شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم

HANAA ALY

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جامعة عين شمس

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قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

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تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

HANAA ALY

Salivary Pepsin versus Oesophageal PH Metry as a Diagnostic Test for Laryngopharyngeal Reflux Disease

Thesis

Submitted for Partial Fulfillment of
Master Degree in **Internal Medicine**

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Ahmed Mohammed Mahmoud Mostafa

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INTRODUCTION

Laryngopharyngeal reflux (LPR) is the retrograde movement of gastric contents (acid and enzymes such as pepsin) into the laryngopharynx leading to symptoms referable to the larynx/hypopharynx.

Typical LPR symptoms include Intermittent dysphonia/hoarseness, mild cervical dysphagia, Globus pharynges, and chronic cough, ***(Franco et al., 2015)***. As well, chronic throat clearing, excessive throat mucus, sialorrhea, sensation of postnasal drainage, dysgeusia,halitosis and throat pain ***(Belafsky, 2007).***

The pathogenesis of laryngopharyngeal diseases (LPRD) are multiple and include: a) motor abnormalities, such as impaired lower esophageal sphincter (LES) resting tone, transient LES relaxations (TLESR), impaired esophageal acid clearance and delayed gastric emptying; b) anatomical factors, such as hiatal hernia; c) visceral hypersensitivity; d) impaired mucosal resistance.

Esophageal pH monitoring is the current gold standard for diagnosis of laryngopharyngeal reflux,as normal ph is considered to be close to ph 7.0 intra oesophageal ph below 4.0 activate pepsin which is the main proteolytic enzyme of the gastric secretion.

Esophageal pH monitoring is performed for 24 or 48 hours using six standard components. Of these 6 parameters a pH score called Composite pH Score or DeMeester Score has been calculated, which is a global measure of esophageal acid exposure. A Demeester score > 14.72 indicates reflux.

- Components of 24-h Esophageal pH Monitoring
- Percent total time pH < 4
- Percent Upright time pH < 4
- Percent Supine time pH < 4
- Number of reflux episodes
- Number of reflux episodes ≥ 5 min
- Longest reflux episode (minutes)

According to recent studies, pepsin activity leads to depletion of the enzyme carbonic anhydrase III (CAIII), inhibiting the expression of protective protein mucin 2,3,5 A, 5B, Sep70 and Sep53 and E-cadherin all of which have a vital role in maintaining cellular integrity of the epithelium. Most recent researches stress the importance of the so-called nonacidic or low acidity reflux in the etiology of the LPRD. Acidity and pepsin are responsible for the development of laryngopharyngeal mucosal injury ***(Birtic et al., 2012).***

Laryngeal mucosa is resistant to acidic material above pH 4. However, there are some studies showing that the presence of pepsin can damage the laryngeal tissue, even in mild acidic or alkaline environments ***(Ocak et al., 2015)***. At this point, pepsin draws the attention of clinicians, as a potential factor for damage of the mucosal tissues,.

AIM OF THE WORK

Evaluation of salivary pepsin as a non-invasive rapid test for diagnosis of laryngo-pharyngeal reflux versus oesophageal ph metry.