

Assessment of influence of smoking, drinking, leukoplakia and dental irritation on local control of early oral tongue carcinoma treated with brachytherapy: age and dental factors are potential prognostic factors

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ABSTRACT

Background. To examine the background characteristics of elderly patients (65 years or older) with node-negative mobile tongue cancer (T1-2N0M0) who showed worse local control than a younger group.

Materials and methods. We retrospectively analyzed background data for 265 patients treated with brachytherapy with or without external radiotherapy between 1967 and 1999. We examined dental factors (such as irritation by prosthesis), leukoplakia, tobacco smoking and alcohol consumption for comparisons between the elderly (age ≥ 65 years; $n = 83$) and a control group (64 years or younger; $n = 182$).

Results. The elderly patients showed a worse outcome than the control group (respectively 86% and 70% at 5 years; $P < 0.05$). Incidence of dental factors tended to be higher for elderly patients (53%) than the control group (40%, $P = 0.07$). Dental factors proved to have prognostic importance for local control. Five-year local control rate was 85% for patients with and 76% for patients without dental factors ($P = 0.04$). The elderly group positive for dental factors showed a lower 5-year local control rate (61%) than the other three groups [(elderly without the dental factor (-) group (80%), control with the dental factor (+) group (84%), and control without the dental factor (-) group (87%)] ($P < 0.05$). Leukoplakia was found more frequently in the control (23%) than in the elderly group (5%) ($P = 0.006$) but had no effect on treatment outcome.

Conclusions. Age and dental factors (including prosthesis irritation) are potentially important prognostic factors for local control of oral tongue cancer treated with brachytherapy, especially for elderly patients.

Key words: aged patients, brachytherapy, dental factors, high dose rate, low dose rate, tongue cancer.

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