

Toxicity in combined modality treatment of HNSCC: Cisplatin versus cetuximab.

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Background: The standard of care for locally advanced HNSCC remains concurrent cisplatin (CIS) and radiotherapy (RT). In British Columbia patients ineligible for CIS (eg. renal or cardiac dysfunction, hearing loss), receive cetuximab (CET) and RT. We conducted a population based retrospective review at the British Columbia Cancer Agency (BCCA) to compare deliverability, toxicity and outcomes.

Methods: Charts of locally advanced HNSCC pts treated with RT (standard, hypofractionated or concomitant boost) and CIS (100mg/m² day 1, 22, 43) or CET (400mg/m² on Day -7 and 250mg/m² weekly) between Aug 2007 and Jan 2010 were reviewed. Data was collected on diagnosis, treatment intended and received, adverse effects and outcomes. Statistical analyses were undertaken using t-tests and chi-square.

Results: 190 patients (118 CIS, 72 CET) were analyzed on an intention to treat basis. Baseline characteristics were similar except in age (56.5 CIS vs 63.1 CET, p=0.005) and RT fractionation. CIS patients required more dose reductions and delays (33.9 vs 8.3%, p<0.0001; 15.3 vs 1.4%, p=0.002). Percentage of weight lost was higher in the CIS group (9.01 vs 6.87%, p=0.006), and more had greater than 10% weight loss (44.1 vs 23.6%, p=0.004). There was a trend to more unexpected admissions and g-tube insertions in CIS patients (22.8 vs 16.6%, p=0.337; 53.4 vs 41.7%, p=0.473). There was no significant difference in CIS vs CET primary and nodal complete response rate at assessment 3 to 6 months post treatment (84.7 vs 75%, p=0.266) or in distant metastases (11.9 vs 11.1%, p=0.875) at early follow-up (14.15 vs 10.25 months). There was a difference in primary and nodal recurrences (CIS 7.6 vs CET 20.8%, p=0.008).

Conclusions: At the BCCA, treatment of locally advanced HNSCC with RT and CET results in less dose reductions, delays and weight loss than CIS. A trend towards a higher complete response rate with CIS was paralleled by a significantly lower local recurrence rate compared to CET. Follow-up and further analysis is ongoing.