

ONCOLOGICAL AND FUNCTIONAL OUTCOMES FOLLOWING TRANSORAL LASER MICROSURGERY IN PATIENTS WITH T2a VS T2b GLOTTIC SQUAMOUS CELL CARCINOMA

David Forner, MH Rigby, RD Hart, JR Trites, S. Mark Taylor

OTOLARYNGOLOGY

BACKGROUND: Decreased vocal cord mobility (T2b) has previously been thought to predict worse oncological outcomes in glottic squamous cell carcinoma (SCC) treated with radiotherapy, compared to normal cord movement (T2a). There is a paucity of evidence comparing oncological control and voice outcomes between T2a and T2b glottic SCC patients treated with transoral laser microsurgery (TLM). This study identified functional and oncological outcomes in this cohort.

METHODS: A prospective study of patients treated with TLM for T2 glottic SCC from 2003 to 2017.

RESULTS: In total, 80 patients were included. Five-year local control rates were significantly different between T2a and T2b patients (73.2% vs 50.7%, $p < 0.05$). Five-year survival was also significantly higher in T2a patients (94.0% vs 76.1%, $p < 0.05$). There was no significant difference in mean VHI score in the pre-operative (19.8 vs 16.3, $p > 0.05$) and post-operative (11.5 vs 10.4, $p > 0.05$) periods between T2a and T2b patients. Significant improvement in mean VHI scores following surgery in T2a patients was seen (- 8.3 points, $p < 0.05$), while T2b patients saw a non-significant improvement (- 5.9 points, $p > 0.05$). The overall laryngeal preservation rate was 91.3%, with all patients requiring organ sacrifice being T2b ($p < 0.05$).

CONCLUSION: This study highlights positive functional outcomes for T2a glottic SCC. Despite significantly worse oncological outcomes in T2b patients, voice quality outcomes in this patient group were found to be similar to T2a patients after treatment with TLM. However, there was a significantly increased risk of laryngeal sacrifice in T2b patients.