1472 PUBLICATION

Amifostine in combined radio- and chemomodalities for head and neck cancer

J. Buentzel[1], M. Glatzel[2], R. Weinaug[1], J. Schuth[3], K. Kuettner[1], D. Froehlich[2]. [1]*Zentralklinikum Suhl, ORL, Head Neck Oncology, Suhl;* [2]*Zentralklinikum Suhl, Radiooncology, Suhl;* [3]*Essex Pharma, Munich, Germany*

Combined regimen of radio- and chemotherapy are characterized by a new quality of toxicity, which is the result of addition, sometimes synergism of the different treatment modalities. That's why the integration of cytoprotective agents in such regimen may be a new way to improve the acceptance and the therapeutic index of the combined treatments. In the first part of our presentation we describe our clinical experiences with the selective cytoprotectant amifostine in about 160 patients with advanced head and neck cancer who were treated by a simultaneous radiochemotherapy (RCT). The standard of irradiation was 2 Gy single dose, 60 Gy total dose, carboplatin administered on the days of week 1 and 5 prior to the radiation (cumulative dose 700 mg/sqm BSA). In a controlled phase II study we have injected amifostine in a total dose of 500 mg 15 minutes prior to each carboplatin infusion and have seen a significant reduction of mucositis, xerostomia, thrombocytopenia, and leucocytopenia, compared to the control group without amifostine. A placebo-controlled phase-III-trial with a similar design was closed at the end of last year. Its preliminary results will be presentes at this meeting. In further 2 trials we studied the possibilities to intensify the standard RCT due to the usage of amifostine. We had to observe a significant higher grade of mucositis and loss of taste, if the carboplatin was combined with a prolonged infusion of 5-fluorouracil, despite different types of amifostine dosage and regimen. On the other site it was possible to intensify the dose of carboplatin up to 1400 mg/sqm BSA without further increasing toxicities, if amifostine was given prior each carboplatin infusion (week 1, 3, 5, 7). In the second part of the presentation we compare the own experiences with the reports of other study groups. Positive results will be reported if the investigators have integrated the cytoprotectant according its short half life at the essential points of toxicity of each treatment. Two German groups reported about their succesful integration of amifostine in a radiochemotherapy with 5-FU as radiosensitizer for head neck tumours (Wendt, Busch). They have given the agent prior to each irradiation and have observed all effects of amifostine as a radioprotector. On the other site a Argentinian group (Giglio) stopped a pilot study amifostine because of their negative results in an alternating radiochemotherapy. Because total insufficient doses (100 mg amifostine) were used and the time schedule of amifostine administration was not defined, no cytoprotective effects could be seen.

Conclusion: The succesful integration of amifostine in the combined modalities of radio- and chemotherapy is possible but it underlies two conditions: 1. The short half life of amifostine demands a small time-window (<1 hour) between amifostine administration and radio- and/or chemotherapy. 2. The radiosensitizer in a combined therapy defines the possibility of cytoprotection. Amifostine offers the best protection against the toxicities of platinum derivates and taxanes.

1473 PUBLICATION

Rapid response radiotherapy program (RRRP): Survey of referring physicians' satisfaction

R. Connolly, E. Chow, M. Vachon, L. Andersson, C. Danjoux, E. Szumacher, E. Franssen, R. Wong. *Rapid Response Radiotherapy Program, T.S.R.C.C., Canada*

Purpose: The RRRP was established in 1996, at the Toronto-Sunnybrook Regional Cancer Centre, to provide effective timely palliative radiotherapy to terminal cancer patients. This program has been well received by the community. In 1998, a quality assurance survey was completed to evaluate referring physicians' satisfaction.

Methods and Materials: 126 actively practicing referring physicians were sent questionnaires. 64 were completed and returned (51%).

Results: Since establishment of the RRRP, 33% of surveyed physicians reported that they have referred more patients for palliative radiotherapy. The primary reasons for referral was: quick access to services (70%) and satisfaction with services provided (59%). 80% of those surveyed rated the program ≥ 7/10 for promptness of patient consultation, radiotherapy delivery and overall impression. Weaknesses were identified as poor accessibility to services for all palliative patients in general and suboptimal communication with community physicians.

