; Colonoscopy; Cancer

Population register for cancer is the basic part of every rational program of oncological health care of population. During 1995, the population register for cancer in the Central Serbia was reorganized according to the criteria of the International and European Association of Registers for Cancer. The aim of the project was to show the incidence of colorectal cancer in the region of the four municipalities in the period from 1996 to 2000. According to the available data, during the project, the rough rates of the incidence of malignant tumors on 100,000 inhabitants according to their sex and the average standardized rate of the incidence of malignant tumors according to the sex in some European countries, Central Serbia, Vojvodina and the municipalities of Loznica, Krupanj, Ljubovija and Mali Zvornik were shown. The average standardized rate of colorectal cancer of the men in the four above mentioned municipalities is 11.5 on 100,000 inhabitants (new world's population according to Seggi) and it is lower than in the surrounding countries (Hungary 59.8; Romania 21.1; Bulgaria 32.6; Slovenia 39.4; Croatia 41.0; EU 33.9; Vojvodina 28.7; Central Serbia 20.7). The average standardized rate of colorectal cancer of the women is 6.1 on 100,000 inhabitants (Hungary 34.6; Romania 14.3; Bulgaria 21.0; Slovenia 25.9; Croatia 23.2; EU 23.2; Vojvodina 19.9; Central Serbia 12.9). From the above mentioned, it can be concluded that the obtained data probably do not represent the real incidence in the examined region, above all, as well as because of the poor registration of malignant illnesses.

Full colonoscopy is advised during preoperative workup of patients with colorectal cancer, whenever is possible. In order to investigate importance of full colonoscopy after radically resected colorectal cancer, we performed this retrospective study. From 1999 to 2000 full colonoscopy were performed in 164 patients with radically resected colorectal cancer. Only 6/164 patients (4%) had altered bowel habits. In all patients we took biopsy specimen from site of anastomosis and abnormalities of mucosa, for histopathological examination. In 44/164 patients (26.8%) we found the tumor. In 28 patients (17.07%) synchronous polyps were found, in 3 patients (2%) synchronous cancer, in 2 patients (1.2%) metachronous cancer, in 7 patients (4.26%) recidivism and in 4 patients (2.4%) rest tumour. Our results strongly suggested full colonoscopy in all patients with radically resected colorectal cancer, particularly in patients without preoperatively performed full colonoscopy.