

Study of the prognostic factors of the relapse of laryngeal cancer after postoperative radiotherapy at the Cancer Center Emir Abdelkader of Oran Algeria

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Abstract

Objective of the study: This is a retrospective single-center study with an analytical aim to determine the prognostic factors for relapse in patients treated with radiotherapy after total laryngectomy with lymph node dissection for laryngeal cancer at the Cancer Center Emir Abdelkader of Oran.

Patients and methods: During the study period from 2014 to 2018, eighty-nine patients (n=89) with squamous cell carcinoma of the larynx were treated with postoperative radiotherapy [Figure 1]. Relapse-free survival was studied in univariate analysis according to pre-treatment criteria using Kaplan-Meier survival curves [Figure 2]. We performed a unifactorial analysis to identify relapse factors. The statistically significant factors were studied in multifactorial analysis according to the Cox model.

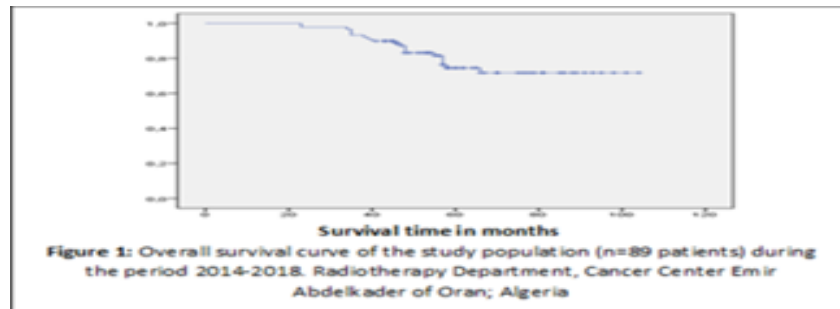


Figure 1. Overall survival curve of the study population (n=89 patients) during the period 2014-2018, Radiotherapy department, Cancer Center Emir Abdelkader of Oran, Algeria.

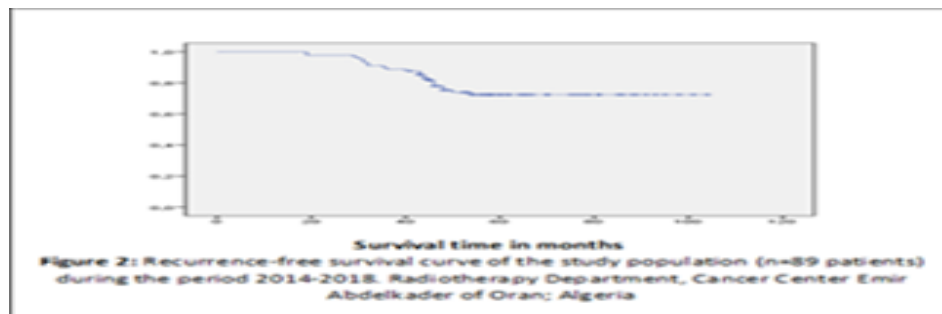


Figure 2. Recurrence free survival curve of the study population (n=89 patients) during the period 2014-2018, Radiotherapy department, Cancer Center Emir Abdelkader of Oran, Algeria.

Results: The average age was 62.7 years (40-86 years). Postoperatively, the tumor was classified as pT3 and pT4 in 93.3% of patients. Histological lymph node involvement was found in 36 cases (40.4%) with capsule rupture in 39% of cases; while the limits of surgical excision were microscopically infiltrated in 11 patients (12.3%). Chemotherapy

concomitant with radiotherapy was used in 67.4% of patients. With a median follow-up of 57 months (23 to 104 months), the probabilities of relapse-free survival and five-year overall survival are 71.2% and 72.4%, respectively. The factors correlated with a high risk of relapse were the locally advanced tumor stage pT4 ($p=0.001$), the site of the tumor in the event of subglottic extension ($p=0.0003$), infiltrated surgical limits R1 ($p=0.002$), lymph node involvement ($p=0.004$) particularly in the event of lymph node capsule rupture ($p=0.001$) as well as the time between surgery and adjuvant radiotherapy ($p=0.005$). However, in the subgroup analysis, the major prognostic factors for disease-free survival were subglottic tumor extension ($p=0.001$) and time between surgery and adjuvant radiotherapy ($p=0.005$).

Conclusion: Combined surgery and postoperative radiotherapy constitute an effective treatment modality in the management of laryngeal cancer. Close cooperation of the entire cervico-facial oncology team is essential, expressed during a multidisciplinary consultation meeting with the need to respect the time between surgery and radiotherapy.

Biography

Taleb Lotfi is Assistant Professor in radiation oncology from Medical College, University Ahmed Ben Bella Oran 2 Algeria. He is the Head of the consultation and emergency unit at the department of radiotherapy at Emir Abdelkader Cancer Center Oran. He is the President of the medical Council at the Cancer Center Emir Abdelkader 2011-2013. In 2017 he defended the Doctor's thesis in Oran "CONFORMATIONAL RADIOTHERAPY FOR PROSTATE CANCER IN ORAN: TECHNIQUE AND RESULTS". He is the member of the Algerian society of radiotherapy oncology and involved in patient care as well as research. His main research interests are the superior aero digestive way and genitourinary cancers. He is Pioneer in conformal radiotherapy for prostate cancer in Algeria.