

Oncological Efficacy of Ktp Laser in Early Glottic Cancer

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Abstract

Background: Early glottic cancer (T1, T2) is typically managed by curative-intent radiotherapy or CO2 laser resection. Disease control rates and voice outcomes are comparable. KTP laser treatment of early glottic cancer has shown promise with similar control rates in limited studies. This study presents the largest series outside its conception in Boston, USA.

Methodology: A retrospective chart review analyzed treatment outcome of consecutive patients with early glottic cancer (T1-2 NOMO). Pre-treatment video stroboscopy and voice handicap index were compared two years following treatment. Recurrence, progression to radiation or open surgery and mortality were recorded.

Results: For 61 patients (average age 61 years, 59 males) 34=T1a, 15=T1b, 9=T2a and 3=T2b. Three had prior irradiation and were excluded. Four patients had recurrence (6.9%): Two CIS (treated with repeat KTP laser surgery), two SCC (one recurrence progressed to open partial resection and chemo-radiotherapy with subsequent total laryngectomy for a nonfunctioning cancer-free larynx, one recurrence progressed to total laryngectomy within one year and then chemotherapy for extensive loco-regional recurrence three months later. Primary KTP laser treatment provided 100% disease-free survival at two years, larynx preservation of 96.5% and post-surgery radiation at 2%. Radiotherapy was preserved as a future option in 98% of patients (100% in T1, 91.6% of T2). The cure rate was 96.5% (Two year minimum follow-up).

Conclusion: This study provides further data supporting oncological efficacy of KTP laser treatment in early glottic cancer. Recurrence and salvage total laryngectomy rates are low with the former often amenable to repeat KTP laser treatment. There is minimal requirement for post-surgery radiation allowing its preservation as a future treatment in 98%.

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Biography

Matthew Broadhurst is a fellowship trained laryngeal and upper airway surgeon specialising in laryngeal surgery, voice restoration and obstructive sleep apnoea. He returned to Brisbane, Australia from Boston, Massachusetts in 2007 having worked for two years at Harvard Medical School and Massachusetts General Hospital. He was the first fellowship trained laryngeal surgeon in Australia and now has a large tertiary referral practice in voice and larynx

disorders and sleep apnoea. In his practice, he utilizes state of the art techniques in surgery to the airway and is actively involved in clinical research and education both nationally and internationally. His areas of special interest and research include KTP laser for dysplasia and glottic cancer, short and long term management of vocal fold paralysis, phonotraumatic lesions in Professional voice users and laryngeal papilloma.