Conclusions: Neo-adjuvant chemotherapy followed by radical chemo-radiation does not result in significant anaemia (no grade III toxicity). Blood transfusion is more cost effective than EPO in keeping the haemoglobin concentrations above the optimum level (>12 g/dL) during radical chemo-radiation for head and neck cancer. In addition this avoids the concerns about EPO activity as a growth factor for Head and Neck cancer cells (Henke et al 2003).

5550 POSTER

Clinical values of PET-CT compared to conventional radiologic imaging in head & neck cancer

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Background and Objectives: In head & neck cancer, the conventional CT and MRI are useful methods in imaging the anatomical structures of cancer, but they have limits in estimating sensitivity and specificity of cervical lymph node metastasis. To overcome these limitation, PET-CT, an imaging technique using metabolism emitting from cancer tissues, was introduced. The purpose of our study is to evaluate the clinical values of PET-CT by comparing with conventional CT/MRI, to finding preoerative cervical metastatic cervical lymph nodes.
Materials and Method: Seventy patients diagnosed as head and neck cancer (laryngeal, oral cavity, oropharynx) in Inha Hospital from 2004 to 2005 were enroled in this study. A retrospective analysis was done by medical record review. Every patients had preoperative CT/MRI and simultanous PET-CT for staging evaluation. every patients underwent primary tumor resection and neck dissection. Postoperative cervical lymph node pathologic results were compared with preoperative PET-CT and CT/MRI findings.
Results: In our study, no statistical differences of sensitivity, specificity and predictability of cervical lymph node metastasis could be found between CT/MRI and PET-CT imaging in head and neck cancer.
Conclusion: In our study, PET-CT had no meaningful differences from the conventional imaging methods to find metastatic cervical lymph nodes, but further studies are needed.

5551 POSTER

Impact of Cisplatin potentiation by Cytarabine in the 5-FU-CDDP regimen for dismal-prognosis head and neck cancer (HNC) patients; a meta-analysis of 3 local trials involving 492 patients

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Further to our randomized study demonstrating response and survival benefit for Cytarabine (CAR) 1,000 mg/m^2 potentiating Cisplatin (CDDP) in the standard 5-FU-CDDP regimen (Eur J Cancer 2002) in dismal-prognosis HNC patients (unresectable T4 N2c-3 or relapsing or metastatic) two further studies were done. One compared potentiation with CAR 500 mg/m^2 versus 1,000 mg/m^2; the other compared the CAR 500 mg/m^2 with 5-FU administered as bolus versus continuous infusion (RR and OS were identical in both studies). The present report is a meta-analysis of the 3 trials with response and survival as main issues. The three studies included a total of 482 patients. Cohort 1 received the standard 5-FU–CDDP regimen (83 pts), Cohort 2 CAR-1,000–5-FU–CDDP (153 pts) and Cohort 3 CAR-500–5-FU–CDDP (246 patients). All three regimens were applied both in palliative and neoadjuvant setting, the neoadjuvant preceding radiotherapy with 70 Gy. RR and PD rates were assessed on evaluable patient basis and survival on intent-to treat basis. Statistical analysis included the chi-square test, the log-rank test, determination of the death hazard radio and Cox regression analysis. Significance was assessed by the t-test with Bonferroni correction.
The RRs were significantly higher in CAR-potentiated Cohorts (Cohort 1 44%, Cohort 2 62%, Cohort 3 66%, $p = 0.0031$) and PD rates in the standard 5-FU–CDDP Cohort (Cohort 1 43%, Cohort 2 21%, Cohort 3 15%, $p < 0.001$). The median survival in Cohort 1 was 7 months and, in Cohorts 2 and 3, 11 months. The one- and two-year survivals were, for Cohort 1 26% and 6%, for Cohort 2 42% and 14%, and for Cohort 3 44% and 24%. The difference in survival with the log rank test was highly in the favor of both CAR-potentiated Cohorts ($p < 0.0001$) with the power of over 90% for $p = 0.01$. Cox regression analysis showed that both performance status, primary tumor localization and treatment schedule were significant predictors of survival. The highest impact on survival had the administration of the CAR-potentiated regimens, with death hazard ratios of 0.58 and 0.53 (CI respectively 0.44–077 and 0.40–070) as compared to standard 5-FU–CDDP regimen. Results in the neoadjuvant setting closely paralleled those in the whole patients group.
Potentiation of CDDP by CAR improves both RR and survival in dismal-prognosis HNC patients. The choice of the neoadjuvant regimen prior irradiation is crucial in judging its benefit impact in otherwise dismal-prognosis HNC patients.

