



Voice Outcomes After Transoral Laser Microsurgery or Radiotherapy in Early Glottic Cancer: Factors to Consider

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Treatment goals in patients with early glottic cancer include maximizing local control of the disease and preserving the function of the larynx as much as possible. Standard treatments for early glottic cancer include transoral laser microsurgery (TLM) and radiotherapy (RT), which were reported to result in similar oncologic outcomes [1]. More recent studies comparing the two treatment methods, however, have yielded inconsistent findings. For example, one study found that survival was longer in patients with Tis/T1a glottic cancer who underwent TLM than RT [2], whereas another study found that oncologic recurrence rates were higher in patients with T1a and T1b glottic cancer treated with TLM than with RT [3]. In contrast to both, a third study found no difference in 5-year local control rate between TLM and RT in patients with T2 glottic cancer [4]. Nevertheless, the oncologic outcomes of both treatments are excellent in patients with early glottic cancer. Because both TLM and RT provide comparable oncological outcomes, quality of life (QOL) considerations, such as voice outcomes, cost, and duration of treatment, are important in determining the primary treatment modality in individual patients.

Patients with early glottic cancer experience voice changes after both TLM and RT. Many studies have been performed to clarify differences in voice changes between these treatment methods. Although several studies have reported that voice outcomes after TLM are superior to those after RT [5-7], other studies have reported that voice quality is better after RT than after TLM [8-10]. Studies have also found that self-rated voice-related QOL is similar in patients with early glottic carcinoma treated with RT and TLM [11,12], although one of these studies found that objective parameters, including jitter, shimmer, fundamental frequency, and noise/harmonic ratio, are compromised

after TLM [11].

One important reason for these conflicting results is the lack of a standard method for evaluating voice outcomes. Some studies used self-assessment tools, such as the Voice Handicap Index (VHI), and perceptual evaluation tools, such as the GRBAS (grade, roughness, breathiness, asthenia, and strain) rating scale. Other studies focused on instrumental assessments, such as laryngeal imaging, acoustic analysis, and aerodynamic assessment. Moreover, studies have reported voice outcomes at different follow-up periods.

Treatment characteristics can also affect voice outcomes. For example, voice outcomes in patients who undergo TLM can depend on the extent of surgical resection. Generally, better VHI outcomes were reported following lower-grade (European Laryngological Society Classification of cordectomies type [ELS] I&II) than higher-grade (ELS III) resection [13], and voice outcomes in patients who undergo RT are affected by radiation dose. Voice outcomes are also affected by individual factors, including smoking status, chronic disease, and previous surgery.

It is not yet possible to determine whether TLM or RT provides superior voice outcomes. Therefore, in making treatment decisions for patients with early glottic cancer, clinicians should consider various factors, including the uncertainties, risks, and benefits of each method, and should fully discuss these factors with their patients.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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