

## Brief Research

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# The Assessment of Gastroesophageal and Gastropharyngeal Reflux Prevalence After Total Laryngectomy

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### ABSTRACT

**Objective:** The aim of this study is to detect prevalence of glomerular filtration rate (GFR) in total laryngectomy patients.

**Method:** Thirty-eight healthy patients who underwent total laryngectomy and followed at least 6 months participated to study. Patients were asked to complete gastroesophageal reflux disease questionnaire (GerdQ) and examined with flexible laryngoscopy.

**Result:** Twenty-seven of 38 (71%) patients had scores over 8 and diagnosed as gastroesophageal reflux (GER). Eleven patients had scores lower than 8.

**Conclusion:** Our study revealed that GER and GFR incidence are higher in total laryngectomy patients.

**KEYWORDS:** Laryngectomy; Gastropharyngeal reflux (GFR); Gastroesophageal reflux (GER).

**ABBREVIATIONS:** GFR: Glomerular Filtration Rate; GerdQ: Gastroesophageal reflux disease questionnaire; GER: Gastroesophageal reflux.

### INTRODUCTION

Gastroesophageal reflux (GER) is a condition in which gastrointestinal content passes through upper esophageal sphincter and reaches esophagus. This situation is called GER disease when causes signs and symptoms.<sup>1</sup> Gastropharyngeal reflux (GFR) is an advanced situation that gastrointestinal content reaches pharyngeal mucosa passing through upper esophageal sphincter.<sup>2</sup> It has been proved that GFR is associated with numerous otorhinolaryngological diseases including otitis media with effusion, laryngeal granuloma and subglottic stenosis. It is accused of being one of the etiological factors in esophageal carcinoma.<sup>3,4</sup> GFR usually exhibits itself without gastrointestinal symptoms.<sup>5</sup> It should be considered in chronic otorhinolaryngological problems.<sup>6</sup>

Although its importance has been accepted in otorhinolaryngological problems it was not studied in detail at laryngectomized patients. GFR may cause pharyngocutaneous fistula and voice problems in laryngectomized patients.<sup>7</sup> We aimed to study prevalence of GFR in total laryngectomy patients.

### METHODS

We evaluated 38 healthy patients who underwent total laryngectomy and followed at least 6 months. All participants were informed of the study procedures and signed a consent form. Patients were asked to complete Gastroesophageal reflux disease questionnaire (GerdQ) and examined with flexible laryngoscopy. Statistical analysis of the data was conducted using SPSS version 17.0. After analysis, data were presented using descriptive statistical methods (mean±standard deviation). Student *t*-tests were used for comparison data of pre-operation and data of post-operation.

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**RESULTS**

GerdQ has high sensitivity and specificity in GER patients and scores over 8 was accepted as GER.<sup>9</sup> Thirty-four males and 4 females were included in the study. Mean age of the patients were 59.8±73.27 of 38 (71%) patients had scores over 8 and diagnosed as GER. Eleven patients had scores lower than 8. There was a statistically significant difference between patients with higher scores and lower scores than 8 ( $p=0.024$ ).

**CONCLUSION**

Our study revealed that GER and GFR incidence are higher in total laryngectomy patients. This can be related to physiological changes which were caused by surgery. Diagnosis and treatment of these patients are important because it negatively affects quality-of-life (QoL). Due to above reported facts we recommend prophylactic proton pump inhibitor use after total laryngectomy.

**CONFLICTS OF INTEREST**

The authors declare that they have no conflicts of interest.

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