

Palliation of malignant pleural effusion

Aleš Rozman

Malignant pleural effusion is a frequent finding in a malignant disease. In patients, it commonly causes dyspnoea, cough and chest pain. The objectives of palliative treatment are: alleviation of symptoms, improvement in the patient's performance and quality of life, and reduction in the number of hospitalisations. The most effective method of palliative treatment is talc pleurodesis, which is,

however, not possible due to non-expansion of the lungs and poor performance status of the patient. In such cases, we use a permanent pleural catheter and pleural punctions, especially when the expected survival of the patient is short. It is important that palliation of malignant pleural effusion is planned early in the treatment course to increase the chances of a successful pleurodesis.

Clinical registry of lung cancer patients

Tanja Čufer, Mitja Košnik

In the last decades, considerable progress was made in the field of cancer management. This progress is based on extensive research work in the field of new methods of diagnostics and treatment and on careful monitoring of epidemiological data on cancer through population-based registries. Cancer Registry of Slovenia is one of the first population-based registries offering data on the incidence, prevalence and mortality rate of individual types of cancer in Slovenia. The occurrence of new diagnostic and therapeutic methods, and mainly the expansion of molecular diagnostics, have given rise to the need for additional careful management of data within the framework of individual clinic cancer registries. These registries enable new findings

on the efficiency and safety of individual diagnostic and therapeutic approaches in patients managed within the scope of everyday clinical practice. Moreover, the doctors and hospital managements have thus access to invaluable data on the efficiency and quality of their work. For that reason, the University Clinic Golnik in 2010 started working on the clinical registry of lung cancer patients, where we collect data on the patients diagnosed and treated for lung cancer at the University Clinic Golnik. A few months ago, we presented our first semi-annual report on this registry for 2010. In cooperation with other institutions, we want to supply the registry with all data on lung cancer patients, regardless of where they were diagnosed and treated.

Teleradiotherapy of bone metastases

Vaneja Velenik

The bone is the third most common site of metastasis of solid tumours. As a result of metastases, complications on the skeleton reduce the quality of life of patients, their mobility and increase the cost of treatment. Radiation therapy remains the most important palliative method for

the treatment of painful bone metastases. The selection of both the modality and the irradiation regime is individualised, depending on the patient's clinical status, life expectancy and quality of life. This paper gives a review of palliative treatment of bone metastases using teleradiotherapy.

Obstacles and challenges of clinical research in oncology

Tanja Čufer, Boštjan Šeruga

Cancer burden is increasing in the world and also in our country. Research work in oncology is of prime importance for successful cancer control. Despite all the advances in research, further efforts

will be required in the future to ensure successful cancer control. The key here is knowing the obstacles of research in oncology and how to overcome them.

Epidemiology of colorectal cancer

Maja Primic Žakelj, Vesna Zadnik, Tina Žagar

In the recent years, colon and rectum have become the most common sites (apart from skin) where the population of the developed world, and also in Slovenia, develops one of the cancer diseases. In 2008, it was estimated that 1,235,108 people were diagnosed with colorectal cancer around the world (9.8% of all new cancer cases), and 609,051 died of the disease. It was estimated that in Europe in 2008, 229,229 men and 203,185 women were diagnosed with colorectal cancer, and 110,059 men and 102,160 died of it. In both genders, colorectal cancer represents one of the most common cancer diseases; in men, it was in third place with 12.8% (after prostate and lung cancers), and in women, it was in second place with 13.1%, right after breast cancer.

According to the data of the Cancer Registry of the Republic of Slovenia, 1,453 people were diagnosed with colorectal cancer in 2008, of which 827 were men (83.0/100,000) and 626 were

women (61.0/100,000), and 758 patients died from that disease, which is 13% of all cancer deaths. Most cancers were found in the colon (57%), 9% were located in the rectosigmoid area, and 44% were developed in the rectum. The incidence has been increasing since the middle of the 1950s, and even more rapidly in the last 20 years. The five-year relative survival is improving gradually due to a higher percentage of treated patients, improved surgical techniques and systemic treatment, but in too many cases, the disease is still diagnosed at an advanced stage.

A healthy lifestyle, maintenance of a normal weight, non-smoking, healthy nutrition and physical activities are the most important factors in the prevention of colorectal cancer. In addition, organised population-based screening under the Screening for Colorectal Cancer (SVIT) will contribute the most to the detection of the disease at an early stage and eradication of pre-cancerous lesions.

