OP 4

UDC: 616.329-006:615.849.1:615.38

Preoperative chemoradiotherapy in esophageal cancer

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The results of treatment modalities in esophageal cancer remain inconclusive. We report preliminary results of our study with combined treatment. This prospective, multicentric, single-arm phase II study is a part of the Ministry of Science Project No 145059. The primary objectives are evaluation of histopathological tumor regression (TRG), clinical response rate and toxicity. Secondary objectives are resectability rate, disease-free survival and overall survival. From September 2006 to August 2009, 56 patients with squamous cell esophageal cancer were enrolled. All of them received chemoradiotherapy with cisplatin plus infusion high-dose 5-FU/LV in 4 cycles every 14 days, and a total reference irradiation dose up to 50.4 Gy. After the clinical assessment, medically operable and fit patients underwent surgery. Up to now, 52 patients are evaluated (median age 56 years, 8 female and 44 male patients). All patients had T3 (46%) and T4 (54%) tumor stage (clinical stage II: 11 patients, stage III: 41 patients). Total reference irradiation dose was applied in all patients. Twenty-nine patients received all 4 cycles of chemotherapy. In 23 patients, chemotherapy was interrupted due to high-grade toxicity. During the treatment, most common toxicity was hematological (grade 3 and 4 noted in 14 patients). Non-hematological toxicity included dermatitis, dysphagia, nausea, vomiting, diarrhea and cardiotoxicity and it was mostly low grade (I-II). There were no treatment related deaths. Clinical response rate was 48% (CR: 3 patients, PR: 22 patients, SD: 17 patients, PD: 10 patients. Radical operation was performed in 17 patients (15 had R0 and 2 had R1 resection). Histopathological complete tumor regression (TRG 1) was noted in 6 patients, partial tumor regression (TRG 2) in 3, (TRG 3) in 4 patients, and minimal tumor regression (TRG 4) in 4 patients. Four patients died in postoperative course. The median observation time was 7 months. Up to now, 41 patients died. Average survival time for the whole group was 9.75 months (operated patients 12.6 months, and not operated 7 months). Eleven patients are still alive (9 had surgery after chemoraditherapy and 7 of them are in complete remission). According to these results, it may be expected that multimodal treatment of locally advanced squamous cell carcinoma of the esophagus improves local control and possibly even survival.

Keywords: Esophageal Neoplasms; Carcinoma, Squamous Cell; Combined Modality Therapy; Antineoplastic Agents; Drug Therapy; Radiotherapy

OP 5

UDC: 616.33-006:616-089.8:616.428

The importance of surgery for gastric carcinoma

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Gastric cancer remains a major cause of cancer death despite a significant decrease in its incidence, particularly in areas out of Eastern countries. Surgery remains the only potentially curative therapeutic option, yet the overall results from surgery alone remain poor. Surgical therapy is effective in small, early-stage malignancies as a technique to locoregional control of the disease. Lymphatic spread through the numerous lymphatic vessels is common in gastric cancer. Radical D2 lymph node dissection improves survival in patients with early lymphatic spread. Locoregional recurrence remains a significant problem in up to 30% of all patients, but more extensive lymphadenectomy is believed to remove a number of these sites of relapse. The lymphatics to the lesser and greater curvature are usually removed, while the celiac, porta hepatis, subpyloric, gastroduodenal, splenic, supra-pancreatic, retro-pancreatico-duodenal, peri-esophageal, superior mesenteric, and periaortic lymph nodes are at risk. At times, these lymph nodes may contain metastatic cancer when the perigastric nodes do not. Minimally one third of all patients with gastric cancer present with disease that is amenable to surgical resection for cure. The proportion of potentially resectable gastric malignancies has increased lately because of earlier diagnosis, improved surgical techniques, and enhanced perioperative care. Adjuvant therapies have not demonstrably altered patient survival after resection in gastric cancer, yet much can be learned from a review of adjuvant trials. No standard adjuvant therapy has been shown to improve survival after surgical resection of gastric adenocarcinoma, and future studies should be based on the data that have been accumulated to date.

Key words: Stomach Neoplasms; Digestive System Surgical Procedures; Gastrectomy; Lymph Node Excision; Reconstructive Surgical Procedures

