

## Non-erosive reflux disease patients are more complex than the sole endoscopy tells us

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To The Editors:

We have read with interest the article by Kislig et al. [1] on the prevalence of mouth's signs and symptoms in patients with different phenotypic manifestations of gastroesophageal reflux disease (GERD). By using various questionnaires, the authors observed that self-perceived tongue coating, bad taste, and bad breath (halitosis) were not typically associated with erosive reflux disease or non-erosive reflux disease (NERD).

Although the study was well designed and conducted, it is very surprising that Kislig and co-workers have almost ignored the complexity of patients with NERD that they defined traditionally as the absence of esophageal mucosal abnormalities visible at endoscopy [2]. Recent functional investigations performed with the impedance-pH technique, the current gold standard for the diagnosis of GERD [3], have clearly shown that this remarkable group of patients with typical reflux symptoms and without esophageal mucosal lesions is greatly heterogeneous from a pathophysiological point of view and can be subdivided into several well-defined subgroups [4–7]. Indeed, among endoscopy-negative patients with heartburn, it is possible to distinguish subsets of patients with real reflux disease (i.e., patients with “true” NERD and those with

hypersensitive esophagus) and those with functional heartburn (FH), who do not pertain to the realm of GERD, and must be treated with drugs different from antisecretory compounds [2, 8]. These new findings are relevant because they have contributed to change our current understanding of the epidemiologic, pathogenetic, and clinical features of this major GERD population, including their complex management [2].

Based on these concepts and given that the number of patients with potentially FH may account for about 25 % of endoscopy-negative population, it is possible that the negative results obtained by Kislig and colleagues could be the consequence of an incorrect inclusion among their NERD patients of subjects without a true reflux disease. Accordingly, it is reasonable to suppose that after excluding patients with FH from their NERD population, different results in terms of severity of clinical and/or subjective signs of halitosis and tongue coating would have been observed in their study population.

Therefore, we would like to stress that the more precise knowledge of the subgroup of NERD to which patients with heartburn belong is fundamental to understand whether extra-esophageal signs, symptoms, or risk factors such as overweight and obesity [9] are really related to reflux disease or not.

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