plan using simultaneous integrated boost (SIB) technique was generated on the basis of initial CT scan. The prescribed doses were 70 Gy to the planning target volume (Gross tumor volume(GTV) with a 5 mm margin), 59.4 Gy to the high-risk subclinical volume (CTV59.4), and 50.4 Gy to the low-risk subclinical volume (CTV50.4). The initial IMRT plan was projected onto the follow-up CT scan. Target volumes and organs at risk (OAR) were delineated on the follow-up CT scan and dosimetric changes of target volumes and OAR were analyzed.
Results: The average reductions of GTV and CTV59.4 were 37% (SD = 22%) and 9% (SD = 7%). The parotid volume was also reduced. The average volume reduction of thirty two parotids was 34% (SD = 19%). The initial average mean dose irradiated to parotid glands was 2613 cGy (SD = 242 cGy) but the average mean dose irradiated to parotid glands on the follow-up CT scan was 3162 cGy (SD = 683 cGy). The average maximal spinal cord dose and maximal brain stem dose were changed from 4279 cGy (SD = 95 cGy) to 4496 cGy (SD = 268 cGy) and from 2199 cGy (SD = 211 cGy) to 5339 cGy (SD = 520 cGy), respectively. However dose coverage of GTV and CTV59.4 was not change significantly.
Conclusions: IMRT may give rise to he significant overdose to OAR, especially parotid gland if adaptation to the volume changes of OAR is not performed. To prevent this problem, adaptive RT or modification of IMRT plan during treatment are needed.

8561 POSTER

Sentinel node mapping in patients with differentiated thyroid carcinoma: our institution's experience

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Background: The aim of this study was to evaluate sentinel lymph node mapping in patients with differentiated thyroid carcinoma (DTC).
Methods: From the year 2001 to 2008. we have performed SLNb in 40 with DTC. Before mobilization of the thyroid gland, approximately 0.2 ml of 1% solution of methylen blue dye was injected peritumorally. After approximately 10 minutes the dissection was continued above and beyond the omohyoid muscle, towards the internal jugular vein and common carotid artery until the blue stained lymph nodes were found and recognized and sent for frozen section examination. If any of the nodes was positive on frozen section, Modified radical neck dissection was performed after total thyroidectomy and routine dissection of central neck compartment.
Results: Twenty three patients had papillary thyroid carcinoma, eleven follicular carcinoma and six benign tumors. Identification of blue stained SLN was successful in 93.5% of case. Negative and positive predictive values were 94.7% and 100%, while overall accuracy of the methods was 95.6%. In the one patient with follicular carcinoma, SLN detection failed. Four patients had one radioactive node, one had three and one had four.
Conclusion: Our results imply that SLN biopsy in the jugulo-carotid chain using methylen blue dye mapping, is a feasible and accurate method for estimating lymph node status in the lateral neck compartment. The method could be helpful in detection of true positive but non-palpable lymph nodes and may support in patients with DTC.

8562 POSTER

Phase II study of docetaxel and carboplatin with concurrent radiation therapy for locally advanced head and neck cancer

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Background: Concurrent chemoradiotherapy with cisplatin has been a standard treatment of locally advanced head and neck cancer. The present study used docetaxel plus carboplatin concurrent with radiotherapy in stead of cisplatin. We sought to evaluate the clinical response rate at the tumor and safety profile of this treatment.
Materials and Methods: Thirty-eight patients were enrolled; 14 had oral cavity cancer (oral tongue 10, buccal mucosa 2, alveolar ridge 1, floor of mouth1), 10 had oropharyngeal cancer (base of tongue 5, tonsil 5), 13 had laryngeal cancer, and 1 had maxillary sinus cancer. Twenty- nine patients had stage IVA disease, and 9 patients had stage III disease. All patients received concurrent docetaxel 15 mg/m^2 one -hour infusion plus carboplatin AUC 2 30 minutes infusion on day 1, 8, 15, 22, 29, and 36. Radiotherapy began on day 1 of concurrent chemotherapy with 2 Gy per fraction, 5 fractions per week to total dose of 66−70 Gy. Tumor assessment was performed by CT scan after 3 months completion of concurrent chemoradiotherapy.
Results: Thirty-five patients were evaluated for response, two patients refused to receive all treatments, another one patient had serious adverse event from the first dose of docetaxel (rash, wheezing both lungs). Of 35 evaluable patients, 26 patients (74.3%) achieved a clinical response rate. Six patients (17.1%) had stable disease, and 3 patients (8.6%) had progression of disease. The 2 year disease free survival was 62.9%, The 2 year overall was 64.1%. The most common toxicity is radiation induced toxicity in every aspect with grade 2−3 mucositis in 85.7%, grade 2−3 skin dermatitis 51.4%, and grade 2−3 dysphagia 51.4%.
Conclusion: Administration of docetaxel plus carboplatin concurrent with radiotherapy results in high response activity and well tolerated in locally advanced head and neck cancer. The most common toxicity is radiation induced toxicity in every aspect.