OP 6

UDC: 616.37-006:616-089.8

Surgery for pancreatic cancer

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Ductal adenocarcinoma accounts for the majority of all pancreatic neoplasms (80%-90%). It is one of the most aggressive tumors with incidence in the USA and the Western countries of 10-11 per 100 000 people and an overall 5-year survival rate of less than 5%. Approximately two-thirds of all ductal adenocaricnoma arise in the pancreatic head, neck or uncinate process. The remaining one-third is found within the body or tail or diffusely throughout the gland. Pancreatic cancer is characterized by retroperitoneal and perineural infiltration, angio-invasion, early formation of local and distant metastasis, high rates of local relapse after resection and resistance to most of the available treatment regimens. There are three steps in the diagnosis of pancreatic carcinoma before deciding on the treatment approach. The first step is to detect the tumor. The next is to differentiate pancreatic adenocarcinoma from other pancreatic lesions. Finally, imaging should be able to permit staging of the tumor. In nearly 50% of cases, a diagnosis is made in a stage of illness in which metastases are present and 80% percent are inoperable (unresectable). The standard operation for tumors of pancreatic head is cephalic pancreaticoduodenectomy, whereas tumors of the body or tail can be resected using a distal pancreatectomy. Total pancreatectomy is generally reserved for newly selected situations in which cancer involves most of the gland. The authors analyzed the resectability rate, treatment, morbidity, mortality, and follow up in 265 patients (161 men and 104 women) with pancreatic cancer treated and monitored at the University Medical Center “Bezanijska kosa” from January 2000 to December 2008. Radical (potentially curative) procedure was performed in 73 patients and palliative procedures in case of 182 patients. In the group of patients that underwent potential curative resection, there were 44 cephalic duodenopancreatectomies, (classical Whipple-26, PPPD-18) 8 total duodenopancreatectomies, 18 distal, 2 central, 1 near total pancreatectomy. Portal vein (PV) resection was performed in 2 pts and lateral PV excision in 3 pts. The operative treatment of pancreatic head cancer in the group of patients that underwent palliative procedures, in most cases (138 patients), involved biliary enteric bypassing (hepaticojejunostomy) and prophylactic or therapeutic GEA as a standard procedure. Operative mortality in radically treated was 6 pts (8.2%). In the group of patients that were subjected to palliative procedures, mortality was 12 pts (6.7%). The most common postoperative complications in patients with resection procedures were the following: pancreatic fistula, erosive bleeding, atonia and gastric emptying disorders, biliary fistula and residual intra-abdominal abscess. Patients who undergo resection have the best change for long-term survival. Patients with unresectable or incurable disease, found during exploration, are generally considered to be the best treated with surgical palliation. The most common symptoms that require palliation in patients with pancreatic cancer are obstructive jaundice, gastric outlet obstruction and pain. To palliate obstructive jaundice, a biliary bypass (hepaticojejunostomy) should be performed. In addition to the biliary bypass, gastrojejunostomy should be performed routinely to prevent gastric outlet obstruction due to tumor ingrowth or compression of the duodenum. Initial severe pain treatment can be analgesic, but when the disease progresses this will not be sufficient in many cases. A neurolytic plexus coeliac block can be performed percutaneously.

Key words: Pancreatic Neoplasms; Diagnosis, Differential; Adenocarcinoma; Surgery; Treatment Outcome

OP 7

UDC: 616.37-006:615.015.2:341.18

Pancreatic cancer - adjuvant chemotherapy

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Pancreatic cancer is highly fatal cancer with >95% mortality rate. Resection is associated with improved survival, with 5-year survival rate of 0.4%-4%. Options of adjuvant therapy for pancreatic cancer (chemoradiotherapy or chemotherapy alone) are controversial. European Study Group for Pancreatic Cancer (ESPAC1) study was designed to answer the roles of adjuvant chemoradiation and adjuvant chemotherapy in 289 patients. Final results showed no survival benefit in chemoradiation arm. However, chemotherapy only arm achieved significant benefit in median survival (20.1 months vs. 15.5 months). Meta-analysis of 5 randomized trials (total 686 patients/550 deaths) was designed to investigate the role of adjuvant chemotherapy based on 5FU. These trials showed a significant trend in favor of chemotherapy with 29% and 46% reduction in the risk of death with chemotherapy. (HR indicated a 25% significant reduction in the risk of death with chemotherapy). The overall benefit for chemotherapy was shown by patients' median survival of 19 months in the group with chemotherapy and 13.5 months in the group without chemotherapy. The 2-and 5-year survival rates were estimated at 38% and 19% in the group with chemotherapy and 28% and 12% in the group without chemotherapy. Charité Onkologie (CONKO-001) study compared the benefit of adjuvant gemcitabine therapy with no postoperative anticancer therapy. Median overall survival was 22.1 months in the gemcitabine group and 20.2 months in the control group. In the qualified analysis, the overall survival advantage for gemcitabine was significant (24.2 months vs. 20.5 months in the control group). In the patient subgroups a significant difference in median overall survival in favor of adjuvant gemcitabine was observed for R0 patients, T3-4 patients, and for N negative patients. The CONKO-001 data, which were reanalyzed in March 2008, showed a significant difference in overall survival between the gemcitabine and surgery-only groups after long-term observation (5-year survival rate, 21.0% vs. 9.0%). ESPAC-3 (v2) was designed to compare 5-fluorouracil plus leucovorin and gemcitabine alone in adjuvant treatment of 1088 patients with resected pancreatic cancer. There was no statistically significant difference in survival between adjuvant fluorouracil plus leucovorin group and adjuvant gemcitabine group (median overall survival, 23.0 vs. 23.6 months). This study suggests that, although there was no significant difference in survival of patients in both study groups, gemcitabine may be suitable for clinical use as adjuvant therapy because the rate of serious adverse events was significantly lower than that in patients treated with fluorouracil plus leucovorin (7.5 vs. 14%).

Key words: Pancreatic Neoplasms; Chemotherapy, Adjuvant; Antineoplastic Combined Chemotherapy Protocols; Treatment Outcome

