surgical margins, 3 or more positive lymph nodes, or extranodal infiltration. Median interval between surgery and RT was 46 days (range: 24–112). RT consisted of 66 Gy (2 Gy/fr) in 5.5 weeks. Median RT duration was 39 days (range: 35−62). Five-field 3D conformal or intensity-modulated RT was performed in all patients according to the GORTEC/EORTC/RTOG guidelines. Concomitant cisplatin chemotherapy was planned at 100 mg/m^2 in days 1, 22, and 43 in all but one patient where carboplatin was chosen due to impaired renal function. Prophylactic percutaneous endoscopic gastrostomy was performed in 18 (45%) patients, and 3 (8%) patients required nasogastric feeding tube. Median follow-up was 37 months (range: 5−66).
Results: All but two patients received the planned total dose without unplanned interruption (66 Gy in 38, 64 Gy in 1, and 58 Gy in 1). According to the CTC/NCI v3.0 toxicity criteria, acute morbidity was acceptable: grade 3 mucositis in 10 (25%), grade 3 dysphagia in 9 (23%), grade 3 skin erythema in 5 (13%) patients. CT-related anemia was observed in 2 patients (grade 3 in 1, and grade 4 in 1), leukopenia in 4 patients (grade 3 in 2, and grade 4 in 2), and no grade 3 or 4 thrombocytopenia was observed. Grade 3 renal-function impairment was observed only in one patient. Median weight loss was 3.5 kg (range: 0−14.5). No treatmentrelated mortality was observed. Considering the late effects, grade 0, 1, or 2 xerostomia was observed in 9 (23%), 22 (55%), and 9 (23%) patients, respectively; grade 0, 1, and 2 edema in 25 (63%), 14 (35%), and 1 (3%) patients, respectively. Locoregional relapse was observed in 8 (20%) patients, and only 7 (18%) patients developed distant metastases. Median time to locoregional relapse was 6 months (range: 1−40). The 3-year overall, cause-specific, disease-free survival, and locoregional control rates were 65%, 69%, 64%, and 82%, respectively. Distant metastasis probability at 3 and 5 years was 19%. Univariate and multivariate analyses revealed that the only prognostic factor influencing the outcome was nodal status.
Conclusions: We conclude that reducing the overall treatment time using accelerated PORT/CT by weekly concomitant boost (6 fractions per week) combined to concomitant cisplatin chemotherapy is easily feasible with good locoregional and distant metastases control for patients operated with curative intent for LAHNC. Acute and late RT/CT-related morbidity is acceptable.

5503 ORAL

The predictive value of tumour thickness for cervical metastasis in squamous cell carcinoma of oral cavity: a meta-analysis of reported studies

S. Huang[1], D. Hwang[2], G. Lockwood[3], B. O'Sullivan[2]. *[1]Princess Margaret Hospital, 2B-Radiation Therapy, Ontario, Canada; [2]Princess Margaret Hospital, Radiation Oncology, Ontario, Canada; [3]Princess Margaret Hospital, Biostatistics, Ontario, Canada*

Background: Cervical metastasis greatly impacts on survival in patients with carcinoma (SCC) of the oral cavity (OC). The significant occult nodal metastasis rate warrants consideration to elective neck treatment but controversy exists as to what patient groups will benefit from such interventions. In previous studies, tumor thickness (TT) appeared a strong predictor for nodal metastasis but no consensus exists on the optimal TT cutpoint (TTcp) for a clinical relevant risk of nodal involvement. To address this question, we conducted a meta-analysis.
Methods: All articles relating to TT and nodal involvement in OC were identified through searching OVID MEDLINE (1966−4th week of 2007) and EMBASE entries. Articles were also obtained by cross-reference from citations in relevant articles. Inclusion criteria comprised: SCC of OC; any T and N categories at inception; primary surgery only; a description of the true nodal status as either node Positive or Negative for specific ranges of TT. True nodal status was assessed by either pathologic positivity on immediate neck dissection (ND) or cases without ND where neck recurrence was identified after FU $\geqslant$ 2 years. Due to inconsistency in the upper boundary of each individual study, we calculated nodal detection proportions and 95% confidence interval (CI) (Clopper-Pearson method) according to an upper level for each TT category: <3 mm, <4 mm, <5 mm and <6 mm from pooled data. Differences between TTcp were tested using Logistic Regression with Generalized Estimating Equations.
Results: Two independent reviewers selected 16 eligible studies from 72 potential studies yielding a pooled total of 1136 patients for this study. The disease subsites were 46% oral tongue, 16% buccal mucosa, 12% floor of mouth and 22% lower lip. There are 4 studies TTcp set at 3 mm, 9 at 4 mm, 6 at 5 mm and 4 at 6 mm (4 studies had 2 TTcp, 1 study had 4 TTcp). For the overall group, the proportion of subsequent node detection was 5.3% (95% CI: 2.0−11.2), 4.5% (2.6−7.2), 16.6% (11.5−22.8), and 13.0% (9.7−16.9) for TT <3 mm, <4 mm, <5 mm and <6 mm respectively. The proportion of subsequent node detection for TT < 5 mm category increased significantly compared to TT < 4 mm category ($p = 0.05$).
Conclusions: When the TTcp of OC migrates from 4 mm to 5 mm, the risk of nodal metastasis increases significantly. We propose that the optimal "cutpoint" of tumor thickness is 4 mm. For tumors thicker than 4 mm, elective treatment of the neck should be considered.

