8527 POSTER

Predictive Value of Epidermal Growth Factor (EGF) and Laminin-5 for Clinicopathologic Oral Squamous Cell Carcinoma(OSCC) Staging and Grading in Iranian Population

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Background: Squamous cell carcinoma(SCC) constitutes the main oral malignancy. Parallel to better understanding of molecular and genetic patterns of tumour behavior, more precise crrelation of tumour markers such as Epidermal Growth Factor (EGF) and Laminin-5 are sought to estimate macroscopic and microscopic tumour status.
Methods and Material: We conducted a cross-sectional study collecting oral SCC samples during 2006–2007 from pathology Department of Sahid Beheshti Dental School. Immunohistochemical staining with antibodies against EGFR and laminin-5 along with staining degree were reported by two experienced pathologist including degree of staining (low, medium, high), and pathological grading and clinical staging obtained from medical records.
Results: Forty-two patients' paraffin blocks of SCC examined with mean age 58 years ranged between 21−88, female to male ratio of 1.33:1 was observed. The study analyses revealed a significant correlation between the expression of laminin-5 with tumour stage and grade ($P < 0.001$ $r = 0.547$ respectively), yet no significant correlation between expression of EGFR and tumour stage or grade ($P = 0.894$ $r = 0.018$ and $P = 0.543$ $r = 0.86$ respectively). Considering high degree of staining and stage IV; sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) of 44%, 54%, 44%, and 78% calculated for EGFR and 55%, 78%, 58% and 86% for laminin-5 respectively.
Considering high degree of staining and grade 3; sensivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of 57%, 57%, 17% and 86% calculated for EGFR and 85%, 82%, 50% and 96% for laminin-5 respectively.
Conclusion: We concluded that laminin-5 has a better prediction for developing higher tumour stage and grade but further research needed for identifying the precise role of EGFR.

8528 POSTER

Fluorouracil and Cisplatin With or Without Docetaxel as Induction Chemotherapy for Squamous Cell Carcinoma of the Paranasal Sinuses − Single Center Results of a 10 Year Experience

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Background: Induction chemotherapy for squamous cell carcinoma (SCC) of paranasal sinuses is not a standard of care but maybe an interesting approach for locally advanced tumours.
Patients and Methods: We retrospectively reviewed 28 consecutive patients with SCC of the paranasal sinuses primary treated with chemotherapy. Chemotherapy regimen included cisplatin and fluorouracil (FP) or cisplatin, fluorouracil and docetaxel (TPF) for more recent patients. Chemotherapy was started regardless of the resectable status of patients and followed by either surgery and radiation or by radiotherapy alone.
Results: Twenty two men and 6 women, median age 59 years old, represented the studied population. Sixteen patients, all with T4 tumour, had induction chemotherapy with TPF compared to 12 patients, among which 8 patients with T4, with FP regimen. Partial response according to RECIST criteria was observed in respectively 81% and 75% of patients. Hematological toxicity was the most limiting toxicity. Two patients were initially mis-staged and found to have pulmonary metastatic disease at the evaluation despite a local response, and were excluded of the survival study. Surgery, most of the time followed by radiotherapy, was performed in 18 patients, whereas concomitant chemo-radiotherapy was performed in others. We didn't find any pathological complete response among the resected patients, but for 3 of them a major pathological response with less than 10% of viable cells was obtained; none of these relapsed with more than 4 years follow up. For the 20 patients treated by induction more than 1 year ago, 18 month-disease free survival rate was 50% in patients treated with TPF ($n = 8$), and 75% in the 12 patients treated by FP. Eighteen month-overall survival rate in the whole T4 group ($n = 14$) was 69%, with an overall median survival of 2.7 years.
Conclusion: Induction chemotherapy with FP or TPF regimen is highly active and well tolerated in SCC of paranasal sinus cancer, and should be prospectively studied. Further trials are expected especially in the setting of advanced tumour to allow surgery in a curative intent.