OP 8

UDC: 616.37-006:615.38:615.015.2

Systemic chemotherapy for advanced pancreatic cancer

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In Europe, cancer of the pancreas is the 10th most frequent cancer, accounting for some 2.6% of cancer in both sexes, and the eighth leading cause of cancer-related death with 65 000 deaths each year. The overall incidence of pancreatic cancer is approximately 8-10 cases per 100,000 persons per year. Incidence of pancreatic cancer in males has been slowly dropping over the past 2 decades, while the incidence in females has increased slightly. Histologically there are three types of pancreatic cancer. Infiltrating ductal adenocarcinomas account for 90% of pancreatic neoplasms, the remaining 10% being represented by acinar cell carcinoma. In patients with advanced and unresectable disease treatment with gemcitabine may be a reasonable choice. A phase III trial of gemcitabine versus 5-FU (well-tested older drug) as first-line therapy in patients with advanced or metastatic adenocarcinoma of the pancreas reported a significant improvement in survival among patients treated with gemcitabine. The use of a combination of gemcitabine with other cytotoxic agents (5FU, irinotecan, cisplatin, oxaliplatin, and docetaxel), is not supported by an advantage in survival. Recent clinical trials have not shown that combining gemcitabine and capecitabine produces any change in clinical response or quality of life. Another therapeutic possibility is a combination of gemcitabine and erlotinib (targeted therapy in the form of epidermal growth factor receptor antagonists), recently approved by FDA and EMEA on the basis of a randomized trial from the NCI of Canada. A preliminary report of a phase III trial (CAN-NCIC-PA3) comparing gemcitabine alone versus the combination of gemcitabine and erlotinib (100 mg/day) in patients with advanced or metastatic pancreatic carcinomas showed that erlotinib modestly prolonged survival when combined with gemcitabine alone (1-year survival was 18% with gemcitabine as compared with 2% with 5-FU, $P = .003$). However, the very modest survival gain (about 2 weeks), the high economic costs of the treatment and having in mind that this combination is with no small amount of patient toxicity question the role of this combination in metastatic pancreatic cancer. At the moment there is no evidence supporting the use of either cetuximab or bevacizumab in the overall setting of pancreatic cancer. There is no standard chemotherapy for patients who have progressed in first-line treatment. Capecitabine alone or capecitabine plus erlotinib may provide second-line therapy benefit in patients refractory to gemcitabine. The low objective response rate and lack of survival benefit with current chemotherapy indicates that clinical trials are still appropriate treatment option for the patients with pancreatic cancer. The signature molecular defects initially identified in pancreatic cancer, KRAS mutation, and epidermal growth factor receptor (EGFR) expression were the basis of initial trials of targeted agents. More recently recognized defects such as CDKN2A, TP53, and SMAD4/DPC4, hedgehog signaling PI3 kinase provide a platform for further development and investigation of drugs.

Key words: Pancreatic Neoplasms; Adenocarcinoma; Antineoplastic Agents; Antineoplastic Combined Chemotherapy Protocols

OP 9

UDC: 616.348-006:616.351-006:616.071:615-085

KRAS: A new predictive biomarker in the treatment of metastatic colorectal cancer

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A selective approach for the first-line treatment of metastatic colorectal cancer (mCRC) is more effective than non-selective treatment options. Personalized treatment, in which only those patients most likely to benefit receive a particular therapy, is possible if good biomarker can be found. Several molecular markers have been recently investigated as potential predictors of response to the epidermal growth factor receptor (EGFR) inhibitors. Currently, the only validated biomarker predictive of anti EGFR therapy is mutational status of KRAS oncogene, which is situated downstream in the EGFR signaling pathway. Up to 65% of colorectal cancers express the KRAS wild type (WT) gene. Recent published studies with cetuximab in combination with standard chemotherapy in first line treatment of mCRC have showed improved outcome with cetuximab in KRAS WT patients. In CRYSTAL study, addition of cetuximab to FOLFIRI in first-line treatment of KRAS WT mCRC patients improved response rate (39.7% vs.57.3%, $p<0.0001$), progression free survival (8.4 vs. 9.9 months, $p=0.0012$) and overall survival (20.0 vs. 23.5 months, $p=0.0094$). Furthermore, addition of cetuximab to FOLFOX regimen in same setting was investigated in OPUS study. Improvement is registered in response rate (34% vs. 57.3%, $p=0.0027$), PFS (7.2 vs. 8.3months, $p=0.0064$) and OS (18.5 vs. 22.8 months, $p=0.385$). National Comprehensive Cancer Network recommended determination of KRAS gene status of either the primary tumor or the site of metastasis in the pre-treatment work-up for all patients diagnosed with mCRC. Testing for KRAS status is therefore essential for ensuring appropriate patient selection for treatment in first-line mCRC.

Key words: Colorectal Neoplasms; Neoplasm Metastasis; Tumor Markers, Biological; Genes, ras; Receptor, Epidermal Growth Factor; Antineoplastic Agents

OP 10

UDC: 616-006:615-085:504.06

Education of cancer patients as a psychosocial support

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In the Institute for Oncology and Radiology of Serbia, cancer patients' specific education is an integral part of oncology treatment. The essence of cancer patients' education is in providing information and knowledge about cancer and anticancer treatments and giving psychosocial support. The aims of cancer patients' education are to demystify facts about cancer, to explain possibilities of contemporary treatment, to reduce emotional tension, to accomplish social participation, and to improve quality of life. Faculty for cancer patients' education includes multiprofessional and interdisciplinary team. Cancer patients' education is organized with individual and groups approaches. In our ten years long practice, the assessment of readiness and needs for education showed that the most of our patients needed more knowledge about nutrition, alternative and complementary cancer treatment. They required more knowledge about coping strategies, inter-family relationships in such situation, and supportive resources in society. They wanted to know more about their own active participation in the process of adaptation in the new situation created by cancer. Our results about influences of cancer patients' education on their life aspects confirmed that better understanding, knowledge, and skills in arrangement treatment goals, and creating plans for future achieved during education, have important positive impact on quality of life. Cancer patients' education has outstanding contribution in establishing self-management approach in which patients assume responsibility for their behavior, for changing their environment, and for planning their future.

