

## ACCELERATED RADIOTHERAPY FOR NASOPHARYNGEAL CARCINOMA

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***Purpose:*** Altered fractionated radiotherapy can enhance the local control in many types of tumor when compared with conventional radiotherapy, especially for head and neck cancer. The purpose of this prospective phase II study is to evaluate the feasibility, response and toxicities of accelerated radiotherapy for nasopharyngeal carcinoma (NPC).

***Materials and Methods:*** Through December 1992 to December 1995, 43 patients with pathologically documented NPC were entered. There were 32 male and 11 female with a median age of 51 years (range 28-78). The pathology of most patients (91%) belongs to WHO type II and III. According to 1988 AJCC staging system, 37 patients (86.1%) were stage IV, 5 (11.6%) stage III, and 1 (2.3%) stage II. The accelerated radiotherapy consists of 1.5 Gy/fraction, two fractions per day, with at least a 6-hour interval. The total dose is usually 72 Gy/48 fractions in 5 weeks.

***Results:*** The major toxicities were mucositis and skin reaction. Grade 3/4 mucositis occurred in 24 patients (55.8%) and grade 3/4 skin reaction in 26 patients (60.5%). Eleven patients asked to change to conventional radiotherapy (1.8-2.0 Gy/fraction, one fraction per day) during the later part of radiotherapy, and 2 patients had interruption for 2 and 4 weeks. Although the original accelerated schedule in 13 patients were modified, all patients completed the treatment with average dose 72 Gy/47 fractions/38 days (range 67.5-79 Gy). After a median follow-up time of 41 months (range 24-60), the nasopharynx disease-free, neck disease-free, and distant metastasis disease-free survivals are 86.6%, 97.3%, and 71.2% respectively. The 3-year overall survival and disease-free survival are 54.1% and 65.7%. Most patients failed due to distant metastases.

***Conclusion:*** Our data indicate that accelerated radiotherapy for advance NPC is both feasible and effective, with acceptable toxicities. Post-radiation adjuvant chemotherapy to eradicate subclinical micrometastasis should be further studied.

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Key words: Accelerated, Radiotherapy, Nasopharyngeal carcinoma