Conclusions: Measures have been implemented to improve communication links with referring physicians (faxing consultations and a quarterly newsletter). Significant health care restructuring will be required to address the issues of program accessibility and patient transportation concerns.

1474 PUBLICATION

Rapid response radiotherapy program – New approach of palliative radiotherapy delivery. It's efficiency in retrospective analysis

E. Szumacher, R. Wong, E. Chow, C. Danjoux, L. Andersson, E. Franssen. *Toronto-Sunnybrook Regional Cancer Centre, Toronto, Ontario M4N 3M5, Canada*

Background: In January 1996, TSRCC initiated a new form of palliative radiotherapy delivery for patients with advanced cancer. The objectives were to provide palliative radiotherapy consultation, simulation and treatment in a single half day clinic within 3 working days from referral.

Objectives of this Review: A quantitative description of the patterns of utilization and quality of care being delivered.

Methods: Retrospective analysis OPIS – an administrative patient care database.

Results: Since January 1996 to June 1998 we identified 374 records corresponding to 362. 194 patients referred into the clinic were seen within 3 working days. In 255 patients radiotherapy was delivered within 3 days of consultation.

Conclusion: RRRP is a feasible model to improve access to radiotherapy for palliative patients.

1475 PUBLICATION

Frequency of complications of venous implantable ports for administration of chemotherapy in cancer patients

J. Van den Brande[1], E. Gerrits[1], D. Ysebaert[2], D. Schrijvers[1], J. Pelgrims[1], P. Wilmes[1], J.B. Vermorken[1]. [1]*Medical Oncology;* [2]*Surgery, University Hospital Antwerp, Edegem, Belgium*

Aim: to retrospectively determine the frequency of complications of venous implantable ports.

During 27 months 122 venous implantable ports for administration of chemotherapy were placed in patients with solid tumours. In adult patients (118 (97%)) Bardport^{R} implantable ports (Bard Access Systems) were mainly placed by denudation of the cephalic vein or by punction of the subclavian vein, mostly under local anesthesia.

Complications of placement were local hematoma (2/122) (2%) and pneumothorax (5/122) (4%), treated by conservative measures or by placement of a pleural drain.

After placement deep venous thrombosis in the ipsilateral arm or subclavian vein occurred in 6/122 (5%) of patients. No pulmonary embolism was noted and no port had to be removed in these patients.

5/122 (4%) catheters were removed: 3 due to suspected catheter infection (confirmed in 2), 1 due to occlusion and 1 due to local irritation.

There were 3 episodes of catheter occlusion in 3 different patients. There were no catheter dislocations, signs of catheter compression, catheter ruptures and embolisations and no patients developed skin necrosis.

Conclusion: venous implantable ports can be used in cancer patients with a low frequency of complications. No port complications specifically related to the use of chemotherapy were observed.

1476 PUBLICATION

Observer error in grading performance status in cancer patients

A. Taylor, I. Olver, T. Sivanthan, M. Chi, C. Purnell. *Department of Medical Oncology, Royal Adelaide Hospital Cancer Centre, Adelaide, Australia*

Purpose: To assess the Karnofsky Performance status (KPS) scale and Eastern Cooperative Oncology Group (ECOG) scale with respect to inter-observer reliability and interobserver difference between the 2 scales.

Methods: One hundred consecutive patients in a medical oncology unit were assessed using both scales given to 3 independent raters and also given to the patients.

Results: There was a high level of agreement between most paired assessors. There were 3 exceptions which were the RMO/patient, nurse/patient pairs on the KPS scale and the RMO/patient pair on the ECOG scale. The level of agreement was better on the ECOG scale.

Conclusion: For individual raters there is no statistical difference between the ECOG or Karnofsky scale. There was good agreement between all raters

for both scales. Interobserver variability was less using the ECOG scale. We conclude either scale could be used with good interobserver reliability. The ECOG scale minimises differences between observers.