Key words: Medical Oncology; Patient Education as Topic; Health Knowledge, Attitudes, Practice; Social Support; Adaptation, Psychological; Quality of Life

OP 11

UDC: 616-006:159.938.363.6:616.071

Psychological reactions of cancer patients: Thoughts, feelings, behavior, and body reactions of patients faced with diagnosis of cancer*

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The diagnosis of cancer usually creates a distress or crisis that requires adaptation to catastrophic information. Negative psychological states - stress, anxiety, and depression - are frequently associated with the diagnosis and treatment of cancer. At the initial phase of the disease, a certain amount of emotional distress is a normal reaction against the stressor, since the cancer experience is a negative life event requiring an enormous effort from patients and their families in order to adapt to the multiple challenges posed by the disease. The aim of this study was to assess the impact of cancer diagnosis on several psychological dimensions, thoughts, feelings, body sensations, and behavior of cancer patients when they faced the new situation. The investigation was conducted at the Institute for Oncology and Radiology of Serbia, Belgrade within European educational program (EEP) *Learning to live with cancer*. As a member of multidisciplinary team, the psychologist gave two lectures: *Cancer as personal and family distress and crisis, and (dis)functional mechanisms of reactions* and *Coping strategies*. Eighty cancer patients were enrolled. At the beginning of lectures, we asked patients to describe (anonymously) their common thoughts, feelings, behavior, and body sensations, in the first six weeks when they faced the fact that they were affected by cancer. The great majority of our patients experienced deny (65% of patients), reexamination (60%), and 40% of patients had dark thoughts (suicidal ideation). Only 20% of patients had positive thoughts about selves and self-encouraging, and 15% thought about ways how to increase the quality of life. The common feelings quoted by most (90%) patients were depression and disappointment, while fear, hopelessness, and emptiness were mentioned by 85% of patients; 70% patients reported sadness, while 65% of patients quoted angry and anxiety; 50% of patients quoted despair, and 30% quoted guilt and shame. Only twelve patients reported self-compassion. Nervousness and irritability as common behavior was mentioned by 90% of patients. Fifty-two patients quoted insomnia, 30% mentioned hypoactivity and passiveness, while 16 patients quoted hyperactivity. Eight patients mentioned acting-out behavior, while twenty-eight patients quoted muscles tension as most common body sensation. Dizziness, tremor, and sweat quoted 20% of patients, while only twelve patients quoted vomiting. The diagnosis of cancer and cancer treatment can cause distress, emotional turmoil, and different psychosocial disorders. Considering different psychological reactions of cancer patients can be helpful for organizing adequate psycho-educational and psychosocial support and psychotherapy for cancer patients and their families.

* The results of this research will be published in Journal of BUON, 2010.

Key words: Neoplasms; Diagnosis; Medical Oncology; Psychology, Medical; Psychological Phenomena and Processes; Adaptation, Psychological

OP 12

UDC: 616-006:616-052:371.64:504.06(497.11 Serbia)"2007"

Mission of the Patient Support Workgroup

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Patient Support Workgroup was established in the Institute for Oncology and Radiology of Serbia in early 2007. It is made up of patient representatives, representatives from the Patient Association, and experts from the Institute itself.

The Workgroup has been established to further activities aimed at supporting Oncology patients and to improve communication between patients and health workers. These activities include:

- Providing adequate information about malignant diseases, diagnostics, up to date treatments, rehabilitation, and palliative care;
- Organizing meetings in behalf of patient associations and individuals so as to point out current problems, exchange patient experiences and interests;
- Developing an action plan for strengthening roles of patients in society;
- Making contacts and strengthening connections between representatives of patient associations, doctors, and other experts who aspire to improve all forms of oncology treatment.

The Workgroup reaches these goals through organizing popular educational lectures, creative workshops, through working in small groups, selecting and preparing educational materials, and through cooperation with patient associations in the country and abroad, which are concerned with education, support and representation of interests of persons inflicted with malignant diseases.

Main mission of the Workgroup is improving the quality of life of ailing individuals.

Key words: Medical Oncology; Communication; Professional-Patients relations; Health Education; Social Support; Quality of Life

PP 13

UDC: 616.988.6:616.711-006:615-085

Treatment results of Ewing's sarcoma of the vertebrae

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Ewing's sarcomas of the vertebrae are rare tumors. Treatment is multidisciplinary: surgery, radiotherapy, and chemotherapy. From 2000 to 2007, 7 patients with primary tumors of vertebrae were treated. No one patient had tumor of the cervical vertebrae. Five patients had tumors of thoracic and 2 had tumor of lumbar vertebrae. The median age at diagnosis was 13 years (range, 12 to 18 yrs.). Six patients were boys, 1 patient was girl. No one had metastases at diagnosis. Surgery was performed in 5 patients. Complete surgical excision was done in 2 and maximal tumor reduction in 3 patients. Biopsy alone was done in 2 patients. After surgery, all patients received chemotherapy: EICESS 92 (EVAIA chemotherapy regimen) was given to 4 patients and 3 patients received Euro Ewing 99. Radiotherapy was performed in 6 patients: after 2 cycles of chemotherapy in 2 patients and after 3 cycles in 4 patients. Median dose 5040 cGy (range: 5018-5400 cGy) in conventional fractionation. Daily fractionation was from 180 to 193 cGy. The mean follow-up was 41 months (range: 4 to 104 months). Overall survival (OS) rate was 71.42%. One patient progressed and died after complete treatment, another one died during chemotherapy but before radiotherapy. In our series of Ewing's sarcoma of the vertebrae, good surgery initially, early definitive radiotherapy and aggressive multimodal therapy (surgery/radiotherapy/chemotherapy) may be effective in disease control and survival.

