control-group a decrease from 118 ml/min (66–174) to 88 ml/min (60–157) was observed ($p < 0.05$). The incidence of low Mg serum levels during treatment was 10% with AMI vs. 63% in control pts ($p < 0.05$). Mg levels recovered almost completely in both group at the end of cycles (94% vs. 83% of starting levels).

Conclusion: The use of early urinary markers allows to detect tubular kidney alterations even after the first application of P/IFO. AMI was identified to have protective effects against P/IFO associated nephrotoxicity indicating by significantly reduced urinary excretion of LMW/NAG, constant levels of Cc after 2 therapy cycles and a lower incidence of hypomagnesemia.

57 ORAL

Effectiveness of antiemetic drugs in prevention of chemotherapy (CT)-induced acute emesis

V. De Angelis, G. Ciccarese, P. Alessandroni, M.T. Cattaneo, B. Agostara, M. Atzeni, S. Dionisi, F. Di Costanzo, G. Troccoli. *A. Del Favero for The Italian Group for Antiemetic Research, Policlinico Honteluce, Medical Oncology Division, Via Brunahonti, 06122 Perugia, Italy*

Purpose: Efficacy obtained by treatment in clinical trials can be different from that achieved in daily practice. No data on this problem, at least for antiemetic treatment of CT-induced emesis, are available. A prospective drug utilization study at 33 Italian oncological centers.

Methods: In June 1996, for two consecutive weeks, all adult patients (pts) starting any CT, were blindly monitored for antiemetic prescription. Excluded from the study were pts with acute leukemia and pts receiving high dose CT or radiotherapy. Response to antiemetic therapy was evaluated by interviewing pts by phone 24 hrs after.

Results: 1220 patients (pts) receiving one-day CT were evaluable. Complete protection from vomiting/nausea was obtained in 75.7%/61.4% of 140 pts receiving cisplatin (CDDP)-based CT, in 81.8%/52.6% of 742 pts receiving moderately emetogenic CT (MEC) (carboplatin, epirubicin, doxorubicin, cyclophosphamide and mitoxantrone) and in 91.7%/71.6% of 338 pts receiving low emetogenic CT (i.e., gemcitabine, vincristine, vinblastine, vinorelbine, etc.). Complete protection from vomiting/nausea in pts receiving CDDP was 79.4%/68.2% if they received the standard combination of corticosteroids plus a 5-HT_3 receptor antagonist and 63.6%/39.4% if not, while in pts receiving MEC it was 84.7%/79.7% and 56.4%/49.8%, respectively.

Conclusion: The rate of protection from emesis achieved in these patients is not different from that obtained in those enrolled in clinical trials despite the fact that a great variety of doses and schedules of the various antiemetics (in particular corticosteroids) was observed.

58 ORAL

Lung cancer after therapy of Hodgkin disease: Influence of treatment and smoking

D. Tate, S. Wolden, S. Hancock. *Department of Radiation Oncology, Stanford University School of Medicine, USA*

Purpose: To retrospectively evaluate the risk of lung cancer after therapy of Hodgkin's disease in a single institution.

Methods: Medical records of 2,391 patients receiving therapy for Hodgkin's disease from 1961 to 1993 (mean follow-up, 10.6 years) were analyzed. Risks for lung cancer incidence were calculated by comparison with expected rates for the general population matched by age and race.

Results: From 1961 to 1993, 41 patients developed lung cancer, yielding a relative risk of 8.96 (95% confidence interval [CI] = 6.2–11 7). Relative risk was 7.2 (95% CI = 4.3–9.0) after radiotherapy alone, 10.7 (95% CI = 5.9–16) following chemoradiotherapy, and 11.0 (95% CI = 4–24.5) after salvage chemotherapy following radiotherapy. No one treated with chemotherapy alone developed lung cancer. Forty of 41 lung cancers (97.6%) arose in the irradiated field. Thirty-eight of the 41 patients (92.7%) had a history of smoking.

Conclusions: Lung cancers arose predominantly in the irradiated field and were strongly associated with smoking. Limiting the lung volume irradiated and avoiding smoking may reduce the subsequent risk of lung cancer.