8529 POSTER

Toxicity of Cetuximab in Locally Advanced Head and Neck Squamous Cell Carcinoma Treatment

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Background: After the publication of the Bonner trial in 2006, cetuximab (CTX) plus high-dose radiotherapy (RT) became a treatment option for patients (pts) with locally advanced Head and Neck Squamous Cell Carcinoma (LAHNSCC). Although the trial concluded that concomitant high-dose RT plus CTX improved locoregional control and reduced mortality in these pts without increasing the common toxic effects associated with RT to the head and neck, recent reports have suggested a higher radio-induced acute toxicity profile with such combination.
Material and Methods: We retrospectively reviewed the LAHNSCC pts treated in our Institution with CTX (loading dose: 400 mg/m^2 1 week before RT; weekly infusions of 250 mg/m^2 during RT) plus RT (2 Gy/daily fraction, median total dose: 70 Gy) to determine the efficacy and acute toxicity of this treatment modality.
Results: Between May 2008 and December 2010, we treated 25 pts with LAHNSCC with concomitant CTX and RT. Most were men (84%), with heavy drinking and smoking habits; median age was 64 years old. All had stage III (24%) or IV (76%) disease, primary tumour site was mainly in the oropharynx (60%) and pts were not candidates for concomitant chemoradiation with cisplatin mostly due to co-morbidities. Compliance with concomitant CTX and RT treatment was good: 19 pts (76%) completed RT treatment with the full 70 Gy dose and 20 pts (80%) completed at least 5 infusions of CTX (although only 7 completed the 8 infusions). The major reason stopping CTX was cutaneous toxicity (56%; 10 pts). There were 3 toxic deaths during treatment (skin toxicity, infection, malnutrition) and 1 death two months after treatment (hemorrhagic complication). We identified mainly grade 3 adverse reactions: radiation skin dermatitis (80%), oral mucositis (36%) and skin rash (36%). Although 84% of pts had a prophylactic enteric feeding tube, weight loss was superior to 10% of initial body mass in 41.6% of pts. With a median follow-up (FU) of 8.2 months, 7 pts (28%) were in complete remission at last FU, 4 (16%) were alive with disease progression and 14 (56%) had died.
Conclusions: In our Institution, we found a high percentage of grade 3 adverse reactions in pts treated with concomitant RT and CTX therapy. There were 3 deaths due to treatment toxicity and important weight loss in 41.6% of pts. Thus, careful selection and monitoring of pts treated with this therapeutic modality are necessary.

8530 POSTER

Primary Chemotherapy With FEP Regimen (Farmorubicin, Cisplatin, 5-fluorouracyl) Followed by Craniofacial Resection and Radiotherapy for Paranasal Adenocarcinoma − Single Center Results of a 10 Year Experience

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Background: To study retrospectively the activity of induction chemotherapy with cisplatin, fluorouracil and epirubicin (FEP) in patients with adenocarcinoma of the paranasal sinuses.
Patients and Methods: Twenty seven patients with localized adenocarcinoma of the paranasal sinuses referred to our institution between 1999 and 2010, received chemotherapy regardless of their resectable status followed by either surgery and radiation or by radiotherapy alone. FEP (farmorubicin 70 mg/m^2 on day 1, 5-FU 750 mg/m^2/day, for the first 5 days as a 120 h continuous infusion, and cisplatin 100 mg/m^2 day 2 q 3 weeks) was planned for three courses.
Results: Most of the patients were exposed to wood dust and had intestinal type adenocarcinoma. Thirteen patients (48%) presented initially with skull base invasion. Haematological toxicity was the most limiting toxicity. Partial response according to RECIST criteria was observed in sixteen patients (59%), Stable disease in 9 patients (33%) and progression in 2 patients (7%). In all patients except two, surgery followed by radiotherapy could

be performed. Two patients didn't become resectable and received only radiotherapy after induction. Pathological complete response (pCR) defined by absence of viable tumour cells was found in 7 resected patients and minimal residual disease defined by less than 10% of viable cells in three other patients. For the 17 patients with a follow up greater than 3 years, 3 years overall survival was 71% and 3 year disease free survival was 53%, which is at least comparable to largest surgical series. At the time of analysis, all patients with a significant pathological response (n = 10) were alive and disease free.
Conclusion: Induction chemotherapy with FEP regimen is highly active and well tolerated in adenocarcinoma of paranasal cancer. Pathological CR was frequent and strongly associated with long term remission. Prospective trial is warranted to confirm these results.