1477 PUBLICATION

Survical prediction in terminal cancer patients: Proposal of a model based on analytical variables

J. Feliu[1], J.R. Rodríguez-Aizcorbe[2], E. Espinosa[1], A. Ordóñez[1], E. Casado[1], P. Zamora[1], J. Castro[1], R. Molina[1], J.L. López[1], M. González Barón[1]. [1]*Hospital La Paz, Service of Medical Oncology, Madrid, Spain;* [2]*Residence Virgen de la Luz, Madrid, Spain*

Objectives: The prognosis of terminal cancer patients is usually determined by symptoms and scores in quality of life scales. Analytical data have not been commonly studied. We tried to identify analytical prognostic variables for survival in terminal patients with cancer.

Patients and Method: 316 patients and 22 analytical parameters were studied with regard to survival (blood count, renal and hepatic biochemistry, albumin and total proteins, cholesterol, ions, etc). The actuarial method was used to assess survival and survival comparisons were made with the log-rank test and the Breslow test. Step-wise regression analysis was then performed with the Cox method.

Results: The median survival was 26 days (295 patients have died and 21 remain alive). The univariate analysis found a relation between a short survival and the following parameters: hypoalbuminemia ($p < 0.001$), hypocholesterolemia ($p < 0.05$), lymphopenia ($p < 0.001$), anemia ($p < 0.001$), and increased values of LDH ($p < 0.01$), alkaline phosphatase ($p < 0.01$) and gamma-GT ($p < 0.05$). The regression analysis confirmed the values of albumin, cholesterol, LDH and alkaline phosphatase as independent prognostic factor for survival in these patients.

The combination of albumin and LDH defined 3 groups of patients with different survival: 1) albumin > 3g/dl and LDH < 400U/L, median survival 41 days; 2) albumin < 3g/dl or LDH > 400U/L, 27 days; and 3) albumin < 3 g/dl and LDH > 400 U/L, 15 days ($p < 0.000$).

Conclusion: The values of albumin and LDH may help define the prognosis in terminal patients with cancer.

1478 PUBLICATION

Fatigue and quality of life (QoL) in cancer patients – Relations between haematological parameters and subjective assessment

B. Holzner[1], M. Koop[1], G. Kemmler[1], Ch. DeCol[1], R. Grell[2], A.G. Zelmet[3], M. Raderer[4], M. Hejna[4], S. Zöchbauer[4], G. Krajnik[4], H. Huber[4], B. Sperner-Unterweger[1]. [1]*University Hospital Innsbruck, Dept. of Psychiatry;* [2]*University Hospital Innsbruck, Dept. of Internal Medicine;* [3]*University Hospital Innsbruck, Dept. of Gynaecology;* [4]*Dept. of Internal Medicine (Oncology), University Hospital Vienna, Austria*

Purpose: Objective was to investigate relations between blood data and subjective experience of fatigue and QoL in cancer patients presently undergoing chemotherapy.

Methods: The present survey includes 58 cancer patients (21 colorectal, 23 bronchial, 14 ovarian cancer) with an average age of 59.2 ± 10.6 years. According to their diagnosis all patients received individual chemotherapy. Fatigue was measured with the Multidimensional Fatigue Inventory (MFI), QoL with the EORTC QLQ-C30. These assessments were carried out immediately before each chemotherapy cycle. At the same time blood data (hemoglobin (Hb), leucocytes, thrombocytes etc.) were collected.

Results: Except for the first chemotherapy cycle, correlations between Hb and subscales of MFI were moderately high (Hb with general fatigue: $r = -0.44$ at cycle 2, $r = -0.44$ at cycle 3). Significant correlations were also found between Hb and certain EORTC QLQ-C30 subscales (Hb with global Qol: $r = -0.50$ at cycle 2, $r = -0.42$ at cycle 3).

Conclusion: In spite of the significant correlations found, results indicate that Hb-values yielded rather incomplete information about subjectively experienced fatigue and QoL in cancer patients.

