

## Speech and Swallowing Function after Tonsillo-Lingual Sulcus Resection with PMMC Flap Reconstruction: A Case Study

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**Abstract :** Background: Tonsillar Lingual sulcus is the area between the tonsils and the base of the tongue. The surgical resection of the lesions in the head and neck results in changes in speech and swallowing functions. The severity of the speech and swallowing problem depends upon the site and extent of the lesion, types and extent of surgery and also the flexibility of the remaining structures. Need of the study: This paper focuses on the importance of speech and swallowing rehabilitation in an individual with the lesion in the Tonsillar Lingual Sulcus and post-operative functions. Aim: Evaluating the speech and swallow functions post-intensive speech and swallowing rehabilitation. The objectives are to evaluate the speech intelligibility and swallowing functions after intensive therapy and assess the quality of life. Method: The present study describes a report of an individual aged 47years male, with the diagnosis of basaloid squamous cell carcinoma, left tonsillar lingual sulcus (pT2n2M0) and underwent wide local excision with left radical neck dissection with PMMC flap reconstruction. Post-surgery the patient came with a complaint of reduced speech intelligibility, and difficulty in opening the mouth and swallowing. Detailed evaluation of the speech and swallowing functions were carried out such as OPME, articulation test, speech intelligibility, different phases of swallowing and trismus evaluation. Self-reported questionnaires such as SHI-E(Speech handicap Index- Indian English), DHI (Dysphagia handicap Index) and SESEQ -K (Self Evaluation of Swallowing Efficiency in Kannada) were also administered to know what the patient feels about his problem. Based on the evaluation, the patient was diagnosed with pharyngeal phase dysphagia associated with trismus and reduced speech intelligibility. Intensive speech and swallowing therapy was advised weekly twice for the duration of 1 hour. Results: Totally the patient attended 10 intensive speech and swallowing therapy sessions. Results indicated misarticulation of speech sounds such as lingua-palatal sounds. Mouth opening was restricted to one finger width with difficulty chewing, masticating, and swallowing the bolus. Intervention strategies included Oro motor exercise, Indirect swallowing therapy, usage of a trismus device to facilitate mouth opening, and change in the food consistency to help to swallow. A practice session was held with articulation drills to improve the production of speech sounds and also improve speech intelligibility. Significant changes in articulatory production and speech intelligibility and swallowing abilities were observed. The self-rated quality of life measures such as DHI, SHI and SESE Q-K revealed no speech handicap and near-normal swallowing ability indicating the improved QOL after the intensive speech and swallowing therapy. Conclusion: Speech and swallowing therapy post carcinoma in the tonsillar lingual sulcus is crucial as the tongue plays an important role in both speech and swallowing. The role of Speech-language and swallowing therapists in oral cancer should be highlighted in treating these patients and improving the overall quality of life. With intensive speech-language and swallowing therapy post-surgery for oral cancer, there can be a significant change in the speech outcome and swallowing functions depending on the site and extent of lesions which will thereby improve the individual's QOL.

**Keywords :** oral cancer, speech and swallowing therapy, speech intelligibility, trismus, quality of life

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