Methods and Materials: Eighty-eight patients with T1N0M0 glottic cancer who had been treated between 1989 and 2008 were reviewed using direct laryngoscopy. Effects of T-stage (T1a or T1b), involvement of anterior commissure, involvement of pars cartilaginea, treatment time, and fraction size on local control were analyzed in all 88 patients; 57 had T1a glottic cancer and 31 had T1b glottic cancer; 17 showed involvement of pars cartilaginea while the other 71 did not. Anterior commissure was involved in 26 patients. Treatment time ranged from 45 to 78 days, and fraction size ranged from 2.0 to 2.5 Gy. The median follow-up period was 50.3 months.
Results: The 5-year actuarial local control rates were 92.8% for all 88 patients with T1 glottic cancer. In univariate analysis, local control rates for patients with involvement of pars cartilaginea were significantly lower than those without involvement (66.7% vs. 100%, p = 0.000013). On the other hand, the local control rates did not differ significantly between patients with T1a and T1b glottic cancer (93.8% vs. 91.1% N.S. P = 0.172). In multivariate analysis, involvement of pars cartilaginea was also the only significant factor affecting local control (p = 0.0049). Median time from the completion of the radiation therapy to the recurrence in patients with involvement of pars cartilaginea was 10 months. The cause-specific survival rate at 10 years was 100% regardless of involvement of pars cartilaginea, because the patients who had the recurrence were saved by salvage operation.
Conclusion: Involvement of pars cartilaginea is a significant factor for radiation control of T1 glottic cancer. Patients with involvement of pars cartilaginea had lower local control and shorter time to recurrence than patients without the involvement.

8577 POSTER

Update of a phase II trial of induction chemotherapy with docetaxel/capecitabine (DC) for patients with locally advanced head and neck cancer

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Background: Capecitabine(C) is an oral fluoropyrimidine that is preferentially activated in tumor tissues. Thymidine phosphorylase(TP) is an enzyme that converts capecitabine to 5-FU in tumor cells. The combination of docetaxel and capecitabine has shown synergism in preclinical studies. In addition, docetaxel and 5-FU have shown activity in head and neck cancer. We updated survival data of a phase II trial of DC induction chemotherapy in locally advanced head and neck cancer
Material and Methods: Between June 2001 and December 2003, 34 patients were enrolled. The treatment schedule consisted of D 75 mg/m^2 IV on day 1 and C 850 mg/m^2 PO BID on days 1−14, every 3 weeks. After 3 cycles of chemotherapy, all patients received radiotherapy up to 75 Gy of doses.
Results: Median age was 65 years old (33−77). The subjects included 31 males and 3 females with disease in the nasopharynx (7), oral cavity (4), oropharynx (4), hypopharynx (4), and larynx (15). The staging was III/IV = 12/22, with 28 squamous cell and 6 undifferentiated cell and PS 0/1/2 = 2/25/6. Eight patients did not complete treatment. The dose intensity was 98.2% (D 97.9%, C98.4%). Grade3/4 hematologic toxicities included 5 neutropenia (4.8%) and 2 neutropenic fever (1.9%). Grade 2/3 non-hematologic toxicities included 13 myalgia (12.6%), 25 oral mucositis (24.4%), 3 hand-foot syndrome (2.9%), 4 diarrhea (3.9%), and 4 peripheral neuropathy (3.9%). The overall response rate of induction chemotherapy was 94.1%: 3 CRs (8.8%), 29 PRs (85.3%), 1 SD (3%) and 1 PD (3%). The response rate after radiotherapy was 19CRs(79.2%) and 5 PRs (20.8%). The median duration of follow-up was 37 months (5−82). The median disease-free survival(DFS) and overall survival(OS) were 28 months (12−82) and 41 months (5−82) respectively. The 5-year DFS and OS rate were 29.4% and 38%. The three 2nd primary cancers were occurred (1 lung, 1 esophagus, 1 genitourinary) during follow-up period.
Conclusions: The DC regimen as a induction chemotherapy showed high response rates and tolerable. The results of survival data were also comparable. The DC regimen could be used one of effectinve induction chemotherapy regimen.