Screening for colorectal cancer - SVIT Programme

Dominika Novak Mlakar, Matej Bračko, Jožica Maučec Zakotnik, Marjeta Keršič Svetel, Tanja Metličar

According to the data of the Cancer Registry, the incidence of colorectal cancer in Slovenia has been increasing since 1961. Most cases of this disease are diagnosed when already at an advanced stage. In the period 2005-2009, colon cancer was detected in a locally-limited form only in 12.3% and rectal cancer only in 14.9%. The consequences are a high mortality rate, poor quality of life of patients, and high treatment costs. In line with the recommendations

of the European Council and the European Guidelines for Quality Assurance in Colorectal Cancer Screening, Slovenia in 2009 established the National Programme for Screening and Early Detection of Pre-cancerous Lesions and Colorectal Cancer - the SVIT Programme. The positive effects of the Programme were seen already after the first round of screening.

Hereditary colorectal cancer

M. Krajc, S. Novaković

In five to ten percent of patients with colorectal cancer there is a family anamnesis where patients indicate a number of relatives of different generations on one side of the family (mother or father) who were also diagnosed with colorectal cancer and/or related cancers. Such patients are often of a young age and are diagnosed with the disease 10 to 20 years earlier than it is common in the population. These types of cancer are called »hereditary colorectal cancers«. Some patients with hereditary colorectal cancer may be diagnosed with more than one cancer (2).

The occurrence of hereditary colorectal cancer is connected to the inheritance of a specific mutation - defect in the hereditary material, therefore a person who inherits this mutation is at a greater risk of developing this disease. Thus, there is a greater probability that a hereditary colorectal cancer will occur in someone who has inherited this genetic change compared with the general population, although it is not certain that the cancer will develop. Inheritance of gene mutations associated with the occurrence of colorectal cancer is very complex and is a feature of several syndromes. We present two most common ones.

Colorectal cancer imaging

Maja Marolt Mušič, Mihael Čavlek, Kristijana Hertl

According to the adopted Guidelines for the Management of Patients with Colorectal Cancer, US of the abdomen and x-ray of chest organs are sufficient in investigating patients with newly detected colorectal carcinoma.

If suspecting remote metastases, it is necessary to perform computed tomography (CT) of the chest and abdomen. Prior to the examination, the patient must take 1,000 ml of dilute contrast agent, after i.v. application of an ionic contrast agent. Imaging of the chest and, after

25 to 30 sec, the upper abdomen is performed, followed by imaging of the abdomen in the portal phase of liver opacification (70 sec after contrast agent application). Usually, we perform 5-mm reconstructions are performed in the transverse, coronal and sagittal planes, and also 10-mm MIP reconstructions.

Using CT, we are able to assess the size and position of the tumour, extension of the tumour into the adjacent structures, presence of pathologically altered lymph nodes and remote metastases.

The role of irradiation in the treatment of rectal cancer

Vaneja Velenik

Treatment of a locally-advanced rectal cancer is distinctively multidisciplinary and comprises both local (surgery and irradiation) and systemic treatment (chemotherapy). Compared to operative treatment alone, post-operative radio-chemotherapy statistically significantly improves local control and survival of patients. A German randomised study confirmed the advantage of pre-operative radio-chemotherapy compared to post-operative treatment in terms of minor acute and late toxicity, better local control and greater proportion of patients with preserved intestinal continuity. However, there are still many

unresolved questions, such as the role of short-course pre-operative radiotherapy, the role of post-operative chemotherapy after neoadjuvant treatment, whether the type of surgery can be adjusted to the tumour's response to pre-operative treatment, and whether a more aggressive systemic treatment would improve the outcome of the disease so that we might be able to avoid radiotherapy.

The paper describes the role of radiotherapy in the combined treatment of rectal cancer.

Adjuvant treatment of colon cancer

Janja Ocvirk

The incidence of colon cancer is still increasing. If detected at an early stage, it is already curable by surgery alone. In patients with stage I disease and in the majority of patients with stage II disease, surgery is sufficient, and no additional treatment is required. However, stage III patients require additional treatment with adjuvant

chemotherapy, as the latter reduces the number of disease recurrences, thus prolonging the overall survival and leading to a larger number of cured patients. Considering the results of the recent studies, stage II patients are also recommended to undergo adjuvant chemotherapy, depending on the presence of risk factors.

