Background & Aims

Heterotopic gastric mucosa (HGM) located in the proximal esophagus is referred to as “inlet patch.” Although its prevalence is reported to be around 4%, the inlet patch is infrequently biopsied. Therefore, studies of its demographic and clinical associations have relied on small numbers of patients and the prevalence and significance of intestinal metaplasia in HGM has remained unclear. The aim of our study was to investigate the clinical significance of HGM with and without intestinal metaplasia in a large group of patients.

Methods

From a large computerized pathology database, all patients with gastric mucosa in the proximal esophagus were extracted. Subsequently, two unique groups were created, one comprised of HGM with IM, the other without. Differences between these two groups and the control group (all patients with esophageal biopsies and no HGM) were analyzed by the Mann-Whitney Rank Sum Test and unadjusted Odds ratios.

Results

There were 2,107 patients with HGM. The most striking pathologic association was an inverse association with Barrett esophagus (BE) (OR 0.66; 95%CI 0.57-0.77; p<0.001).

Patients with HGM presented with significantly more complaints of cough (OR 1.7; 95%CI 1.23-2.41; p<0.05) and globus sensation (OR 1.48; 95%CI 1.03-2.13; p<0.05) than controls. Gender distribution and patient ages were approximately equal.

Further stratification yielded 59 (2.8%) HGM cases with IM and 2,048 (97.2%) without. 12/59 (20%) of the patients with metaplasia and 180/2,048 (8.8%) of the patients without metaplasia had a simultaneous Barrett esophagus, imparting a significantly increased propensity to have Barrett esophagus in the metaplasia group versus the no metaplasia group (OR 2.65; 95%CI 1.38-5.09; p<.005). The metaplasia group included significantly more males (66%) than the non-metaplasia group (52%; OR 0.56 95%CI 0.32–0.96; p<.05). Notably, the metaplasia group had a prevalence of IM in the stomach that was twice as high (7.5%) as both the no metaplasia (3.8%) and control (3.7%) groups.

Study Highlights

• HGM had an inverse association with BE; however HGM with IM was significantly associated with BE.
• HGM with IM was identified twice as often in patients with gastric IM versus those without.
• Studies are needed to elucidate the interaction of intestinal metaplasia at these three seemingly unrelated locations: the inlet patch, the GE junction, and the non-cardiac gastric mucosa.

References