

Outcomes of Nonsurgical Management for Stage T4 Laryngeal and Hypopharyngeal Cancer

Background: Stage T4 larynx and hypopharynx cancer are underrepresented in prospective trials using induction chemotherapy and definitive radiation therapy for organ preservation. Concerns for the suboptimal outcomes of non-surgical management have led to preference in surgery. However, there is limited data to guide the treatment of inoperable patients or those who refuse surgery.

Methods: We reviewed Memorial Sloan Kettering's experiences on the nonoperative management of T4 laryngeal and hypopharyngeal cancer and report the outcomes. We included all T4 primary larynx (n=44) or hypopharynx patients (n=53) from 1997 to 2015. Univariate analysis (UVA) was performed to determine factors that impacted treatment response.

Results: The 2-/5-year OS rates were 73%/38% for larynx patients and 52%/29% for hypopharynx patients. Locoregional failure (LRF) occurred in 25% and 19% of larynx and hypopharynx patients, respectively. On UVA of the larynx subset, N3 nodal status and non-intensity-modulated radiation therapy were negatively associated with OS; treatment with radiation therapy alone impacted disease-free survival; and age>70 was associated with LRF. On UVA of the hypopharynx subset, only T4b status significantly impacted OS. In the larynx and hypopharynx cohorts, 68% and 85% received a percutaneous endoscopic gastrostomy (PEG) tube and 32% and 40% received a tracheostomy tube, respectively. Combined, 18% of larynx patients and 38% of hypopharynx patients had a persistent PEG and tracheostomy at last follow-up and 55% and 29% had neither, respectively.

Conclusion: We report better than previously noted outcomes among T4 larynx and hypopharynx patients who have unresectable disease or refuse surgery.