Follow-up of colorectal cancer patients after radical treatment

Irena Oblak

After completed treatment, either surgical or combined treatment of colorectal carcinoma, it is necessary to follow up patients regularly and in accordance with the recommended protocol. The purpose of such follow-up is to detect the disease or its recurrence as early as possible, including pre-cancerous lesions or potential metachronous (newly developed) tumours which can be treated successfully at an early stage. Follow-up is important also for the treatment of late complications, it enables psychological support to the patients, and finally, we can also track and assess our own performance. It is known that colorectal cancer recurs in 30 do 50% of patients. As

many as 70% of recurrences are detected within the first two years, 80% in the first three years, and 90% or more disease recurrences are found within five years after surgery of the primary tumour. It has been shown that regular follow-up of patients after their treatment improves the outcome of their disease and reduces mortality in patients by 9% to 13%.

We must adapt it to each patient separately, taking into account both his age and general condition, stage of the disease, concurrent diseases, and further treatment possibilities in the event of a recurrence.

Progress in the treatment of patients with metastatic colorectal cancer from the perspective of an medical oncologist

Janja Ocvirk

Metastatic colorectal cancer is in the majority of cases still an incurable disease, but the prognosis and the survival of these patients have improved considerably in the last decade. From the median survival of 10 months achieved with 5-fluorouracil, which had been, until few years ago, the only effective drug for the treatment of these patients, we have obtained survival times of more than 20 months as a result of treatment with new cytostatic drugs. In the last ten years, six new drugs were registered for the treatment of metastatic colorectal cancer: cytostatics – capecitabine, irinotecan, oxaliplatin, and target drugs – cetuximab, bevacizumab and panitumumab. Combined

treatment assures a better quality of life and longer remissions, and also increased overall survival. Combining cytostatics with target drugs further improves the median survival of these patients, and patients undergoing treatment have a median survival of more than 30 months. Such treatment in combination with surgery of lung or liver metastases also enables remissions. Identification of mutations in the KRAS gene is of utmost importance. For colorectal cancer, the KRAS gene is the first biomarker that predicts the response of patients to treatment with EGFR inhibitors.

Results of surgical treatment of resectable liver metastases in colorectal cancer at the University Clinical Centre Maribor

S. Potrč, M. Horvat, T. Jagrič, J. Ocvirk, V. Velenik, B. Krebs, A. Ivanecz

Background: Only surgical treatment in patients with liver metastases (LM) in colorectal cancer (CC), which is nowadays often combined with other forms of treatment, offers the possibility of long-term survival or even hope of a cure. The aim of this study is to present the possibilities of multimodal treatment and to assess the results of such treatment of LM in CC in our patients.

Methods: In the period from 1 July 1997 to 31 December 2011, a total of 377 liver surgeries were performed in 281 patients with metastases of CC (107 men, 103 women; mean age 63.3 years; span of 27 to 85 years).

Results: Of 377 surgeries for LM of CC, liver resection was performed 324 times, and in 28 of those patients in combination with RFA. 235 (79.4%) were R0 resections, 54 (18.2%) were R1 and 7 (2.4%) were R2 resections. A total of 53 procedures were RFA of LM. In 113 patients, LM were diagnosed synchronously with CC, and 168 men had metachronous LM. Unilobar metastases were found in 145 patients, and 136 had bilobar metastases. On average, there were 2.9 liver metastases with an average size of 4.3 cm. In 46 patients, the disease was present also outside the liver. Prior to liver surgery, 131 patients underwent neoadjuvant chemotherapy. In 16 cases, portal embolisation was performed to increase the residual liver volume, and ligation of the right branch of the vena porta

was performed 10 times. Simultaneous liver resection was performed in 41 patients. At the first surgery, liver resection was performed in 252 patients. Liver resection alone was performed in 239 patients, whereas in 23 patients, it was combined with radiofrequency ablation of LM (RFA). Of 239 LM resections without additional RFA, 198 (83%) were R0 resections, 36 (15%) were R1 and 5 (2%) were R2 resections. In 29 patients, only RFA of LM was performed (open RFA 20 times, percutaneous RFA 9 times). Surgery for disease recurrences was performed on 73 patients, who underwent 96 procedures (1 to 6 per patient). Considering all surgeries (377), the total post-operative incidence was 25.5%, and 30-day morbidity was 1.9%. The expected 5-year survival in patients with R0 resection of LM and no disease outside the liver was 38.3% (median survival: 43 months).

Conclusions: Liver resections are safe (morbidity: 25.5%; 30-day morbidity: 1.9% in R0 resections). Considering the expected long-term survival (5-year of 38.8%, median of 43 months), they currently represent the most effective method for the treatment patients with metastases of CC. The focus is on the importance of a multidisciplinary approach and multimodal treatment of patients with metastases of CC.