8578 POSTER

Comparison of clinical features and treatment outcome in elderly head and neck cancer patients with younger patients

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Background: The elderly patients often receive treatment less intensive than the younger patients because of age-related organ dysfuctions, co-morbidities, and poor tolerance to treatment. However, recent data reported that elderly patients are tolerable to chemotherapy and radiotherapy as much as younger patients. So we analyzed elderly head and cancer patients to compare clinical features and treatment outcome with younger patients
Material and Methods: We analyzed the clinical data of 180 head and neck cancer patients who were diagnosed at our center retrospectively, from January 2001 to December 2008. The analysis was conducted to compare clinical features and treatment outcome between elderly patients(EP⩾70 years old) and younger patients (YP <70 years old). Patients with thyroid cancer, lymphoma, sarcoma, skin cancer were excluded for analysis.
Results: The 180 patients were included with 57 elderly patients(31.7%). No sex (male, E: Y = 84.2%: 88.6%, p = 0.413), histology(squamous cell, E: Y = 94.7%: 88.6%, P = 0.615) and amount of smoking(>40 PYS, E: Y = 82.5%; 78.9%) differences were observed. The difference of involving primary site was not also observed except nasopharynx(oral cavity, E: Y = 14%; 13.9%, p = 0.433, oropharynx, E: Y = 8.8%;8.3%, p = 0.45, larynx E: Y = 33.3%: 36%, P = 0.54, sinus, E: Y = 14%: 11.1%, p = 0.67). Involvement of nasopharynx was less common in the elderly(E: Y = 8.8%: 15.6%, p = 0.02). The advanced stage was more common in the elderly (E: Y = 12.3%: 4.1%, p = 0.07) Concurrent chemoradiation were conducted more in the younger(E: Y = 7.2%: 22.5%, p = 0.03) but not induction chemotherapy followed by radiotherapy(E: Y =21.5%: 20.8%, p = 0.29) Best supportive care was performed more common in the elderly(E: Y =12.5%: 1.7%, p = 0.04) The patients who complete radiotherapy were more common in younger patients(E: Y = 89.3%: 98.9%, p = 0.01) and total radiation dose received were also more in the younger(E: Y = 59 Gy: 64.3 Gy, p = 0.01). The median overall survival received curative treatment was longer in the young patients(E: Y = 16.6 months(3−120): 24months(1.0−180), p = 0.03).
Conclusions: The elderly head and neck cancer patients have similar clinical characteristics but treatment pattern, tolerance to radiotherapy and outcome were different than younger patients.

8579 POSTER

Re-irradiation with Cetuximab in relapsed squamous cell carcinoma of the head and neck (HNC)

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Background: Patients with relapsed HNC after initial treatment including radiation (RT) may benefit of re-irradiation (R-RT). Most cases however cannot reach an adequate RT dose level. Cetuximab (C-mab) is a potent radiosensitivity restore agent and has shown benefit in combination with RT, with minor changes in RT toxicity. On these basis, the combination of C-mab and R-RT, even if at unadequate dose, could represent a good palliative approach.
Materials and Methods: from December 2003 and June 2006, nine pts with far advanced, relapsed, heavily symptomatic with poor pain control, HNC, underwent to a compassionate program of R-RT (30 Gy, 2 Gy/d, 5d/week, given every other week) combined with carboplatin AUC 6 (day 1−22−43) and weekly C-mab at loading dose 400 mg/m^2 given the week before R-RT, repeated weekly at the meinteinance dose of 250 mg/m^2 (6 cumulative doses of C-mab). All the accrued pts signed a informed consent to the treatment. All of them received prior RT, surgery and 2−3 prior chemotherapy lines.
Results: disease extension was evaluated with CT scan and physical examination. Pain was evaluated using a ten points visive analog scale (VAS). Toxicity was analyzed using the NCI-CTC version 2.0. At the start of treatment, all pts had uncontrolled pain tumor related (VAS ranges between