8563 POSTER

Treatment outcomes for squamous cell carcinoma of the external auditory canal and middle ear

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Background: Squamous cell carcinoma (SCC) of the external auditory canal (EAC) and middle ear is extremely rare, with a yearly incidence of around one per one million people. The purpose of this study is to evaluate treatment outcomes for SCC of the EAC and middle ear.
Materials and Methods: Between 1990 and 2008, 38 patients treated at our institute for SCC of the EAC and middle ear were retrospectively investigated. Twenty-nine (76%) patients had primary EAC cancer and 9 (24%) had primary middle-ear cancer. There were 15 (39%) males and 23 (61%) females. Fourteen (37%) patients had T1−2 disease and 24 (63%) had T3−4 disease according to the Pittsburgh classification. Lymph node involvement was found in 7 (18%) patients. Thirteen (34%) patients received surgery (S), 12 (32%) received radiotherapy (RT), and 13 (34%) received surgery combined with radiotherapy (S + RT). All 14 patients with T1−2 disease received S, with or without RT. All 12 patients in the RT group had T3−4 disease, and 9 of them received concurrent chemoradiotherapy. The median total radiation dose of the 25 patients treated by RT was 60 Gy (range: 24−70 Gy). The median overall treatment time for RT was 41 days (range: 15−54 days).
Results: The median follow-up period was 32 months (range: 1−122 months). Ten patients experienced recurrence: six locally, three locally and in regional lymph nodes, and one only in regional lymph nodes. Twelve patients died during the period of this study. Ten died of primary disease (including postoperative epidural hematoma). The five-year overall survival (OS), disease-specific survival (DSS), and locoregional control (LRC) rates for all patients by the Kaplan-Meier method were 66%, 72%, and 69%, respectively. The five-year OS, DSS, and LRC rates according to treatment modality (S/RT/S+RT) were 77%/53%/63% ($p = 0.49$ by log rank test), 84%/53%/63% ($p = 0.51$), and 83% /53%/66% ($p = 0.56$), respectively. The five-year OS, DSS, and LRC rates according to T stage (T1−2/T3−4) were 92%/50% ($p = 0.03$), 92% /52% ($p = 0.02$), and 85%/57% ($p = 0.11$), respectively. One patient in the S+RT group experienced late radiation toxicity in the form of Grade 4 osteonecrosis.
Conclusions: Our treatment outcomes for T1−2 disease were excellent, and our outcomes for T3−4 disease were comparable with those of several previous reports. Although the standard treatment modalities for SCC of the EAC and middle ear are still unclear, our results indicate that S with or without RT is an appropriate therapy for T1−2 disease and that concurrent chemoradiotherapy may be a useful modality for T3−4 disease.

8564 POSTER

A Phase II study of docetaxel, cisplatin, and 5 FU induction chemotherapy followed by chemoradiotherapy in advanced nasopharyngeal cancer

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Background: The current standard treatment for locoregionally advanced nasopharyngeal cancer (NPC) is concurrent chemoradiotherapy (CCRT) with or without adjuvant chemotherapy. Several randomized trials of CCRT have demonstrated a progression-free survival (PFS) or overall survival (OS) benefit over radiation therapy (RT) alone. However, the