SURGICAL MANAGEMENT OF DYSPHAGIA IN HEAD AND NECK CANCER PATIENTS

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INTRODUCTION

In recent years, there has been a trend towards chemoradiation therapy (CRT) as primary treatment modality for organ preservation in patients with head and neck squamous cell carcinoma (HNSCC)1-6. Chemoradiation therapy causes acute mucositis in the oral cavity and pharynx and delayed fibrosis of the cervical and pharyngeal muscles leading to severe dysphagia7. In addition, 65-88% of these patients suffer from multiple episodes of aspiration pneumonia which may cause death8-11.

A large number of these patients also have a tracheotomy tube that produces multiple morbidities. Additionally, many become dependent on gastric tube (G-tube) feedings and their quality of life (QOL) is severely compromised12. Presence of a G-tube is a constant reminder of the disease process, even with eradication of cancer. Traditional swallowing therapy (TST) is effective in a very small number of patients who are tracheotomy and gastric tube dependent. We developed a surgical protocol based on the function of the pharynx and larynx, and site of stenosis for those patients who failed TST to restore swallowing.

RESULTS

No procedure-specific complications were noted in the study subjects. All 80 patients from 4 groups were decannulated and maintained sufficient oral intake such that all Gastric tubes were removed. No patient experienced aspiration pneumonia.

Combined antegrade and retrograde esophageal dilation was performed once per patient in Group I. Initially all patients in this group were placed on weekly home dilation program (Figure 1). However, only fifteen patients needed to dilate themselves after 6 months. Three patients in Group II and 5 patients in Group IV needed home dilation at 1-year follow-up. Patients who underwent MERLAP maintained adequate lumen in the upper aerodigestive tract at 3-year follow-up.

All patients in Groups I, II and IV had a near normal voice. Six patients in Group III underwent placement of a tracheo-esophageal voice prosthesis, and all 6 patients regained a functional voice.

CONCLUSIONS: Using this surgical approach, optimum rehabilitation of swallowing can be achieved in patients with chemoradiation induced dysphagia.

REFERENCES

7. Proctor P, et al. The tracheoesophageal groove is exposed after reflecting the thyroid lobe. The recurrent laryngeal nerve is identified ... at the stricture site. The graft is then sutured to the normal side-walls of the pharynx and esophagus, and to the edges of the stricture for three weeks, at which time the NG tube is removed and patients start a thin liquid diet and advance as tolerated.
11. As the trend shifts towards primary organ preservation protocols there is an increased incidence of chemoradiation induced dysphagia and dysphonia9-20. Multiple studies indicate that swallowing is the most important domain in quality of life for head and neck cancer patients.

As a result, we continue to encounter patients with cancer treatment-related dysphagia and conventional swallowing therapy is often ineffective in these patients with intense fibrosis of cervical and laryngopharyngeal muscles and they remain gastric-tube dependent.

In the current study, we developed a surgical protocol for those patients who remain G-tube dependent. We prefer combined antegrade and retrograde esophageal dilation (CARD) followed by home self-dilation if the stricture is amenable. Home dilatation program was effective for patients in Groups I, II and IV and all patients were able to tolerate a sufficient oral diet. Multi-modality dysphagia treatment including traditional swallowing therapy, surgical intervention and a home dilatation program successfully rehabilitates swallow in gastric-tube-dependent patients who undergo chemoradiation therapy for head and neck cancer.