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LETTER TO THE EDITOR

The importance of 24-h hypopharyngeal–esophageal impedance–pH monitoring for the treatment of laryngopharyngeal reflux

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Dear editor,

We read the paper of Zhang et al. about the role of hypopharyngeal–esophageal multichannel intraluminal impedance–pH monitoring for diagnosing of laryngopharyngeal reflux (LPR) [1]. The authors showed data about the value of combined LPR diagnosis with both pepsin saliva measurements and 24-h hypopharyngeal–esophageal multichannel intraluminal impedance–pH monitoring (HEMII–pH). They reported several levels of sensitivity and specificity of combined diagnosis and concluded that for patients with positive combined multi-timepoint salivary pepsin testing, the duration of HEMII–pH can be appropriately shortened to reduce patient suffering [1]. We congratulate the authors for the study originality associating HEMII–pH findings and pepsin measurements. However, we would like to draw attention to some points.

First, the suggestion to shorten the time of HEMII–pH was based on several pepsin saliva measurements, which may be costly and time-consuming in our practice. Although efficient public healthcare systems, each pepsin saliva measurement costs 30–50 euros in Europe for the patient. Moreover, the pepsin saliva level can vary throughout the day, because it may be influenced by the 'refluxogenic potential' of foods and beverages consumed during meals [2–4]. Thus, some authors recommended collecting one saliva sample—fasting—in the morning [4, 5]. In other words, it is conceivable that the pepsin saliva levels measured in the study of Zhang et al. were influenced by meals and were not so reliable than expected.

Second, the main weakness of pepsin saliva detection remains the focus on only one gastroduodenal enzyme for the LPR diagnosis. Indeed, some authors suggested that bile salts [6, 7] and potentially other enzymes may be increased in the saliva of LPR patients, and, therefore, may contribute to the mucosa injury in some patients with low undetectable pepsin level(s). The consideration of bile salts and other gastroduodenal enzymes for future studies makes particularly sense according to the high proportion of nonacid or weakly acid reflux in European [8], American [9], or Asian [10] LPR patients.

Third, the 24-h HEMII–pH is useful for the LPR diagnostic, but may provide important information for the treatment. Indeed, most patients have daytime and upright pharyngeal reflux events [8, 10], while only 5.5% of reflux events occur

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nighttime. According to studies, > 50% of LPR patients did not report supine/night-time events [8, 11]. The determination of the patient profile at the HEMII–pH may lead to the prescription of personalized treatment, protecting or not the laryngopharyngeal mucosa night-time [12]. Thus, patients with only daytime and upright reflux events may benefit from once daily—morning—20 MG proton pump inhibitor (PPI), which is sufficient to protect mucosa during daytime. Patients with daytime and night-time reflux events may benefit from twice daily 20 MG PPI to protect mucosa daytime and night-time. In the same vein, patients with recumbent gastroesophageal reflux disease at the HEMII–pH (bedtime), may take alginate at bedtime in addition to the thrice daily post-meal alginate [12]. It could be interesting to keep the HEMII–pH device 24 h to have a specific reflux pattern for patients.

Naturally, these methodological points do not make the study of Zhang et al. any less important, original and relevant for practitioners. The consideration of refluxogenic scores of foods and beverages consumed prior to saliva collection and measurements, as well as the consideration of bile salts in the saliva of patients may strengthen the knowledges in the LPR field. We encourage teams, such as the Li et al. team, to pursuit their future interesting works.

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Declarations

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