



Letter to the editor

Function restoration after laryngectomy – Present and future



Although there has been recent efforts at laryngeal transplantation and development of an artificial larynx for the laryngectomee [1–3], from a practical point of view, Traceo-oesophageal puncture (TEP) and skilful preservation of unaffected laryngeal remnants and their reconstruction continues to be the principal method of voice restoration after surgical removal of cancer affected larynx at its advanced stages.

Voicelessness due to organ sacrifice was a major concern that paved way to the landmark VA trial [4] in the early nineties that shifted the management paradigm of advanced laryngeal cancers to non-surgical organ preserving protocols, incorporating supplementation of chemotherapy to conventional radiation therapy (chemotherapy enhanced radiotherapy). However over the past 2 decades we have realized that the pendulum representing this paradigm has perhaps swung a bit too far to a state of affairs where we encounter immediate treatment related life threatening toxicities often followed by laryngo-esophageal dysfunction [5,6] due to its late sequelae. This is probably due to an initial underestimation of the scope of surgical conservation options in the management of at least a subset of those patients who satisfied the inclusion criteria of the VA trial. [ie, Transoral Laser Microsurgery and Open Partial Laryngectomy].

Salvaging treatment failures is indeed a daunting task [7] for the head and neck surgical oncologist and it is often fraught with complications. Meanwhile the possible over estimation of the non-surgical organ preservation in apparently advanced laryngeal carcinoma is being discussed widely these days and we are witnessing a resurgence of interest in laryngeal conservation surgeries both in upfront and salvage settings. In spite of all these developments, organ sacrifice becomes inevitable in many, both in an upfront and salvage settings.

As the longevity of all voice and airway (generating and assisting) devices currently available in the market are generally low and with escalating costs due to issues like biofilm formation, a biological alternative would be the best answer in the long run [7,8]. Near Total Laryngectomy (NTL) and Supracricoid partial laryngectomy (SCL) are some of the viable options to address this issue. Furthermore adequate resection of the involved cancer and its mandatory margin and immediate reconstruction with suitable vascular tissue [9] is another viable and perhaps permanent alternative.

Considering the complexity of the function of this vital organ and the overall failure of the infrequent attempts at laryngeal transplantations [1] and issues related to long term maintenance of in dwelling biocompatible devices, voice restoration efforts should focus on tailored resection with best possible function preservation [10] and biointegration of the most simple voice producing and if possible, airway maintaining device (aspiration preventing assistive device like a univalved speaking tracheostomy tube).

Our research, in collaboration with Shri Chitra Thirunal Institute for Medical Science and Technology, Thiruvananthapuram, Kerala, India with the support of Kerala State Council For Science Technology and Environment (KSCSTE) focuses on addressing these issues and hopes to come out with concrete solutions in the near future.

Funding

Kerala State Council For Science Technology and Environment.

Declaration of Competing Interest

Nil.

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