

Long-term use of nimotuzumab in combination with intensity-modulated radiotherapy and chemotherapy in the treatment of locally advanced nasopharyngeal carcinoma : experience of a single institution

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Abstract

Aim: To evaluate the efficacy and safety of long-term using nimotuzumab in combination with intensity- modulated radiotherapy (IMRT) and chemotherapy in the treatment of locally advanced nasopharyngeal carcinoma.

Methods: Between March 2009 and December 2013, 39 newly diagnosed patients with stage III–IV nasopharyngeal carcinoma were treated with IMRT and nimotuzumab concomitantly. The distribution of disease was stage III in 20 (51.3%), stage IV A in 14 (35.9%), and stage IV B in 5 (12.8%). All the patients received at least two cycles of cisplatin-based neoadjuvant chemotherapy followed by IMRT and more than nine cycles of nimotuzumab 200 mg/week. Acute and late radiation-related toxicities were graded according to the Acute and Late Radiation Morbidity Scoring Criteria of Radiation Therapy Oncology Group.

Results: With a median follow-up of 41 months (range, 15–85 months), the estimated 3-year local recurrence-free survival, regional recurrence-free survival, distant metastasis- free survival, progression failure-free survival, and overall survival rates were 97.4%, 100%, 92.2%, 80.7%, and 89.3%, respectively. The median cycle for nimotuzumab addition was 12 weeks. Grade 3 radiation-induced mucositis accounted for 42.6% of treated people. No skin rash and infusion reaction were observed, distinctly from what is reported in nimotuzumab-treated patients.

Conclusion: Nimotuzumab plus IMRT showed promising outcomes in terms of loco-regional control and survival, without increasing the incidence of radiation-related toxicities for patients.

Keywords: nasopharyngeal carcinoma, intensity-modulated radiotherapy, nimotuzumab