1479 PUBLICATION

Reirradiation with concomitant application of ethyol (amifostine) in recurrent pelvic tumors – First results from a phase II study

O. Micke, U. Schäffer, G. Hampel, E. Horst, N. Willich. *Department of Radiotherapy and Radiation Oncology, University Hospital of Münster, Münster, Germany*

Purpose: Unresectable recurrent carcinomas in preirradiated pelvic areas are a major problem for the radiooncologist because of exceeding the tolerance doses of bowl and bladder. Ethyol (Amifostine) has been shown to have a radioprotective effect on normal tissues. The aim of this prospective study is to evaluate whether the concomitant application of Ethyol (Amifostine) is able to reduce radiation associated side effects of pelvic high dose reirradiation.

Methods: Patients with a history of prior irradiation in the pelvic region at least 6 months before recurrence are included in the study. The study design consists of a pelvic reirradiation of the gross disease with a 2 cm margin to a dose of 39.6 Gy (1.8 Gy single dose). Additionally 500 mg Ethyol (Amifostine) are infused 20 minutes prior to irradiation. Toxicity and life quality are documented.

Results: 7 patients has been included in the study. All patients had a histologically confirmed pelvic recurrence of a gynecologic or rectal carcinoma. Of these patients 5 have completed therapy so far. No interruption of therapy was necessary. The acute radiation associated side effects were mild to moderate. No grade III/IV toxicities (EORTC/RTOG) were observed. Some episodes of nausea and hypotension due to amifostine were noted. All patients achieved a good palliative effect.

Conclusion: Our preliminary results indicate that high dose reirradiation of pelvic recurrences is feasible with a low rate of side effects and a good palliative effect.

1480 PUBLICATION

Interest of bipulmonary irradiation combined with concomittant chemotherapy in treatment of pulmonary metastases

A. D'Hombres[1], V. Grangeon[1], S. Negrier[2], C. Carrie[1]. [1]*Department of Radiotherapy;* [2]*Department of Medical Oncology, Centre Léon Bérard, Lyon, France*

Aim of the study was to evaluate the palliative effect of bipulmonary irradiation combined with CDDP (100 mg/m^2 Day 1) on dyspnea and performance status in patient with symptomatic bilateral pulmonary metastases.

Patients and Methods: From 05/92 to 03/98, 19 patients (sex ratio 3) with symptomatic and rapidly growing pulmonary metastases disease (Kidney: 7 cases, parotid gland: 4 cases, sarcoma: 3 cases, adenocarcinoma: 4 cases, hepatocarcinoma: 1 case) were treated in palliative intent with bipulmanory irradiation (6 Gy/2 fractions/2 days) and concomittant CDDP.

The same schedule was repeated every 4 weeks in case of clinical response up to a maximum of three cycles.

Results: The response was evalated on the WHO performance status stade, WHO dyspnea score, and metastases measurement.

13 patients (70%) have had a significant improvment of dyspnea after 2 cycles. The performance status was improved in half of patients. No toxic death occurred.

Conclusion: Finally this regimen seems to be well tolerated, cost effectiveness and provide signifiant improvment of quality of life in advanced patients.

1481 PUBLICATION

Analysis of the effect of chemotherapy (CT) on erythropoietin (EPO) synthesis in cancer patients (PTS)

F.J. Carabantes, M.D. Matas[1], F. Rius, S. García, M.L. Hebrero, M. Benavides, R. Trujillo, M. Cobo, J.J. Bretón, C. Juárez. *Medical Oncology Section;* [1]*Department of Biochemistry, Carlos Haya Hospital, Malaga, Spain*

From June 95 to May 97 serum EPO levels were measured during CT treatment in 32 cancer pts. CT schedules used were: CDDP + VP-16 for small cell lung cancer (SCLC, n = 6), BEP for germ cell tumours (GCT, n = 6), CMF for breast cancer (BC, n = 10), 5-FU + LV for colorectal cancer (CRC, n = 10). Three serum EPO measurements were made (EPO-ELISA) coinciding with the 1st, 3rd, and final cycle given. The pts receiving CDDP (SCLC + G-CT) required transfusions due to G3–4 (WHO) anaemia and