define individual variables for radio-sensitivity. Alpha and β values showed a pattern of individual sensitivity that correlates to the clinical toxicity observed in this study.

8532 POSTER

Prognostic impact of comorbidity in elderly patients with head and neck squamous cell carcinoma (HNSCC)

M.A. Moreno Jimenez[1], I. Gonzalez Cebrian[1], R. Collado Martin[1], B. Medina Magan[2], A.L. Ortega Granados[1], M.J. Mateos Salido[1], R. Alonso Calderon[3], Y. Plata[1]. *[1]Hospital Medico-Quirurgico Ciudad de Jaen, Oncologia Medica, Jaen, Spain; [2]Hospital Torrecardenas de Almeria, Oncologia Medica, Almeria, Spain; [3]Hospital General San Pedro de Alcantara, Oncologia Medica, Caceres, Spain*

Background: there is no standard treatment for elderly HNSCC patients and comorbidity is known to be an independent predictor for mortality in head and neck cancer patients. We analyse the influence of comorbidity in survival and toxicity in elderly HNSCC patients.
Materials and Methods: A retrospective review was conducted in all patients with HNSCC over the age of 70 seen in a single cancer hospital from January 2004 till April 2009. Adult Comorbidity Evaluation 27 (ACE27) was used and compared with ECOG to calculated adjusted hazard ratio. All high-grade toxicity events per patient was summarise according to the National Cancer Institute Common Toxicity Criteria across the entire treatment period in a sequence form in those elderly HNSCC patients not intended for best supportive care (BSC)
Results: 77 patients were included. Median age was 76 (range 70−99) with a male/female ratio 4:1. Cancer subsite more commonly are larynx (32.5%) and oral cavity (29.9%). Stage IV was in 59.8%. ECOG 0 was in 23.4%, 1 in 49.4%, 2 in 22.1% and 3 in 5.2%. Comorbidity was severe in 29.9%, moderate in 27.3% and mild in 32.5%. 51.9% was qualify for chemotherapy as induction, concurrent or palliative treatment. BSC was intended for 23.4%. Grade 3−4 toxicity happened in 65% of patients qualify for chemotherapy including two toxic deaths. There were no differences according to age, gender, ECOG or ACE. 7 patients (10.7%) were excluded from analysis survival due to missing data. Compared with patients with mild or moderate comorbidity Kaplan Meier survival curves for patients with severe comorbidity was signifincantly worse in the whole population (median overall survival from diagnosis 36 weeks, 95% CI 25−46, $p < 0.05$, one year survival 28.4%) as well as in patients scheduled to undergo treatment (median overall survival from diagnosis 39 weeks, 95% CI 32−46 $p < 0.05$). In patients qualify for treatment cox regression model shows that adjusted hazard ratio was significantly in ECOG 0 patients (HR = 0.24; $p < 0.005$) and severe comorbidity patients (HR=1.43; $p < 0.05$).
Conclusions: Data from this retrospective review suggested that elderly HNSCC patients ECOG 0 could be worthy for treatment irrespective of ACE, and that elderly HNSCC patients ECOG 1−2 with severe comorbidity should be ruled out from treatments. Elderly HNSCC patients ECOG 2 shouldn't deserve exclusion from treatments solely due to moderate or mild comorbidity

8533 POSTER

The role of postoperative external beam radiotherapy in differentiated thyroid cancer with focal anaplastic change

W.I. Jang[1], H.G. Wu[1], C.I. Park[2], Y.K. Youn[1], K.H. Kim[1], B.Y. Cho[1], D.J. Park[1], J.K. Chung[1], K.W. Kang[1], K.C. Jung[1]. *[1]Seoul National University Hospital, Department of Radiation Oncology, Seoul, South Korea; [2]Korea Institute of Radiological & Medical Sciences, Department of Radiation Oncology, Seoul, South Korea*

Background: Anaplastic thyroid cancer is rare disease and has a very low cure rate with the very best treatments. The major problem with anaplastic thyroid cancer, is that it is usually too aggressive and invasive when it is diagnosed. We examine to determine the role of postoperative external-beam radiotherapy (EBRT) in the patients with differentiated thyroid cancer with focal anaplastic change.
Materials and Methods: Of the 6,345 patients diagnosed as thyroid cancer at our institution between January 1980 and June 2008, 115 had anaplastic thyroid carcinoma. Of these patients, 33 had focal anaplastic change. The median patient age was 53 years (range, 22−75 years). The majority of patients were female (75.8%) and had extrathyroidal tumors (72.7%). Two patients (6.1%) had distant metastasis at diagnosis. Total thyroidectomy was achieved in 25 patients (75.8%). Twenty patients (60.6%) received postoperative EBRT (EBRT group) to a median total dose of 61.2 Gy (range, 54.0−70.0 Gy) and 11 (33.3%) received radioactive iodine (no-EBRT group). The median follow-up duration was 19 months (range, 2−130 months).
Results: The 5-year overall and disease-free survival rates were 96.2% and 57.2%, respectively. The 5-year local failure-free survival rates were significantly different (100% in the EBRT and 52.5% in the no-EBRT $p = 0.024$). There were no significant difference in overall, disease-free, regional failure-free, and distant metastasis-free survival rates between the EBRT group and no-EBRT group. Thyroglobulin, palpable lymph node, anaplastic transformation from previous differentiated thyroid cancer, and multiple foci were significant prognostic factors.
Conclusions: Postoperative EBRT significantly improved local failure-free survival in patients with differentiated thyroid cancer with focal anaplastic change

