merits of adjuvant and neoadjuvant chemotherapy remain unproven. This study was performed to determine the feasibility and safety of induction chemotherapy with docetaxel, cisplatin and 5 FU (TPF) followed by concurrent chemoradiotherapy (CCRT) for advanced nasopharyngeal cancer (NPC).
Methods: Patients with metastatic or locoregionally advanced NPC were treated with 3 cycles of induction chemotherapy. Docetaxel (70 mg/m^2) and cisplatin (75 mg/m^2) were given on day 1, followed by 5 FU (1,000 mg/m^2) as a continuous infusion for 4 days and repeated every 3 weeks. After induction chemotherapy, cisplatin was given at a dose of 100 mg/m^2 every 3 weeks with radiotherapy.
Results: Thirty patients were enrolled and 25 patients completed both induction treatment and the subsequent CCRT. Response to the induction TPF (N = 30) was as follows: five patients (16.7%) achieved a complete response (CR) and 23 patients (76.7%) a partial response (PR). At 6 weeks after CCRT (N = 25), 17 patients (68%) had a CR and eight patients (32%) a PR. The median progression free survival was 38.2 months and the 3-year overall survival was 79.6%. The main hematological toxicity was neutropenia and leucopenia. A greater than grade 3 neutropenia was observed in 20 patients (66.7%); febrile neutropenia developed in one patient (3.3%). The major non-hematological toxicities were asthenia, nausea and mucositis.
Conclusions: The results showed that this treatment was very effective with manageable toxicity in locally advanced, and distant metastatic NPC. In the near future a randomized phase III trial comparing TPF followed by CCRT versus CCRT alone will be started by the Radiotherapy Oncology Group for Head and Neck (GORTEC); the results of this future study will help determine specific treatment regimens for patients with advanced NPC.

8565 POSTER

Surgery does not improve tonsil cancer patient's outcome in T2N1 stage compare to radiotherapy alone

K. Trela[1], K. Skladowski[2], D. Gabrys[1]. *[1]Maria Sklodowska-Curie Cancer Center and Institute of Oncology, Radiation Oncology, Gliwice, Poland; [2]Maria Sklodowska-Curie Cancer Center and Institute of Oncology, Radiotherapy Clinic, Gliwice, Poland*

Radiotherapy is a common treatment method for tonsil cancer patients. Patients with advanced loco-regional disease are treated primarily with surgery followed by additional radiotherapy. The aim of this project is to compare the results of radiotherapy alone with combination of radical surgery with radiotherapy for patients with tonsil cancer.
Between 1997 and 2000, 63 patients with tonsil cancer were treated in Institute of Oncology Gliwice. Patient's age ranged from 37 to 72 years, average 58 years. There were 14 (22%) men and 49 (78%). Whole group was homogenous in stage, all patients in T2N1. Majority 33 (52%) of patients were treated with combined treatment-surgery with additional radiotherapy (S+RT). Surgery procedure was performed in each case in the same manner: radical tonsillectomy and one side selective lymphangiectomy. Thirty (48%) of patients were treated only with radiotherapy alone (RT).
In all patients radiotherapy was delivered in 2 Gy fractions, 5 days a week. Tumour bed or primary tumour irradiation was carried out to the total dose of 60−74 Gy. Locoregional elective lympn nodes irradiation continued to the total dose of 50−66 Gy and 66−70 Gy was delivered to the metastatic lymph nodes. Total doses 70−74 Gy were used for radiotherapy as a sole modality, and 60−66 Gy for postoperative irradiation. In majoraty 23 of patients (70%) negative surgical margins were achieved, in remaining 10 patients (30%) positive margins were present. Operated patients at the beginning of radiotherapy were free of the disease. Statistical analysis includes 5-year Kaplan-Meier estimates of OS and LRC.
Overall 5-year OS and LRC were 52% and 50% respectively. During 5-year follow-up, there were 22 local relapses (35%) and 8 distant metastases (12%). The 5-year OS was higher in the RT group 58% than S+RT group but this difference was not significant (HR=1.8, p = 0.12). Probability of loco-regional control was 67% in RT and 53% in S+RT groups, difference was close to significance (HR = 2.1, 0 = 0.08). There were 8 (26%) locoregional recurrences in RT group, 3 local and 5 regional, versus 14 (42%) in S+RT group, 10 local and 4 regional. Distant metastases in locoregional controlled patients were noted in 4 (23%) in RT and in 4 (12%) in S+RT group.
Radiotherapy alone in patients with tonsil cancer was more effective than combined surgery with irradiation. Lover combined treatment efficacy may be related to higher local recurrence rate.