Biopsy of resectable liver metastases of colorectal cancer – an unnecessary and dangerous method

Arpad Ivanecz, Marko Sremec, Aleksandra Šauperl, Jasmina Golc, Jasna Zakelšek, Stojan Potrč

If in the patient who underwent surgery for colorectal cancer (CC) a newly developed tumour is detected in the liver, it is possible to assume immediately that it is a metastasis. Moreover, it is possible to confirm the diagnosis with 99% probability based on imaging and biochemical screening. Despite this some insist that diagnosis needs

to be confirmed with percutaneous core needle biopsy (PCNB). With a review of the literature and an analysis of our series of patients, we will try to show why this procedure is unnecessary and dangerous in patients with resectable liver metastases of CC.

Palliative care of colorectal cancer patients

Maja Ebert Moltara

Palliative care of patients with advanced colorectal cancer represents a comprehensive care of incurably ill patients. This care includes symptom management as well as psychological, social and spiritual support. The most common symptoms in colorectal cancer patients who were referred to the acute palliative care unit of the Institute of Oncology Ljubljana were pain, severe general weakness, intestinal obstruction and difficulty breathing. Palliative treatment of symptoms may differ as the disease progresses. The main objective of measures

in palliative care is to maintain the best possible quality of life. In early palliative care, more complex treatment approaches (palliative surgeries, palliative irradiation, etc.) may also be used to provide a better quality of life when the disease progresses. In late palliative care (last weeks of life), the main concern is to provide comfort and the best possible well-being for the dying patients and their close relatives.

A patient with primary metastatic rectal carcinoma with metastases in the liver - a case study

Marko Boc, Martina Reberšek, Zvezdana Hlebanja, Nina Boc, Janja Ocvirk

Colorectal cancer (CC) is the most common cancer in Slovenia. According to the Cancer Registry of the Republic of Slovenia, a total of 1,450 people were diagnosed with colorectal cancer in Slovenia in 2008(1). The increasing incidence also means increasing morbidity, as in half of the patients, the disease is diagnosed when already at an advanced stage. Metastatic disease is incurable, but the prognosis and the survival of these patients have improved considerably, as in the last decade, with the use of new drugs, namely a combination of cytostatics (capecitabine, irinotecan, oxaliplatin) and target drugs (cetuximab, bevacizumab, panitumumab)

we have achieved a median survival of more than 30 months(2). When combining systemic and surgical treatment in patients with liver metastases, in particular if these are solitary metastases, the 5-year survival can exceed 50%. In this paper, we present a case of a patient with primary metastatic rectal carcinoma with metastases in the liver. Within the framework of a multidisciplinary approach with a combination of systemic therapy and multiple surgeries of liver metastases, and using also other therapeutic approaches, we have achieved a survival of more than 50 months.

Repeat liver surgeries in the recidive of colorectal cancer metastases - a case study

Arpad Ivanecz, Jasmina Golc, Jasna Zakelšek, Marko Sremec, Stojan Potrč

Half of colorectal cancer patients may develop liver metastases. Multi-disciplinary management is the basis for successful treatment, and liver resection represents the only potentially curative form of therapy. Despite a successful surgery, liver metastases may later recur. In such cases, it is

wise to restart treatment with a combination of chemotherapy and target drugs, and to plan repeat liver resections. After the treatment, some patients can live for years without disease recurrence.

Pre-operative irradiation of the pelvis with a short regimen of 5 x 5 Gy in a patient with rectal carcinoma - a case study

Franc Anderluh

In patients with locally and/or regionally advanced rectal carcinoma, the currently applicable guidelines indicate pre-operative treatment. In this study, we present a clinical case of an older patient with stage T4 N0 rectal carcinoma, who was treated with pre-operative irradiation using a short regimen of 5 x 5 Gy, which was followed

by abdominoperineal excision six weeks later. With pathological complete remission, the patient did not undergo post-operative chemotherapy and showed no signs of disease recurrence at the last follow-up a year and a half after the surgery.

Lung and heart impairment after irradiation and chemotherapy for Hodgkin's disease - a case study

Lorna Zadavec Zaletel, Katarina Osolnik and Berta Jerab

Acute and chronic defects following childhood cancer treatment are rare with modern treatment techniques and usually without any clinical signs and symptoms. In a patient who was treated for childhood Hodgkin's lymphoma with irradiation to the neck, supraclavicular lymph nodes and mediastinum and chemotherapy, the consequences include a probable combination of adverse effects of this treatment on the lungs and heart.

Considering the course and progression of lung impairment, vascular impairment - pulmonary vasculopathy was found to be at the forefront in our patient, which was confirmed by histological examination of the lung-tissue biopsate.

By describing this case, we wish to point to the chronic and progressive course of the disease which requires complex management by specialists and causes severe disability 22 years after treatment.

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