



## Comparative study on 24-h esophageal pH monitoring and endoscopy in the diagnosis of gastroesophageal reflux disease

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### Abstract

**AIM:** To investigate the 24-h esophageal pH monitoring and endoscopy in the diagnosis of gastroesophageal reflux disease.

**METHODS:** 24-h esophageal pH monitoring and endoscopy were performed in 39 patients with classic reflux symptoms. Additionally, 16 healthy adults underwent 24-h esophageal pH monitoring.

**RESULTS:** There is a very significant difference between GER patients and healthy volunteers for each parameter of 24-h esophageal pH monitoring ( $P < 0.001$ ). About 54% (21/39) GERD had normal endoscopic appearance, mild esophagitis patients were common, Grade 1 esophagitis accounted for nearly 90% (16/18), Grade 2 esophagitis for 10% (2/18). None for Grade 3 and 4 esophagitis. The

total and supine percent time of pH less than four, episodes lasting for five minutes, and the longest reflux episodes were much more in esophagitis patients than those in patients with normal endoscopic appearance, but no significant difference in reflux episodes between the two groups ( $P > 0.05$ ). The 24-h esophageal pH monitoring of 39 cases showed 34 were positive (87%), but that of control group showed only 1 was positive (93% negative). 24-h esophageal pH monitoring was positive in 17 of 18 patients with esophagitis. The positive rate was 94%. Conversely, 17 of 34 patients with positive 24-h esophageal pH monitoring had normal endoscopic appearance.

**CONCLUSION:** 24-h esophageal pH monitoring is an important method for detecting acid reflux, especially in patients with no endoscopic esophagitis. Endoscopy is useful in detecting esophagitis and its degree. Both of the two measures may play complementary roles. A combined approach using 24-h esophageal pH monitoring and endoscopy may further increase the diagnosing rates.

**Key words:** 24-h esophageal pH monitoring; Endoscopy; Diagnosis

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