Key words: Sarcoma, Ewing`s; Spinal Neoplasms; Treatment Outcome; Combined Modality Therapy

PP 14

UDC: 618.19-006:615.015.2:616-079.4

Differentially - diagnostic dilemmas of skin changes caused by cytostatics: A case report

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Skin changes caused by cytostatics are usually manifested by erythema. Xeloda, oral fluoropyrimidine, which commonly causes hand-foot syndrome, can also cause lupus-like syndrome. A 44-old patient was diagnosed with locally progressive breast cancer. Treatment started with neoadjuvant chemotherapy according to FAC protocol. After down staging, radical left mastectomy with dissection of axilla was performed. Afterwards, the treatment continued by administrating taxane and carboplatin. Soon after, metastases in liver were verified and carboplatin was replaced by trastuzumab because it was HER2 positive carcinoma. After eight chemotherapy cycles, partial regression was accomplished and taxane was replaced by Xeloda. After first cycle, multiform rash appeared on the skin of the torso and arms and in the shape of a butterfly on the face, together with the changes on the lip and oral mucosa. In the meantime, patient was exposed to sunlight. Differential diagnostics included systemic lupus erythematosus (SLE), lupus-like syndrome, Stevens-Johnson syndrome, Lyell syndrome, and others. The doses of Xeloda had been reduced by 30%. Antinuclear antibodies were positive, C4 decreased. Skin biopsy and histopathologic findings indicated the polymorphic eruption of light. Specific symptomatic treatment was administered together with corticosteroids, followed by regression of the skin changes. One year after the original skin eruption, darker pigmentation persisted on the skin of face, hands, and torso. SLE is chronic autoimmune disease manifested by skin changes, enanthema, arthritis, changes of serosa, anemia, leucopenia, false-positive test results for lues and positive antinuclear antibodies. Lupus-like syndrome is caused by many medications and out of cytostatics most often by Xeloda and taxanes. It is mainly manifested by skin changes, but specific antibodies were not found. It is associated with anemia and thrombocytopenia, and it disappears once the medications are stopped. Even with all the clinical symptoms, histopathologic findings, findings of different antibodies, it is often impossible to clearly differentiate etiology of skin changes during cytostatics administration. Cytostatic effects enhanced by exposure to sunlight could have induced exacerbation of SLE in this patient's case, although lupus – like syndrome cannot be completely excluded, either.

Key words: Breast Neoplasms; Neoadjuvant Therapy; Cytostatic Agents; Skin Manifestations; Diagnosis, Differential

PP 15

UDC: 617.735:2-446:616-089.8:615.849.1

Multidisciplinary treatment of bilateral retinoblastoma – 10 years experience

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Treatment of children with bilateral retinoblastoma is multidisciplinary. From1999 to 2009 we treated 31 patients (7 female and 3 male patients) with high-risk retinoblastoma. We had 10 patients with bilateral retinoblastoma; median age at the time of diagnosis was 14.5 months (range: 2 to 31 months. Tumor invasion into the optic nerve was present in 3 (30%) patients. Leptomeningeal dissemination was not diagnosed in treated children. Bone marrow was also not affected in followed patients. Enucleation of one eye was performed in 5 patients and enucleation of both eyes in 2 patients. Local radiotherapy was applied in 3 patients and 7 patients received focal treatment modalities (cryotherapy, thermotherapy). All patients received systemic chemotherapy (protocol consists of carboplatin, etoposide, and vincristine). During the 12-108 months follow-up period (median follow up 48 moths) overall survival rate was 80%; 2 patients died. Sixty percent of all cases preserved useful one eye vision. Multidisciplinary treatment is essential in children with bilateral retinoblastoma. Delay of diagnosis and infiltration of the optic nerve had a negative impact on survival. Seven patients required enucleation of one or both eyes at some stage, but 60% of patients preserved useful one eye vision. Aggressive chemotherapy treatment with focal treatment modalities (cryotherapy, thermotherapy) can result in avoiding of radiotherapy.

Key words: Retinoblastoma; Child; Combined Modality Therapy; Antineoplastic Combined Chemotherapy Protocols; Cryotherapy; Hyperthermia, Induced; Radiotherapy; Surgery

PP 16

UDC: 616.36-006:616.071

Focal hepatic lesions and hepatocellular carcinoma

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The number of new cancer cases increases every year worldwide. About 10.9 million new cancer cases and 6.7 million cancer deaths occur worldwide every year. Cancer of unknown primary site (CUP) occurs in 6% of all cancers. Hepatocellular cancer (HCC) is one of the most frequent cancers with five-year relative survival less than 10%. Over 80% of the total liver cases occur in developing countries. Rates are higher in men than in women (ratio 4:1). The aim of this study was to prove frequency of primary HCC in patients with initial ECHO ultrasound or CT discovered metastatic lesions in the liver without known primary site of tumor. This paper presents 60 patients hospitalized in Clinic of Oncology, Clinical Centre Banja Luka. Detailed history of disease was taken and clinical examination (laboratory analyses, hepatitis markers, tumor markers, ECHO examination, CT scan) was done for all patients. In addition, fine needle aspiration was performed in some of them. Disease was confirmed micromorphologically in 51 (85%) patients. Primary HCC (χ^2=9.40 p<0.01) was found in 14 (27%) patients (13 men and 1 woman, average age 63 [range: 48-74 years]); 28% patients had previously cirrhosis; 43% patients were alcohol consumers. HBsAg positivism was found in 33.3% of patients, HBV antibodies were proved in 28.6%, and HCV antibodies were confirmed in 14% of patients. Extrahepatic primary process was found in 26 (51%) patients and CRC was found in 70% of all studied patients. Hepatocellular cancer was proved in 27% of examined patients. Colorectal cancer is the most frequent tumor in patients with secondary deposits in the liver (70%).

