

Outcomes of radiation therapy for T1 glottic carcinoma from an Italian regional series with doses ranging from 60 to 66 Gy

Roberto Manzo¹, Vincenzo Ravo¹, Paola Murino¹, Anna Morra¹, Giuseppe Panetti², Antonio Laudati³, Agnese Prisco³, Giancarlo Panelli⁴, and Paolo Muto¹

¹UOC Radioterapia, and ²UOC Otorinolaringoiatria Presidio Ospedaliero C. Ascalesi; ³Dipartimento Assistenziale di Radioterapia, Seconda Università degli Studi di Napoli; ⁴Servizio di Radioterapia, Clinica Mediterranea, Napoli, Italy

ABSTRACT

Aims and background. Radiotherapy has remarkable success rates for the cure of patients affected by glottic carcinoma; local control rates are similar to surgery with lower morbidity and better functional results. Our aim was to determine local-regional control rates, overall survival, second cancer incidence, acute-late toxicity and prognostic factors in our series of T1 glottic cancer patients with radiation doses of 60 to 66 Gy. Functional results were not sufficient for statistical analysis.

Methods and study design. A retrospective study was carried out of all T1N0 glottic carcinomas treated with radiation therapy between 1996 and 2006. To be eligible, patients had to have newly diagnosed cancer and had to be treated with a curative intent by radiation therapy alone. Ninety-eight patients satisfied the eligibility requirements: 85 patients had T1a disease; 13 patients were staged as T1b. Treatment was performed for all cases with a 6 megavoltage linear accelerator. The total dose prescribed varied from 60 to 66 Gy: 2 Gy/fraction, 1 fraction/day, 5 fractions/week. During treatment, a weekly clinical evaluation was performed; endoscopic examination was performed once every two weeks. After the treatment, a clinical, endoscopic and radiological follow-up was performed every three months for the first two years, every 6 months till the fifth year, and then once a year.

Results. With a median follow-up of 41.5 months (range, 10-132; mean, 56.8), we registered 12 cases of local failures; 8 of them were successfully treated with salvage surgery (median time to relapse, 3-48 months). The local relapse rate was 12.2%, and disease-specific survival, taking into account salvage surgery, was 6%. Thirty-four deaths were registered: 2 for local progression, 2 for distant metastasis, 4 for a new primary cancer, and 26 for non-neoplastic causes. Five- and 10-year overall survival were respectively 85.8% and 69.4%. Four cases of lung cancer were detected in the upper aerodigestive tract in our series. In terms of acute-late toxicity, no grade 3-4 dermatitis, dysphagia or hoarseness occurred. Mild dermatitis and arythenoid edema were the most common causes of toxicity. Only one patient did not complete the treatment (60 Gy instead of the planned 66 Gy).

Conclusions. Our series confirmed the primary role of radiation therapy for the cure of T1N0 glottic cancer. Outcomes were good in terms of local-regional control as well as overall toxicity. Radiation therapy can be offered to T1 glottic cancer patients as a valid alternative to surgery, with high rates of functional preservation. Free full text available at www.tumorionline.it

Key words: glottic cancer, local failure, prognostic factors, radiotherapy, toxicity.

Correspondence to: Dr Roberto Manzo, UOC Radioterapia, Ospedale Ascalesi, Via Egiziaca a Forcella 31, 80139 Napoli, Italy.
Tel +39-081-2542177;
fax +39-081-5630660;
e-mail robertomanzo@inwind.it

Received November 25, 2009;
accepted February 18, 2010.