5552 POSTER

Benzydamine for prophylaxis of radiation induced oral mucositis in head and neck cancers, double-blind clinical trial

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Background: Oral mucositis is one of the most common adverse effects of radiotherapy in head and neck tumors. We determined the efficacy of oral rinse benzydamine in prevention of radiation induced mucositis.
Material and Methods: Patients with head and neck cancers, who were referred to Cancer Institute, Imam Hospital in 2005, were enrolled in a randomized, placebo-controlled clinical trail to receive either benzydamine or placebo. All the cases received at least 50 Gy radiation to the oral cavity and oropharyngeal areas. The end points were comparison of highest grade of mucositis at the end of radiotherapy, frequency of grade 2 or more, the interval days to establishing grade 2 in the groups.
Results: 100 patients with head and neck cancers were randomized in this trail. At the end of the study, 19 patients were excluded of the analysis due to minor side effects of drug, or stopping the radiotherapy. In 39 cases in the treated group, the frequency of mucositis grade 3 or more was 43.6% (17 cases) in contrast to 78.6% (33 cases) in 42 cases in the placebo group, which was significant ($p = 0.001$). Mucositis grade 3 or more was 2.6 times frequent in placebo group (CI = 95%, relative risk = 1.38−5).
At the end of RT, at least 42% of the treated group had mucositis grade 3 or more in contrast to at least 76% in the control group which was statistically significant. Intensity of mucositis was increased up to fourth week of treatment in both groups to grade 2. In the treated group the grade of mucositis was approximately constant to the end of therapy; but in the control group it rose to grade 3 ($p < 0.001$). The highest grade of mucositis during the treatment time was significantly different between two groups ($p = 0.049$).
The median interval days of establishing grade 2 mucositis was 3.6 days sooner in the placebo group ($p = 0.12$).
Conclusions: According to these results it seems that oral rinse benzydamine was effective, safe, and well tolerated for prophylactic treatment of radiation-induced oral mucositis in head and neck tumors.

5553 POSTER

Second radical irradiation in head and neck cancer patients – retrospective study

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Background: Head and neck cancer patients who require reirradiation have poor prognosis because of limited possibilities of treatment, not only in recurrent cancer, but also in second primary tumors. Repetition of radiotherapy may provide better local tumor control, also when combined with surgery and chemotherapy.
Materials and Methods: 47 patients were included in this retrospective research. Average age was 61.9 (±9.1). 10 female and 37 male patients were treated in MSC Memorial Oncology Centre in Gliwice between 1981 and 2006 because of primary tumor in head and neck region with curative intent. 35 patients underwent surgery, 5 patients were treated with concomitant chemotherapy. First irradiations were planned in 2D (22 patients), 3D (23) or IMRT (2) techniques with average dose to PTV 60.87 Gy (±9.01 Gy) and average dose per fraction 1.96 Gy (±0.21 Gy). 28 patients had local and 13 nodal recurrences, 6 patients had second primary tumor. 32 patients underwent surgery prior to second radical radiotherapy. Six patients were dedicated to concomitant chemotherapy. Interval between first and second irradiation was 11 to 296 months. Either 3DRT (34 pts) or IMRT (12 pts) plans were prepared, one patient was treated with 2D technique. Average dose to PTV was 58.2 Gy (± 6.9 Gy) with average dose per fraction 1.84 Gy (± 0.2 Gy). Acute side effects were evaluated according to Diche score. All patients were followed up during and after treatment.
Results: Median follow up was 12 months (1–121 months). One patient finished reirradiation on lower dose due to acute side effects. Acute toxicity was in the range 3 to 14 with a median 7 points. 15 recurrences (5 nodal and 10 local) and 7 distant metastases were observed. Long-term side effects were noticed in 33 patients. 18 patients suffered from xerostomy on moderate level, 15 patients from chronic pain in previously irradiated regions and 11 patients from dysphagia. 2-years recurrence free survival was 28% and 2-years overall survival was 39%.