59 POSTER

Protection of salivary glands by amifostine in patients treated with high dose radioiodine

K.H. Bohuslavizki, W. Brenner, S. Lassmann, K. Kaiser, S. Tinnemeyer, J. Mester, M. Clausen, E. Henze. *Clinics of Nuclear Medicine, University of Kiel and Hamburg, Germany*

Purpose: Salivary gland impairment following high dose radioiodine treatment (HD-RIT) is a well recognized side effect. Since differentiated thyroid cancer (DTC) has a very good prognosis reduction of long-term side effect becomes more important. Therefore, the radioprotective effect of amifostine (Ethyol®) was investigated in patients receiving high dose radioiodine therapy.

Methods: Quantitative salivary gland scintigraphy was performed in 17 patients with DTC prior to and 3 months after radioiodine therapy with 6 GBq I-131. Eight patients were treated with 500 mg per sqm b.s. prior to radioiodine, and 9 patients served as control.

Results: In 9 controls HD-RIT significantly ($p < 0.01$) reduced pertechnetate uptake by 37% and 31% in parotid and submandibular glands, respectively. Three out of these 9 patients exhibited xerostomia grade I. In contrast, in 8 patients treated with amifostine there was no significant ($p = 0.878$) decrease in parenchymal function following HD-RIT, and xerostomia did not occur in any of them.

Conclusion: Parenchymal damage in salivary glands induced by HD-RIT can be reduced significantly by amifostine. This may help to increase quality of life of these patients.

60 POSTER

Effect of 5-fluorouracil (5-FU) infusion in myocardial perfusion scans

T. Bishiniotis, D. Mouratidou, G. Pentheroudakis, C. Andreadis, G. Katseas, A. Litos, D. Hatseras. *Theagenion Anticancer Hospital, Thessaloniki, Macedonia, Greece*

Purpose: The cardiotoxicity of 5-FU is frequent (12.5%) and manifests usually by acute coronary events. The aim of this study was to assess the effect of the drug in the coronary blood flow.

Methods: During a 40 months period, 45 patients (M/F: 39/6, mean age: 59 years) with advanced head and neck cancer and normal cardiac function were included prospectively in a chemotherapeutic protocol with continuous IV infusion of 5-FU 1000 mg/m^2/day for 5 consecutive days. The evaluation of the myocardial perfusion was based on dipyridamole thallium-201 cardiac imaging and included 2 scans for every patient: (1) a dipyridamole thallium-201 heart scan before the initiation of chemotherapy, and (2) after one month, using the same imaging protocol and the same doses of dipyridamole and thallium-201, a heart scan while the patient was under the continuous IV infusion of 5-FU (3rd–4th day). The comparison of the 2 scans and the quantification of the results were based on the computer programme of the University of Alabama.

Results: There was a statistically significant decrease in the myocardial thallium-201 uptake during the IV 5-FU infusion ($p < 0.001$). This decrease was equivalent to 24.5% and was equal in all myocardial segments.

Conclusion: The infusion of high doses of 5-FU results in a great reduction (24.5%) of the myocardial perfusion. This effect could trigger the acute cardiotoxicity events observed mainly in patients with preexisting critical coronary stenoses.

61 POSTER

Intensive radiochemotherapy (RCT) with amifostine (A) in head and neck (H&N) cancer

J. Büntzel[1], K. Küttner[1], L. Russell[3], J. Schuth[1], M. Glatzel[2]. [1]*Dept. of ENT;* [2]*Dept. Radiotherapy, Klinkum Suhl, Suhl, Germany;* [3]*US Bioscience, Croxley Green, UK*

Purpose: We evaluated the ability of A to protect against the toxicities induced by intensive RCT for H&N cancer in a 3 arm study.

Methods: 25 patients with H&N cancer received primary or adjuvant radiotherapy (2Gy, 5days/week to 60Gy) and either carboplatin 70 mg/m^2 on days 1–5 and 21–25 (arm A, n = 10) or, carboplatin 70 mg/m^2 on days 1–5 and 21–25 and 5-FU 600 mg/m^2 administered over 16 hours on days 1–5 and 21–25 (arm B, n = 8). Both groups of patients received 500 mg A prior to carboplatin. Patients in arm C (n = 7) received chemotherapy as in arm B plus an additional dose of A (250 mG) prior to each infusion of 5FU.