8534 POSTER

Hyperfractionated radiotherapy with concurrent docetaxel in locally-advanced head and neck cancer

K. Karasawa[1], H. Izawa[1], H. Hirowatari[1], K. Ito[1], T. Furuya[2], S. Ozawa[2], F. Matsumoto[3], S. Ito[3], S. Oba[3], K. Ikeda[3]. *[1]Juntendo University, Radiation Oncology, Tokyo, Japan; [2]Juntendo University, Medical Physics, Tokyo, Japan; [3]Juntendo University, Otolaryngology, Tokyo, Japan*

Purpose/Objective(s): Altered fractionated radiotherapy and/or radiotherapy combined with chemotherapy have been used in locally advanced head and neck cancers to increase local control. Concurrent chemo-radiotherapy is now considered to be a standard treatment option for these cases. This study was designed to evaluate hyperfractionated radiotherapy with concurrent use of low dose docetaxel in locally advanced head and neck cancer.
Materials/Methods: Patients eligible for this study had stage III to IVB squamous cell carcinoma of the head and neck or stage II carcinoma with large tumor volume. Tumor volumes were calculated by a tool in the radiotherapy treatment planning computer. The hyperfractionated radiotherapy was delivered 5 days per week with a 4-MV photon beam at 1.2 Gy per fraction with more than 6 hours apart to a total dose of 72.0 Gy. Docetaxel at 10 mg/m^2 was administered every week during radiotherapy. Toxicities were assessed weekly and graded according to NCI-CTCAE ver.3.0. Treatment response was assessed at 1 month after treatment completion. Statistical analysis of survival was calculated using the Kaplan-Meier method.
Results: From March 2003 to October 2008, 70 patients were treated according to this regimen. Median age was 66 years and sixty-three patients were male. Primary sites were the oropharynx in 25, hypopharynx in 24, larynx in 18, oral cavity in 1 and primary unknown in 2. Eleven of the patients were stage II, 16 were stage III, 33 were stage IVA and 9 were stage IVB. The grade 3−4 hematological toxicities were lymphocytopenia in 29 (42%) and neutropenia in 2. The grade 3 non-hematologic toxicities were mucositis in 42 (60%), treatment related pain in 12 (19%) and dermatitis in 2 (2%). Fifty-five patients (79%) reached complete response (CR) and 13 (19%) reached partial response (PR). The median follow-up period was 18 months (ranging from 2 to 38 months). Seventeen patients developed a relapse or recurrence. Infield recurrence was observed in 11 and metastasis in 6. The two year overall survival rate was 71.7% and three year was 67.9% in entire group, respectively. Significant prognostic factors in two year relapse-free survival rates were primary site (51.5% in hypopharynx, 68.6% in oropharynx and 100% in larynx), clinical stage (100% in stage II-III, 64.8% in stage IVA and 0% in stage IVB) and tumor volume (less than 100 cm^3 in 75% and more than 100 cm^3 in 0%).
Conclusion: Although the follow up period was short, we can conclude that docetaxel combined with hyperfractionated radiotherapy may become a useful approach for the management of stage II to IVA head and neck cancer provided that appropriate measures are taken to reduce mucosal toxicities.

8535 POSTER

Induction chemotherapy within a multimodality treatment of nasal cavity and ethmoid sinus malignant epithelial tumours: report of an homogeneous series of patients

P. Bossi[1], R. Calderone[1], G. Cantù[2], P. Olmi[3], P. Quattrone[4], L. Locati[1], C. Bergamini[1], R. Granata[1], P. Potepan[5], L. Licitra[1]. *[1]Fondazione IRCCS Istituto Nazionale Tumori, Head and Neck Cancer Medical Oncology Unit, Milano, Italy; [2]Fondazione IRCCS Istituto Nazionale Tumori, Maxillo Facial Unit, Milano, Italy; [3]Fondazione IRCCS Istituto Nazionale Tumori, Radiotherapy, Milano, Italy; [4]Fondazione IRCCS Istituto Nazionale Tumori, Pathology Unit, Milano, Italy; [5]Fondazione IRCCS Istituto Nazionale Tumori, Radiology Unit, Milano, Italy*

Background: Ethmoid sinus and nasal cavity cancers are rare diseases, whose prognosis mainly stays upon histology and stage. Optimal treatment can hardly be stated, due to heterogeneity of tumour site, histotype, treatment and within limited series.