Combined modality treatment of Nasopharyngeal cancer with IMRT & Concurrent/Adjuvant Chemotherapy-First report from Nepal

Subhas Pandit, Surendra Gauchan, Anjani Jha, Surendra Chand, PP Chaurasia
Radiotherapy & Oncology, BP Koirala Memorial Cancer Hospital, Chitwan, Nepal

Purpose: Intensity modulated radiotherapy (IMRT) was started in Nepal in 2012. Nasopharyngeal cancer is a uniquely responsive to treatment with IMRT and combination chemotherapy. Hence we explored the feasibility and efficacy of a similar such treatment protocol in our patient population.

Methods and materials: From November, 2012 to Dec 2013, 14 Patients (9 male, 5 female) aged 12 to 70 years old who developed carcinoma of Nasopharynx were treated with IMRT along with combination chemotherapy. Intensity-modulated radiotherapy (IMRT) contouring, planning and plan evaluation was done in under a single protocol (RTOG 0615). The prescribed dose was 70Gy, 59.4 Gy and 54 Gy in high-risk, intermediate-risk and low-risk PTV fractions by Simultaneous Integrated Boost (SIB) technique. Chemotherapy was given either in concurrent or adjuvant setting. All patients received concurrent cisplatin chemotherapy and 8 patients received adjuvant chemotherapy (Paclitaxel / Carboplatin).

Results: 57% of patients had stage IV tumour. All patients received concurrent chemotherapy with cisplatin (100mg/m2) on week 1, 4 and 7 of radiotherapy. This was followed by adjuvant chemotherapy (Paclitaxel 175mg/m2 and carboplatin AUC 5) for 2 cycles every 4 weekly starting 1 month after completion off radiotherapy. About 57% of patients received all the intended treatment. 71% received all 3 cycles of CDDP during the RT phase and 57% received all two cycles of adjuvant chemotherapy. No treatment related death was encountered. At median follow-up of 13.3 months, 3 patients had relapsed (1 systemically and 2 loco-regionally) and one died. The LRC and OS at 1 years are 79.6% and 91.9%.

Conclusion: IMRT with concurrent and adjuvant chemotherapy is feasible in our setup with good results comparable to literature. Modern radiotherapy like IMRT reduces toxicity and improves patients tolerance to chemotherapy which may explain tolerance to concurrent and adjuvant chemotherapy in our patient population.

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