4−10, median 7). Most pts presented with massive T recurrence (6 pts). Massive T and N recurrence in 2 pts. All the pts completed the treatment as scheduled. One case of G III skin toxicity inside the irradiated field occurred. Systemic skin rush occurred in 5 pts (G1 in four and G2 in one). No other relevant side effects occurred. At the end of the treatment, all pts showed a dramatic improvement in clinical conditions: complete control of pain without analgesics was achieved in 5 pts, while the remaining had VAS value between 1 and 2 with analgesics. CT scan demonstrated objective responses in three pts and SD in 2.
Conclusions: R-RT with C-mab and carboplatin results in clear improvement of clinical status and in some objective responses in this very heavily pretreated pts population. Toxicity was moderate and did not required treatment interruptions. This compassionate experience supports the development of clinical trials.

8580 POSTER

Social support service impact to the anxiety and depression of oral cavity cancer patients in Taiwan

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Purpose: To understand the impact of social support service to anxiety and depression of oral cavity cancer patients
Material and Methods: Oral cavity cancer patients who will receive radical surgery treatment are invited to take part in three arms randomized trial. Group A included basic social support program, group B included basic and previous treated cancer survivor volunteer visit and share, group C include frequent social worker visit except group B service. All patients are evaluated the anxiety and depression status by Hospital Anxiety and Depression Scale(HADS) and social support questionnaire included emotion, information, evaluation and solid support domains. Patients are evaluated at three time point: T1, pre-surgery; T2, 10−14 days after surgery (discharge from ICU) and T3, discharge from hospital.
Result: One hundred and thirty four oral cavity cancer patients are included in this study after informed consent. Median age is 47 and 98% are male. Seventy one percents of patients married. Most patients are blue-collar workers and have economic duty for the family. All patients receive radical surgery, 43% of them received adjuvant chemoradiotherapy and 24% received adjuvant radiotherapy. All patients are definite anxiety and depression at T1 (mean: 16.3), T2 (mean: 16.2) and T3 (13.8). The change is significant between T3 and others. Patients in C group have significantly better HADS improvement compared to group A and B but no difference between group A and B. There is no significant difference in social support domain among different patients group except patients feel more social support from family than medical personnel at T1 and patients with religion belief can appreciate more support from medical personnel.
Conclusion: All oral cavity cancer patients will have anxiety and depression condition from admission to discharge. Combined more intensive social support care can significantly improve patient anxiety and depression condition during admission. Further study is needed to know what change after discharge and long term condition.

8581 POSTER

Single centre experience in the use of induction TPF (docetaxel, cisplatin, 5FU) in locally advanced head and neck squamous cell carcinoma (LAHNC)

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Background: Induction TPF followed by radiotherapy (RT) or concurrent chemoradiotherapy (CTRT) has been shown to give improved overall survival compared to PF (cisplatin, 5FU) in LAHNC. This is a retrospective review of the experience of a single centre in the use of TPF in a non trial setting.
Materials and Methods: We reviewed 98 patients with stage 4 LAHNC treated between Mar 2006 and Feb 2009 with a modified version of the TPF regime used in TAX 324 (T and P 75 mg/m^2, both d1, F 750 mg/m^2/d, d2−5) q 3 wks. We aimed to deliver 3 cycles of TPF.
Results: Median age was 56 (35−74). 10 patients started treatment at a lower dose due to various co-morbidities. The first 7 patients did not receive antibiotic prophylaxis, 1 (14%) developed febrile neutropenia (FN). 49 patients received routine prophylaxis with ciprofloxacin 500 mg bd d5−15, of these 16 (33%) developed FN; 42 patients received both GCSF and ciprofloxacin routine prophylaxis, and 6 (14%) developed FN. 7 patients had minor cardiac events, 2 of which were associated with raised Trop T. There were 2 treatment related death during induction chemotherapy (CT). 16 patients had dose reduction due to toxicities. 93 patients proceeded to radical RT with concurrent cisplatin (56), carboplatin (17), capecitabine (2), cetuximab (7) or without concurrent CT (11). 1 patient received palliative RT. 1 patient underwent surgical management, 1 patient refused further treatment. Following induction CT, 94 patients were evaluable, 70 (74.5%) had PR, 9 (9.6%) had CR and 15 (16%) had SD.
Conclusion: TPF is deliverable in a non trial setting with manageable toxicities. Response rates were comparable to TAX 324 (84% versus 72%) with a higher proportion of patients proceeding to definitive RT or CTRT (96% versus 79%). Patients with both GCSF and antibiotic prophylaxis have lower risk of FN.