5504 ORAL

Quantification of plasma Epstein-Barr virus DNA in patients with nasopharyngeal carcinoma: results of a prospective study

E. Ozyar[1], M. Gultekin[1], A. Alp[2], G. Hascelik[2], C. Demir[3], I.L. Atahan[1]. *[1]Hacettepe University, Radiation Oncology, Ankara, Turkey; [2]Hacettepe University, Microbiology and Clinical Microbiology, Ankara, Turkey; [3]Hacettepe University, Laboratory of Drug Resistance Oncology Institute, Ankara, Turkey*

Background: Recently, quantification of plasma EBV DNA was shown to be useful for monitoring patients with nasopharyngeal carcinoma (NPC) and predicting the outcome of treatment. We designed a prospective study, to investigate the correlation between plasma EBV DNA levels and clinical status of the patients with NPC.
Methods: A total of 149 patients with NPC and healthy controls were enrolled between February 2004 and June 2006. The levels of circulating EBV DNA were measured in 3 NPC patient groups. Group A (35 patients): non-metastatic patients treated with curative intent and measurements were made at diagnosis and after treatment. Group B (82 patients): patients in remission with conventional follow-up examinations and measurements were made at follow-up. Group C (13 patients): patients with evident clinical/radiological local and/or distant relapse. Group D: 19 healthy volunteers were selected as control group.
Results: Group A: EBV DNA was detected quantitatively in plasma samples of 25 (71%) out of 35 patients at diagnosis. The median concentration of plasma EBV DNA at the time of initial diagnosis was 576 copies per milliliter (interquartile range, 41 to 15,599). The median EBV DNA concentration decreased to 0 copies per milliliter after the completion of treatment in all but four patients (3 with DM and 1 in clinical remission). Group B: During follow-up period, a quantitative increase in EBV DNA concentrations was detected in 8 (9.8%) out of 82 patients (range 0−13,731 copies/ml). The imaging of these patients revealed distant metastasis in 4, local/regional relapse in 3 and false positive in 1 patient. Group C: EBV DNA concentrations were measured quantitatively in seven (54%) of 13 patients with locoregional relapse or distant metastases. Group D: All healthy individuals have negative plasma EBV DNA.
Conclusions: This study showed that quantitative plasma EBV DNA can be detected in 71% of the NPC patients at diagnosis. The plasma EBV DNA levels were persistently undetectable or low in patients with clinical remission. These results suggest that quantitative analysis of plasma EBV DNA may be a useful clinical tool in the screening and monitoring of NPC patients.
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5505 ORAL

Large cohort dose-response analysis of parotid gland function after radiotherapy: IMRT versus conventional radiotherapy

T. Dijkema, P.M. Braam, C.H.J. Terhaard, J.M. Roesink, M.A. Moerland, C.P.J. Raaijmakers. *University Medical Center Utrecht, Radiation Oncology (Q00.118), Utrecht, The Netherlands*

Background: Five years after radiotherapy, approximately half of the head-and-neck cancer patients still complain of moderate or severe xerostomia. Intensity-modulated radiotherapy (IMRT) reduces the dose to the parotid glands and thereby the number of xerostomia complications. Data regarding doses that permit preservation of parotid gland function are conflicting and originate from relatively small patient groups. Aim of this study was to compare, in a large group of patients, the parotid gland dose-response curve after IMRT with that after conventional radiotherapy (CRT).
Material and Methods: A total of 221 patients treated with primary or postoperative radiotherapy for various head-and-neck malignancies were prospectively evaluated. Of these, 64 patients were treated with IMRT and 157 with CRT (of which 49 using 3D-conformal techniques). Stimulated parotid flow rates were measured before radiotherapy and 6 weeks, 6 months and one year after radiotherapy using Lashley cups. Parotid gland dose-volume histograms were derived from CT-based treatment planning. The TD_{50} (the dose leading to a complication probability of 50%) was calculated using the normal tissue complication probability (NTCP) model proposed by Lyman and the mean dose to the parotid gland. A complication was defined as stimulated parotid flow rate <25% of the pre-radiotherapy flow rate.
Results: No difference was found between the TD_{50} value for the IMRT and conventional treatment groups (Table 1). We found rather flat dose-response curves at one year after radiotherapy (slope $m = 0.44$ for the