

# Functional Results of Voice and Swallowing in Patients Treated with Surgery or Radiation Therapy for Early Glottic Cancer

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**Objective/Background :** Laryngeal neoplasms such as early glottic cancer can be effectively treated with several methods, namely laser surgery, conservation laryngeal surgery and radiotherapy. Therefore, the preservation of the ability to speak and swallow normally is another important consideration in the selection of therapy for early glottic cancer. The purpose of this study is to compare the functional results of voice and deglutition for early glottic cancer patients treated with surgery or radiation.

**Materials and Methods :** Between January 2002 and October 2006, 43 patients with the early glottic cancer who had undergone radiotherapy (n=19) or surgery (n=24) were retrospectively investigated. All the patients were phonetically analyzed using CSL and Fo, Jitter, Shimmer and NHR were evaluated. For aerodynamic test, maximum phonation time (MPT) and mean air flow rate (MFR) were also evaluated. Modified barium swallow (MBS) was performed to evaluate swallowing function.

**Results :** There were no significant difference in all the vocal parameters between radiotherapy group and surgery group. But shimmer differed significantly between radiotherapy group and laser cordectomy group. In aerodynamic study, MPT was significantly longer in the radiotherapy group than in the surgery group, but no significant difference was observed between the radiotherapy group and laser cordectomy group. MBS showed better results in the surgery group than in the radiotherapy group.

**Conclusion :** Therapeutic modality for patients with early glottic cancer should be chosen in consideration of voice quality and swallowing, and according to multiple parameters of the patients' conditions.