8582 POSTER

Radiosensitivity of neck metastases from squamous cell carcinoma of the head and neck assessed by immunocytochemical profiling of fine-needle aspiration biopsy cell specimens

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Background: To assess radiosensitivity of neck metastases of squamous cell carcinoma of the head and neck (SCCHN) by immunocytochemical profiling of fine-needle aspiration biopsy (FNAB) cell specimens.
Methods: Immunocytochemical reactions (localization, percentage and intensity of positive cells) to p53, cyclin D1, stefin A and Ki-67 was determined in FNAB cell samples of neck metastases from 21 patients treated with concomitant chemoradiotherapy with mitomycin C and cisplatin. Immunoreactivity was graded according to the percentage of positively stained cells (p53, cyclin D1, stefin A: <10% vs. $\geqslant$10%; Ki-67: <20% vs. $\geqslant$20%) and correlated to clinical characteristics and response to therapy.
Results: Six (28.6%), eight (38.1%) and 15 (71.4%) FNAB cell samples were classified as p53, cyclin D1 and stefin A positive, respectively. Ki-67 staining positivity ranged between 0−80% (median 10%). Threshold value of 20% classified nine (42.9%) FNAB samples as Ki-67 positive. Statistically significant predictors of favorable nodal response to chemoradiations were p53 ($P = 0.025$) and cyclin D1 ($P = 0.048$) negativity and Ki-67 positivity ($P = 0.045$). Neck mestastasis recurrence correlated only with Ki-67 immunoreactivity (no vs. yes: negative 4 vs. 8, positive 8 vs. 1, $P = 0.024$). Favorable profile of the tandem cyclin D1 and Ki-67 (one or both of the two) further improved the predicitive strength of these markers: it was associated with less advanced cN-stage ($P = 0.045$), complete nodal clearance after therapy ($P = 0.004$), absence of regional recurrence (0.006), and favorable survival status ($P = 0.045$). Its clinical repercussion was tested for two outcomes, i.e. regional response at 8−12 weeks post-therapy and regional disease reappearance: the the sensitivity, specificity and positive predictive value were 93.8%, 80%, 93.8% and 100%, 55.6%, 75%, respectively. Combination of all three markers (favorable immunocytochemical profile of $\geqslant$2 of them) did not add to their predictive value.
Conclusion: FNAB is non-invasive, simple and cheap procedure, which could serve simultaneously for diagnostic purposes and for radiosensitivity testing. Immunocytochemical determination of the tandem cyclin D1 and Ki-67 in FNAB cell samples from neck metastases of SCC of the head and neck seems to be valuable marker for predicting regional response to radiotherapy and might assist when deciding on appropriate primary therapy.

Central nervous system

Oral presentations (Tue, 22 Sep, 09:00−10:45) Central nervous system

8700 ORAL

Subclinical systemic disease and relapse pattern in primary central nervous system lymphoma (PCNSL)

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Background: An unresolved question is why some PCNSL spread systemically while most others do not. It was postulated that extracerebral relapse of PCNSL may represent a sequel of initial occult systemic disease rather than true extracerebral spread.