

Induction chemotherapy followed by concurrent chemoradiotherapy in locally advanced inoperable head and neck cancer: feasibility and response in Indian context

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Squamous cell carcinoma of head & neck is most common cancer in India. Most of these patients are in locally advanced stage and are inoperable. Concurrent chemo-radiotherapy (CCRT) has been standard of care for these patients. However, faced with poor results and increased distant failures, induction chemotherapy (ICT), before definitive CCRT has been introduced. This is an open label study of ICT with triple drugs (TAX 324 like protocol) followed by CCRT.

Primary objective:

To assess the response rate of ICT, with triple drug followed by CCRT in locally advanced head & neck cancer.

Secondary Objective:

To assess feasibility and toxicity profile of ICT, followed by CCRT.

Design of Study:

Prospective, open label observational study.

Methods:

Between 1 April 2007 to 31 Dec. 2008, 52 patients of Squamous Cell Carcinoma of head and neck carcinoma (locally advanced stage III, IV with no distant metastasis and considered to be nonresectable or were candidate for organ preservation) were enrolled. 3 cycles of ICT in form of Docetaxel 75mg/m², Cisplatin 75mg/m² both on Day 1 and 5-FU 750mg/m² continuous infusion on Day 1,2,3 were given in responding patients followed by CCRT with weekly Cisplatin 35mg/m² concomitant with radiotherapy (5 days per week; 66 to 70 Gy with Linac), for those who had response to induction chemotherapy.

Results:

Median age was 50 years (range 30 to 72) with male: female of 38/14 (73:27%). Anatomical location of tumors were, Hypopharynx 18 (35%), followed by 14 (27%) each of oral cavity and oropharynx. 40 (76.92%) could complete all three induction chemotherapy. 4 (7.69%) dropped and lost to follow-up. Four patients developed grade IV toxicity of induction chemotherapy and 4 had progressive disease during ICT and were treated separately.

18/48 (37.5%) patients showed complete response and 15 (31.25%) had partial response and 11 (22.91%) had stable disease giving the over all response rate of 44/48 (91.66%). All 40 patients could complete CCRT. Complete response after CCRT was 29/48 (60.41%) converting additional 11/48 (22.91%) patients into complete response while 11 (22.19%) patients had partial response and 8 (16.66%) had minimal response/ stable disease. Sites of treatment failure were primary 11 (22.91%), neck 14 (29.16%) and both 8 (16.66 %).

Toxicity Profile:

All patients had at least one treatment related adverse event. Main toxicity was mucositis in 41.66%. Other non-hematological grade III/IV toxicities were asthenia 36% and vomiting 25%. Haematology toxicity were 33.33% and 12% had febrile neutropenia. Grade III/IV anemia/neutropenia and thrombocytopenia were 8.33%, 25% and 12.50% respectively. 22 cycles were delayed in ICT and 16.66% patients each had delay in starting radiotherapy and dose reduction of 2nd or 3rd cycle of ICT.

Conclusion:

Sequential chemoradiotherapy in Metastatic head and neck cancer is feasible in Indian context. High complete (60.41%) and partial response rate(22.19%) are comparable with published data. Toxicity profile is predictable and manageable even in locally advance disease and given their poor nutritional status. Long term follow up is underway to assess the pattern of relapse and toxicities.