8566 POSTER

Primary tumour site as a predictor of treatment outcome for definitive radiotherapy of advanced stage oral cavity cancers

J. Chang[1], L. Chen[1], C. Lin[1], K. Fan[1], E. Chen[1]. *[1]Chang Gung Memorial Hospital, Department of Radiation Oncology, Taoyuan, Taiwan*

Purpose: The purpose of this study was to evaluate the outcome of definitive radiotherapy (RT) for oral cavity cancers and to assess prognostic factors.
Methods and Materials: One handred and fifteen patients with oral cavity cancers who received definitive RT from January 1995 to September 2007. Patient clinical stage distribution of stage III, IVA and IVB were 6%, 47% and 47%, respectively. The median dose of RT was 72 Gy (range, 62−76 Gy). Cisplatin-based chemotherapy was administered to 95% of patients. Eleven patients underwent salvage operation for RT-failure.
Results: In our cohort, 88 (76.5%) patients responded partially and 23 (20%) responded completely; of these, 18% and 57% experienced a durable effect of treatment. The 3-year overall survival (OS), disease-specific survival (DSS) and progression-free survival (PFS) was 22%, 27% and 25%, respectively. The 3-year PFS based on the primary tumor sites was as follows: group I (buccal, mouth floor and gum) 51%, group II (retromolar and hard palate) 18%, and group III (tongue and lip) 6% ($P < 0.0001$). The 3-year PFS for N0 patients was 41% and 19% for patients with N+ disease ($P = 0.012$). T stage and radiotherapy technique did not impact to survival. Patients underwent salvage surgery for RT failure demonstrated better 5-year OS and DSS (35% *vs.* 13%, P = 0.015 and 53% *vs.* 22%, P = 0.029, respectively).
Conclusion: Primary tumor site and neck stage are prognostic predictors in advanced stage oral cancer received radical radiotherapy. Primary tumor extension and radiotherapy technique did not influence survival. More aggressive treatment may be considered for unresectable disease.

8567 POSTER

Nasopharyngeal carcinoma: prognostic factors and long-term outcomes with emphasis on radiotherapy techniques

A. Navran[1], G.J. Hordijk[1], C.H.J. Terhaard[1]. *[1]University Medical Center Utrecht, Radiotherapy, Utrecht, The Netherlands*

Background: To evaluate long-term outcome after treatment of nasopharymgeal carcinoma (NPC) and determine the prognostic factors, with emphasis on radiation technique.
Materials and Methods: Retrospectively analyzed patients with NPC (n = 119) treated with curative intent in a single institute between 1982−2007. Stage IV, III and I+II (UICC 2002) were 40%, 35% and 25% respectively. Radiotherapy techniques were: 2D-RT (n = 52), 3D-CRT (n = 46) and IMRT (n = 19). Concomitant chemoradiation (CHRT) were given to 23 patients. The prescribed dose to tumour was 70 Gy. The locoregional recurrence (LRR), systemic failure, disease free survival (DFS), overall survival (OS) and prognostic factors were calculated using uni- and multivariate analysis.
Results: The 5-year actuarial LRR free survival, systemic failure free survival, DFS and OS were 57%, 72%, 46% and 38% respectively. The independent prognostic factors were: stage for all end points, pathological type and IMRT for LRR; 3D-RT, and IMRT for DFS; and finally age and CHRT for OS.
Conclusions: With regard to equally dose of 70 Gy for all patients the impact of radiation technique on the end points and superiority of IMRT compared to 3D-CRT can not be explain by radiation dose. These may be explained by the use of advanced imaging based on CT-MRI-PET scanning for preparation of an IMRT plan.

8568 POSTER

Prophylactic swallowing exercises during and after radiotherapy for head and neck cancer - results of phase I trial

K. Jensen[1], E.M. Eriksen[2], M. Behrens[2], K. Lambertsen[3], K. Aksglæde[4], C. Grau[1]. *[1]Aarhus University Hospital, Oncology, Aarhus, Denmark; [2]Aarhus University Hospital, Occupational Therapy and Physiotherapy, Aarhus, Denmark; [3]Aarhus University Hospital, ENT Surgery, Aarhus, Denmark; [4]Aarhus University Hospital, Radiology, Aarhus, Denmark*

Background: Dysphagia is a common and severe side effect after radiotherapy (RT) for head and neck cancer (HNC). Alterations of all structures and functions of the throat have been described. At the same time structures important for swallowing are often tumour embedded or close to target areas, making swallowing sparring RT an uncertain strategy with respect to both efficacy and safety. Therefore, we wanted to examine the effect of prophylactic swallowing exercises in HNC patients. The current reports concerns the phase I feasibility study.