Risk Factors Associated with Oropharyngeal Dysphagia Post Esophagectomy: A Study Proposal

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Abstract

Purpose: Despite the growing body of evidence confirming incidence of oropharyngeal dysphagia (OPD) post esophagectomy, it is currently unknown why some patients are more at risk of developing this complication than others. No studies to date have identified pre-operative or intra-operative predictor variables for post-operative OPD in a homogeneous esophagectomy cohort. The aim of this study is to determine if any risk factors pre-dispose patients to developing OPD after surgery.

Method: All patients undergoing esophagectomy with cervical anastomosis at a single center would be included. Consecutive sampling will be used to reduce selection bias. Patients who do not develop OPD would be the control group. Nine primary predictor variables would be identified. The outcome variable, OPD post-surgery will be confirmed on routine radiological exam using the Rosenbek penetration-aspiration scale. Patient demographics and predictor variables between the disease (OPD) and control group would be compared. To avoid multiple testing, the study will be powered using the strongest predictor identified in preliminary analysis. Univariate analysis will be used for initial exposure used to power the study. A two-tailed p-value of less than 0.05 will be considered significant. Univariate analysis will be performed and predictors will be two-sided. Univariate p-value (<0.05) will be selected for multivariate logistic regression with OPD as the dependent variable.

Conclusion: Determining which patients are at risk of developing OPD will streamline care, ensuring interventions are appropriately targeted. It would also inform design of future randomized controlled studies examining treatment approaches for OPD by enabling appropriate sample selection.