Key words: Carcinoma, Hepatocellular; Liver Neoplasms; Neoplasm Metastasis; Liver Diseases; Diagnosis

PP 17

UDC: 618.19-006:616-052:504.06

Patient's personal narrative

Jasmina Lukić

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My name is Jasmina Lukic (53). Four years ago, I had first surgery of breast cancer and two years later, I had the second surgery. On my road to recovery, I went through several different and specific therapies at the Institute for Oncology and Radiology in Belgrade. Today, I feel healthy and satisfied primarily because I was able to overcome the pernicious disease and I learned how to maintain my recovered health. During the illness and the treatment, I had great family support by my two sons, mother, and my husband. In addition, my doctors who treated me and my friends supported me too. Breast cancer is a stressful life event and shock to both patients and their families. When I realized how serious was my disease I decided that I must accept reality as it is and I decided to be healthy again. I explained my diagnosis to my beloved ones clearly not allowing them to fear. It was important for them to have patience and understanding for supporting me in my struggle to recovery. It was the first moment of good communication with my family and later with all of my friends. I surrounded myself with positive things. I did the things I enjoyed as long as I enjoyed them. I relaxed, read novels, and minimized watching TV. I spend my free time with my family and my friends, walking, talking, and laughing. However, as usually happens, difficult moments come, and then all of them were there to give me their positive attitude, not letting bad mood to continue. Doctors and team form counseling department always were there to clarify every dilemma. My mother's supporting words , comfort and understanding, great patience and attention of my family, help at home from my husband and sons, my kids' smiles and their success in school, big heart and a little surprise and concerns of my friends, were support to me on my road to recovery.

Key words: Breast Neoplasms; Patients; Narration; Social Support; Family; Quality of Life

PP 18

UDC: 616-006:316.246:504.06

The social support net

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A human being is a psychological and social being so the importance of psychosocial support in stress situation is quite understandable. Numerous clinical and epidemiological researches showed that the level in which the sick person has the support and feels the presence of the support is important factor in his/her adapting to the illness as well as in keeping the life quality. That is the reason that professional staff should check the level of existing support given to a patient. Our aim was to identify when there is a lack of it and in that case to recommend some additional resources and information referring to the way of its obtaining. The aim of this study was to inform the participants with the resources of psychosocial support in our circumstances, verified by the results of survey, done in 2006 with the oncologic patients. The survey results showed that the family is the main resource of psychosocial support for 38% of examinees; 22% of them recognize the support in professional staff of the Health Care System; 35% of examinees have the support of Support Associations, while 5% of examinees are without any kind of support. The family means the resource of not only a practical support but also the most intensive social affective base that obtains trust and the sense of belonging. The examinees expected the informative support to be provided by professional staff from social institutions, and instrumental one by NG sector. Relying only on family is unsuitable; most frequent unwelcome occurrences are chronic fatigue syndrome, changing of family roles and economic pressure on family. The best results are achieved by combination of support by family members but also by the others who do not belong to family system. Not less important are also emotional, informative and practical support so it is of a crucial importance to recognize the kind of social support that is suitable for the current status of a patient and his/her family.

Key words: Medical Oncology; Social Support; Family; Quality of Life; Adaptation, Psychological

PP 19

UDC: 611.71:612.83-006:615-085:615.849.1:006.31.8

Extracranial metastases from medulloblastoma in children

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Extracranial metastases by hematogenous spread from primary intracranial neoplasms occur rarely. The most common site of metastases is bones (more than 80%) and the other common sites are bone marrow, lymph nodes, liver, and lung. From 1990 to 2008, 122 patients with intracranial medulloblastoma were treated in the Institute for Oncology and Radiology of Serbia. We reported three cases (10- and 14-years old boys, and 16-years old girl) of extracranial metastases from medulloblastoma. In primary treatment after adequate staging (CHANG staging system – T3 M1, T3 M0 and T3 M0), all patients were treated with standard therapy strategy. After surgery (subtotal/total extirpation) and craniospinal irradiation (55 Gy to the area of the primary tumor, 35 Gy whole brain and spine), they received six cycles of chemotherapy (CCNU, vincristine). In the first patient, after follow up period of 7 months, bone (calvarium, vertebra, ribs, humerus, femur) and bone marrow metastases were developed. The second patient, after 36 months of follow-up period, developed bone metastases (distal femurs). Third patient after 24 months of follow-up period developed bone metastases (left humerus, left scapula, left and right femur, costae IV). Histopathological diagnosis was confirmed by biopsy. In all patients, levels of alkaline phosphatase and lactate dehydrogenase were elevated. In secondary treatment first two patients received ten cycles of chemotherapy (CDDP: 20 mg/m^2 days 1-5; VP16: 60 mg/m^2 days 1-5) while the second patient had local radiotherapy of bone metastases with 36 Gy. After initial partial response with loss of pain, both patients died within one-year time due to dissemination of disease. In the third patient, 16 years old girl, secondary treatment included five cycles of secondary chemotherapy (carboplatin, etoposide, vincristine) and palliative irradiation of left shoulder and proximal part of the left humerus and right and left hip and proximal part of both femurs with TD 36 Gy. Because of the progression of disease (tibia and fibula bilateral, metastases in both breasts, in supraclavicular and left axilla lymph nodes), tertiary treatment included four cycles of chemotherapy (doxorubicin, CDDP, actinomycin D, vincristine) and palliative radiotherapy (left knee, left axilla, and supraclavicular region left, costae IV). Aggressive multimodal therapy with controlled pain slowed down the natural course of disease, so she lived another 18 months after relapse of disease. A greater understanding of the pathogenesis of the systemic metastases may be valuable in designing of future, more aggressive multimodal therapy.

