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Postprandial bloating after laparoscopic Nissen fundoplication: A cause of comorbidity?

We read with interest the article by Anvari and Allen (*Can J Surg* 2001;44:440-4) on postprandial bloating after Nissen fundoplication, which describes the prevalence and possible contributing factors in 578 patients suffering from gastroesophageal reflux disease (GERD) before and after laparoscopic Nissen fundoplication. As their data show, 73% of the patients reported some postprandial bloating before the procedure. In general, laparoscopic antireflux surgery was able to improve the severity of bloating in most patients during the 5-year follow-up. No significant correlations were found between the 24-hour pH values or lower esophageal sphincter basal pressures and different scorings of postprandial bloating. Additionally, they could not find any significant differences concerning dysphagia scores and bloating 2 years postoperatively. They concluded that bloating is a very common symptom in patients with GERD, and proposed several factors as the cause of this symptom, such as aerophagia, delayed gastric emptying or the patient's heightened perception of gastric filling.

We totally agree with Anvari and Allen that bloating and other gas-related symptoms are common in patients suffering from GERD. As previously shown in one of our own studies,[1] gas-related symptoms are extremely common, especially in patients who have GERD and concomitant aerophagia. There is evidence[2] that patients with GERD may swallow air, which can produce belching, bloating and subsequent reflux. In contrast, reflux of gastric contents into the esophagus can trigger multiple dry swallows in a partly unknown and reflex attempt to enhance acid clearance,[3] which can result in gas-related symptoms.

In patients who had GERD with concomitant aerophagia, we found a significantly higher percentage who had impaired esophageal motility, with objectively and subjectively dominant reflux in the upright position and a strong belief that stress had some bearing on their symptoms, than in patients without aerophagia. Factors such as lower esophageal sphincter pressure and DeMeester score did not differ between these 2 groups. Some of these results correspond with other reported findings.[3,4] Laparoscopic antireflux surgery in patients with and without concomitant aerophagia reduced GERD-related symptoms significantly and improved patients' quality of life. In contrast to patients without aerophagia, the subjective improvement in severity of symptoms was less in patients with aerophagia. Further, patients with aerophagia rated postoperative dysphagia as more intense without any objective explanation.

We concluded that complete symptomatic relief might be the result of a physiologic correction by antireflux surgery: there is no further trigger effect of acid reflux leading to multiple dry swallows enhancing esophageal clearance. In patients with continuing gas-related symptoms, we believe that factors such as stress and other psychological disorders affect these symptoms.[4,5] What we would like to know is, did Anvari and Allen find any comorbid conditions in those patients with a worsening or continuation of bloating postoperatively?

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(Dr. Anvari replies)

Dr. Kamolz and his colleagues have highlighted some of their recent findings with respect to gas-related symptoms in patients with gastroesophageal reflux disease and the effect of laparoscopic Nissen fundoplication. Of interest is the role of aerophagia, triggered by the presence