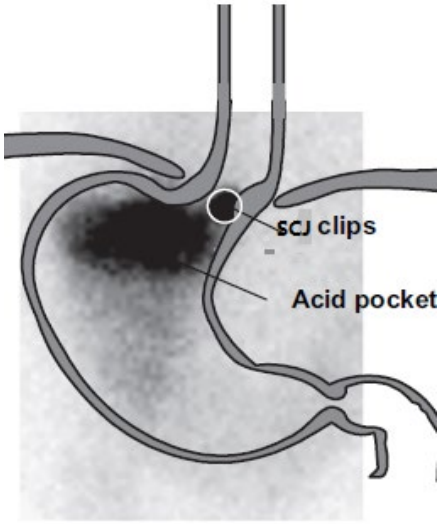
Cite this as: Yuan-yuan NIAN, Xian-mei MENG, Jing WU, Fu-chu JING, Xue-qin WANG, Tong DANG, Jun ZHANG, 2020. Postprandial proximal gastric acid pocket and its association with gastroesophageal acid reflux in patients with short-segment Barrett's esophagus. *Journal of Zhejiang University-Science B (Biomedicine & Biotechnology)*, **21**(7): 581-589. http://doi.org/10.1631/jzus.B1900498

Postprandial proximal gastric acid pocket and its association with gastroesophageal acid reflux in patients with short-segment Barrett's esophagus

Key words: **Short-segment Barrett's esophagus; Postprandial proximal gastric acid pocket; Gastroesophageal acid reflux**

Research Summary

This review mainly focused on determining the characteristics of postprandial proximal gastric acid pocket (PPGAP) and its association with gastroesophageal acid reflux in patients with Barrett's esophagus (BE).



JZUSB

Research Summary

Table 1. Comparison of indicators for postprandial proximal gastric acid pocket (PPGAP) between patients with short segment Barrett's esophagus (BE) and healthy individuals

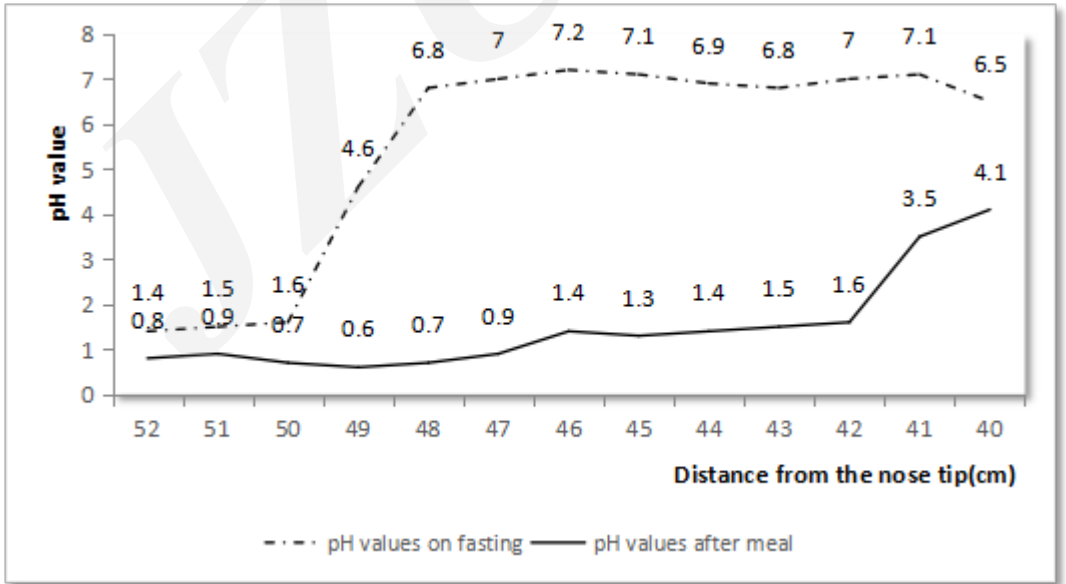
	Time of PPGAP appearance (min)	Length of PPGAP (cm)	Lowest pH of PPGAP	Mean pH of PPGAP
Patients with short segment BE (n = 15)	14 (13, 19)	5 (3, 7)*	1.1 (0.8, 1.5)*	1.8 (1.6, 2.2)
Healthy individuals (n = 15)	19 (16, 21)	2 (1,2)	1.6 (1.4, 1.9)	2.1 (1.7, 2.3)

Data are expressed as the median and percentiles (P25, P75).
* indicates $P < 0.05$.

The length of PPGAP was significantly longer and the lowest pH was significantly lower in patients with short-segment BE than in healthy individuals[5(3, 5) vs. 2(1, 2) cm, 1.1(0.8, 1.5) vs. 1.6(1.4, 1.9), respectively].

Research Summary

PPGAP is commonly seen, PPGAP started to appear proximally from the gastroesophageal pH step-up point to the esophageal lumen. The acidity of PPGAP was higher in the distal segment than in the proximal segment.



Research Summary

In short-segment BE patients, there were significant correlations between the acidity and the appearance time and length of PPGAP. The length and acidity of PPGAP were positively associated with gastroesophageal acid reflux episodes. The acidity of PPGAP was associated with the DeMeester scores, the GerdQ scores and the fasting intragastric pH.

JZUSB

Innovation points

This study showed that PPGAP is commonly seen, the length and acidity of PPGAP are associated with gastroesophageal acid reflux, the DeMeester score and the GerdQ score in patients with short-segment BE.

JZUSB