Key words: Medulloblastoma; Child; Neoplasm Metastasis; Bone and Bones; Combined Modality Therapy; Radiotherapy; Antineoplastic Combined Chemotherapy Protocols

PP 20

UDC: 616.33-006:615.849.1:615.015.2

Postoperative radiochemotherapy in gastric cancer

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Based on results of the INT0116 study, adjuvant radiochemotherapy has become the standard treatment after complete resection of gastric adenocarcinoma. In this study, we evaluated the results of postoperative radiochemotherapy of patients with resected, high-risk, gastric cancer. Since January of 2006, 22 patients with resected gastric cancer were treated with adjuvant radiochemotherapy at our Institute. Sex distribution was as follows: 15 male and 7 females; mean age was 54 years (range: 40-65 yrs). Types of surgically treatment were: total gastrectomy (18 pts), subtotal gastrectomy (4 patients.); with: Ro resection (12 patients), R1 (5 patients) and Rx (4 patients). Adenocarcinoma of the stomach was histopathologically proven in 22 patients (grade I: 1, grade II: 4, grade III: 8, grade IV: 3, and unspecified grade: 6 patients). According to UICC staging system, 3 patients were in pathological stage II, 6 patients in IIIA, 3patients in IIIB, and 10 patients in IVA stage. The adjuvant treatment consisted of adjuvant chemotherapy with 5FULV followed by radiotherapy with concomitant 5FULV, and then two more courses of adjuvant chemotherapy with 5FULV. Radiation dose of 45 Gy was delivered in 25 fractions at 1.8 Gy per fraction, five days per week over five weeks to the tumor bed, anastomoses and stumps, and regional lymphatics. Radiation was delivered using Linear accelerator with 6-18MV photons. In majority of cases, we used conventional technique: parallel-opposed AP-PA, 3 or 4 field arrangements. We started to use a conformal technique of radiation delivery, on October 2008. Toxicity, during radiochemotherapy course was as follows: dermatitis grade 1 in 1 patient, leucopenia grade 2 in 2 patients, neutropenia grade 2 in 2 patients, anemia in 1 pt, grade 2 in 2 patients, grade 3 in 1 pt, nausea grade 1 in 3 patients, grade 2 in 4 patients, vomiting grade 2 in 2 patients and diarrhea grade 2 in 3 patients. After the end of radiochemotherapy, complete clinical response was achieved in 17 patients, and progression of disease had 4 patients (peritoneal metastases 1 pt, liver metastases 1 pt, lenticular metastases 1 pt, and local progression 1 pt). After the end of radiotherapy, patients were followed up from 1 to 44 months (median 9 months). During follow up, progression of disease occurred in another 6 patients with mean period to progression of 5.2 months (range: 1-12 m): local relapse in 1 pt, liver metastases in 1 pt, lung metastases in 1 pt, bone metastases in 1pt, ovarian metastatic cancer in 1pt, regional lymph nodes metastases in 1 pt. Mean overall survival time was 12 months (1-44 months). Postoperative radiochemoherapy should be considered for all patients at high risk for recurrence of gastric cancer who have been done curative resection.

Key words: Stomach Neoplasms; Gastrectomy; Postoperative Period; Radiotherapy, Adjuvant; Chemotherapy, Adjuvant

PP 21

UDC: 616.351-006:615.849.1:615.015.2

The role of preoperative radiotherapy in the treatment of locally advanced rectal cancer: A case report

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Preoperative radiochemotherapy is accepted as standard treatment option for locally advanced rectal cancer. The purpose of this report was to show our experiences with preoperative radiotherapy for locally advanced rectal cancer at our Institute. In presented case, the initial treatment was radiotherapy followed by surgery and chemotherapy. A 47-year old female patient started oncology treatment in May 2008, after biopsy of suspected tumor mass in rectal region. Histopathological finding was adenocarcinoma well differentiated HG1 NG2. CT scan of abdomen and lower pelvis showed oval, intraluminal, inhomogenous mass (4 cm) with infiltration of posterior vaginal wall. Physicians' consulting decision was to start with preoperative radiotherapy (RT) as initial treatment, beginning in June 2008. It was conducted on LINAC 6-Mev, with tumor dose 50 Gy in 22 fractions using isocentric technique. The end of RT treatment was in July 2008. The operation was performed in September 2008 (abdominoperineal resection Miles and hysterectomy with bilateral adnexetomy). Postoperative histopathological finding was infiltrating adenocarcinoma of the rectum HG2 NG2 with rectovaginal fistula. The status of lymph nodes was unknown. Further treatment option was systematic chemotherapy, and cycle I capecitabine (Xeloda) started in November 2008. After completion of eight chemotherapy cycles, the patient was in stable condition without any sign of illness progression. The physicians' consulting decision was to finish specific oncology treatment. Further, follow up in regular intervals. On the first control exam, three months later multi-sliced CT of abdomen and lower pelvis showed no focal lesion in liver, no enlarged nodes in retroperitoneum, insignificant small lymph nodes in inguinal. Bone scintigraphy shows no pathological findings. Values of tumor markers were normalized. Radiologic examination of lungs showed no secondary deposits. Patient was in stable overall condition. This case confirms that preoperative radiotherapy with or without chemotherapy appears to be well-tolerated and effective initial treatment of locally advanced rectal cancer.

Key words: Rectal Neoplasms; Radiotherapy; Preoperative Care; Radiotherapy, Adjuvant

PP 22

UDC: 618.19-006:616.71-006:615-085

Breast cancer: Is a skeleton scintigraphy a method of choice in evaluation of bone metastatic spread?