8531 POSTER

Esthesioneuroblastoma − Clinical Experience From a Regional Cancer Centre in North India

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Background: This study is aimed to assess the clinical management and outcome in patients of esthesioneuroblastoma (ENB).
Methods and Materials: A retrospective review of medical records of patients of ENB (2009−10) was conducted. Primary endpoint of the study was overall survival. Statistical analysis was performed using Kaplan–Meier method (SPSS version 17).
Results: We identified 22 patients of ENB diagnosed at our centre from 2009−10. Altogether 4 patients were excluded due to attrition & 18 patients were evaluable. Median age at diagnosis was 29 years (Range 3−67 years). A male preponderance was noted (male:female = 2:1). Tumour stage was Kadish B in 7 & Kadish C in 11 patients. Cervical lymphadenopathy was noted in 4 patients at presentation. Common symptoms included epistaxis in 50%; nasal obstruction, proptosis & visual dimness in 27.77% each & nasal mass in 16.66% patients. 11/18 patients underwent surgery. Radiotherapy was used in all patients-16 with radical intent (median dose 60 Gy; range45−70 Gy) & 2 with palliative intent (range 8−30 Gy/1−10fractions). Radiation plan was 2 dimensional using telecobalt in 2 patients & 3 dimensional using megavoltage X-rays in 16 patients. Treatment volume encompassed the gross tumour with a safety margin of 1−2 cm. Neck was addressed in patients with involved nodes. Common field arrangement included 2 anterior oblique or anterolateral or superior & inferior vetex beams. Chemotherapy was used in the following setting: neoadjuvant in 10 patients (common regimens CAP-cyclophosphamide, adriamycin & cisplatin; EP-etoposide & cisplatin; VAC-vincristine,actinomycinD, cyclophosphamide), concurrent in 3 patients with weekly cisplatin & adjuvant in 5 patients with EP regimen. 7 patients had died at last follow-up with causes being local recurrence in 2, nodal recurrence in 2, distant dissemination in 3 (metastases in bone, brain & chest wall respectively), disease persistence in1 & unknown in 1. After a median follow-up of 14.43 months, 2 year overall survival & progression-free survival were respectively 62%±13% & 49.7±14%.
Conclusion: Management of esthesioneuroblastoma poses clinical challenge due to rarity, complex topography of disease, morbidity of extensive surgery and absence of well defined treatment protocols. Our institutional results are modest and clinical management has been quite heterogenous. In future treatment guidelines need to be framed − surgery alone for Kadish A tumour, surgery with post-operative radiation in Kadish B tumour & multimodality management- surgery (craniofacial resection) followed by chemoradiation in Kadish C tumour. Neoadjuvant chemotherapy merits trial in Kadish C tumours which are upfront unresectable.

8532 POSTER

Adjuvant Chemoradiation in High-Risk Head and Neck Cancer

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Background: Adjuvant chemoradiation (adCRT) is the standard of care in resectable high-risk head and neck squamous cell carcinoma (HNSCC). It improves loco-regional control and disease-free survival compared to radiotherapy (RT) alone, but increases adverse effects. The aim of our study was to evaluate the efficacy and toxicity of adCRT in a clinical practice setting.
Methods: We performed a retrospective review that included all patients (pts) with resected HNSCC treated with adCRT, cisplatin-based, from 2007 to 2009 at our Institution. Response evaluation by clinical observation (direct and by fiberoptic endoscopy when appliable) and loco-regional computed tomography scan 3 months after completion of treatment, disease status at last follow-up and acute and late toxicities were reviewed. Overall survival and disease free survival were estimated using Kaplan–Meier methodology.
Results: 94 pts included, 92.5% male, median age 54.5 years. Median follow-up: 16.3 months. The incidence of stage IV disease (77.6%) and major high risk pathological features such as involved surgical margins (43.6%) and extranodal spread of the disease (60.6%) was high. Compliance to treatment was good: 95.2% of pts completed RT treatment and 96.8% received at least 2 chemotherapy treatments. There was a high incidence of grade 2−3 skin (57.4%) and mucous-membrane (68.1%) acute adverse effects; 23.4% of pts lost more than 10% of initial body weight. Late toxicities (grade 2 or more xerostomy, neck fibrosis and osteoradionecrosis) were present in 40.42% of pts at least 3 months after treatment. No deaths occurred due to treatment. At last follow-up 75.5% of pts were alive; 71% in complete remission. Local or regional recurrence as the first site of treatment failure occurred in 12% of pts. The Kaplan–Meier estimates of 2-year disease free survival and overall survival were 65% and 80%, respectively.
Conclusions: Our data confirms the good outcome of pts treated with adCRT in a clinical practice setting. As we recorded a high incidence of adverse effects, a less toxic radiosensitizing regimen is desirable.

8533 POSTER

First Results of an Uncontrolled, Phase II Trial of Induction Chemotherapy With Cetuximab and Docetaxel-Cisplatin-5FU Followed by Cetuximab+Radiotherapy in the Responders in Locally Advanced Resectable Squamous Cell Cancer of the Head and Neck

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Background: The objective of this study was to determine the efficacy and safety of adding cetuximab to the standard TPF induction chemotherapy (ICT), administered with the aim of selecting patients for organ preservation.
Materials and Methods: Eligible patients were those who had untreated, Stage III, IV, resectable cancers of the oral cavity (OC), oropharynx (OPH), hypopharynx (HPH), or larynx (L). They had to be enrolled until at least 25 patients completed cetuximab+radiotherapy per protocol.
Treatment: 2 cycles of 75−75 mg/m^2 docetaxel and cisplatin (d1, d22), 750 mg/m^2 5-fluorouracil/day in continuous infusion (d1−5, d22−26), and cetuximab (400 mg/m^2 loading dose, then 250 mg/m^2 weekly). Complete (CR) or partial (PR) responders were treated with 70 Gy radiotherapy (RT) (2 Gy/day) with weekly 250 mg/m^2 cetuximab. Tumour assessment (CT/MRI) was performed before treatment, at the end of ICT, and three months after RT. Primary endpoint: rate of CRs 3 months after the end of RT.
Results: Ten OC (20%), 19 OPH (38%), 15 HPH (30%), 6 L (12%) patients were enrolled; 43/7 men/women, median age: 56 years. Response rate (RR) to ICT: PR: 33/50 (66%), stable disease (SD): 14/50 (28%), progressive disease (PD): 1/50 (2%), 1 OC and 1 HPH cancer patients (4%) were lost for measurement. Primary tumour sites of the ICT responders were: 1 OC, 16 OPH, 11 HPH, 5 L.
Twenty-seven of 33 ICT-responders were treated with RT+cetuximab per protocol. RR to RT: 21/27 (77.8%) CR, 5/27 (18.5%) PR, 1/27 (3.7%) PD. Grade 3,4 adverse events (AEs) during ICT were neutropenia 15 cases + 5 febrile neutropenias, 8 cases of low ion levels, 5 liver enzyme elevations, 2 hypersensitivity reactions to cetuximab, and one sudden death of uncertain cause. Grade 3,4 AEs during RT were 7/27 mucositis, 4/27 skin reactions, 1 patient died of pneumonia and hepatic insufficiency during RT. Three of 27 patients were feeding tube- and 2 of them also tracheostomy-dependent after the end of RT.
Conclusions: High RR to ICT in all but OC cancers was observed. Most of the ICT responders had CR after RT. Gr 3,4 AEs were common, but manageable, in patients with good general condition.

8534 POSTER

Voice Quality in Patients Treated With Surgery or Radiotherapy for Early Glottic Cancer − a Comparative Study

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Background: To retrospectively analyze the differences in voice quality by means of Voice Handicap Index (VHI-10) in patients with early glottic cancer treated with surgery or radiotherapy for early glottic cancer.