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Breast cancer is the most common malignancy in women, accounting for 32% of all cancers. The most common sites of distant breast metastasis are the lungs, liver, and bone. Assessment of disease extent in skeleton is bone scintigraphy (BS), which should be performed as a screening of the entire skeleton, and radiography or CT (Computed Tomography) should additionally examine suspicious lesions. BS remains a method of choice in the evaluation of the entire skeletal system, providing, among other data, the insight into the metabolic activity in the bones. BS is rather sensitive (over 90%), revealing the presence of bone metastases even 6-12 months before they could be seen on a conventional bone radiogram. The investigation was aimed at evaluating the diagnostic value of the skeleton scintigraphy in defining the breast cancer spread. The primary examined group included 103 patients with a verified breast cancer, differing in histological types, who received no therapy prior to bone scintigraphy. The statistic analysis of the obtained data was performed by the t-test, non-parametric analysis with subsequent testing of the difference significance and multi-parametric correlation analysis. The diagnostic efficiency of the test was evaluated by the methods induced from the Bays' theorem. Bone metastases were registered in 40 patients of examined group. Pathologic finding includes solitary focal lesions and multiple lesions. Solitary bone metastases were registered in 13 patients, while multiple bone lesions were found in 27 of the patients. Solitary bone metastases were found in the thoracic and lumbar spine, shoulder bones, the sacroiliac joint, long bones, and skull, while multiple metastases were most frequently localized in the endpoints of the femur, thoracic vertebrae, ribs, pelvis, and in the skull and scapula. By the addition of all metastases, the ribs are most often affected (22.92%), then femur (20.83%) and vertebrae (19.44%). Long bone metastases were registered at 35 sites – in end points 85.71% and in the marrow 14.28%. Considering the particular bones, metastases appeared in the endpoints of femur 7 times, diaphysis 1 time, as well as in the end-points of the tibia. Regarding the humerus, its end-points were involved once and diaphysis twice. Analyzing the entire examined group, bone metastases are registered in 39.6% of the patients; of them, 9.17% have metastases at the same other localizations. Other patients (30.43%) constituted the group with a limited disease until BS was performed, which, giving positive findings, completely changed the selected therapy procedure. This seems to be a crucial data, pointing to the relevance of BS performed at the moment of establishing the diagnosis. Based on the Bays' theorem and the obtained data, a high sensitivity of the method has been calculated, accompanied with a slightly lower specificity, which speak in favor of BS as a method of choice for assessment of the skeleton system involvement by malignancy. Bone scintigraphy is a highly sensitive, specific, and accurate method and takes important place in assessment of disease extent, changing completely the therapeutic approach in asymptomatic patients.

Key words: Breast Neoplasms; Neoplasm Metastasis; Bone and Bones; Radionuclide Imaging; Sensitivity and Specificity

PP 23

UDC: 616.348-006:616.351-006:616-036.22(497.115 Kosovo and Metohija)

Pathomorphological and epidemiological characteristics of colorectal carcinomas in the population of Serbian municipalities of Kosovo and Metohija

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Colorectal carcinoma is known to be one of the most frequent tumors in the European and North American population. The overall incidence of the disease may vary between 30 and 55 cases per 100000 people. Our country is placed into the group of those involving a high risk, having an average incidence of over 30 cases per 100 000 inhabitants. Colorectal carcinoma occurs at a similar frequency in both genders, with an average patient age of 60 years. The aim was to analyze epidemiological, clinical, and morphological characteristics of colorectal carcinoma, along with both histological and clinical staging of the disease. The retrospective analysis was performed on biopsy samples acquired at the Institute between 2004 and 2008. During the stated period, 31 cases of colorectal carcinoma have been diagnosed. The gender structure was as follows - there have been 15 cases detected in male patients (48.39%), and 16 cases in the female group (51.61%). The average age of the patients was found to be 64.29 years (minimum age - 26 years, maximum age - 79 years). The carcinoma was most frequently located in the rectosigmoid junction (64.52%). In the vast majority of cases (96.77%), the infiltrative-stenosing form was macroscopically recognized. The average size of the tumor was 6.37cm (minimum size - 2cm, maximum size - 14cm). Rectal bleeding and meteorism were stated as the main symptoms in 41.94% of cases diagnosed, and those lasted for an average of 6 months. The detected colorectal carcinomas are histologically classified as adenocarcinomas, and most of them are grade II carcinomas. In 41.94% of cases, an invasion of lymph and blood vessels was involved, as well as a perineural invasion. The disease's stages were determined according to the Astler-Coller method. Stage B (51.61%) and stage C (32.26%) were the ones with the highest frequency rate. While stage B carcinomas were more frequently diagnosed in female patients, stage C was usually associated with male gender. Colorectal carcinoma is nearly equally distributed between both genders, occurring at an average age of 64.29 years, and is typically located at the rectosigmoid junction, usually being detected in stage B.

Key words: Colorectal Neoplasms; Epidemiology; Serbia

PP 24

UDC: 616.33-006:616-076:616.98:615-085

Gastric MALT lymphoma: A case report

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We present a case of successful treatment MALT lymphoma in 22-year old man. The patient was admitted to hospital with a pain in epigastrium accompanied with heartburn. For clinical diagnosis of the patient, gastroscopy was performed, which showed malignant alteration. With histopathological analysis of changed mucosa, low-grade gastric MALT lymphoma with presence of *Helicobacter pylor*i was diagnosed. CT of thorax, abdomen, and pelvis did not show pathological enlargement of lymph nodes. Ultrasonography of the neck, axillae, and inguina did not show pathological enlargement lymph nodes. Biochemical analyses of serum were within reference ranges. Biopsy of hipbone did not show pathological infiltration of bone marrow with lymphoma cells. The phase of disease has been determined as IE. We have treated the patient with eradication therapy for *Helicobacter pylori*: clarithromycin, amoxicillin, and proton pump inhibitor. After three months of eradication therapy, a complete remission was achieved.

Key words: Stomach Neoplasms; Lymphoma, B-cell, Marginal Zone; Helicobacter Pylori; Drug Therapy