

胃食道逆流診斷之先進食道功能檢查

Novel esophageal functional tests for GERD

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Gastroesophageal reflux disease (GERD) is a common disorder in adults. The diagnosis of GERD is commonly established based on the response to reflux symptoms to acid-suppressive therapy or on objective findings by diagnostic tests. Current diagnostic tests for GERD include endoscopy, pH, and pH impedance monitoring. The role of endoscopy in GERD is suboptimal since most patients with GERD do not present with erosive disease. Esophageal 24-hour pH monitoring with or without combined impedance is usually performed in patients with negative endoscopy and poor response to PPI therapy to assess esophageal acid exposure and symptom-reflux correlations. It can also detect acid and non-acid reflux events. High-resolution manometry (HRM) may provide greater understanding of the function of the esophagogastric junction and the risks associated with hiatal hernia.

A great day-to-day variability in acid exposure time (AET) might be frequent during 24-h pH-metry testing. The wireless pH capsule (BRAVO) allows for monitoring for 48-96 hours and can potentially improve the sensitivity and specificity of the testing. However, current diagnostic tests depend on measurement of reflux at a point in time ignoring chronicity of disease. In response to these limitations, catheter-based mucosal impedance testing (MIT) was developed to measure conductivity of the esophageal epithelium directly during endoscopy. Current studies are promising in differentiating GERD from non-GERD conditions (normal, eosinophilic esophagitis (EE)), with a higher specificity and positive-predictive value than pH monitoring.

Pepsin detection in the saliva has been proposed to suggest GERD and as a non-invasive method in reflux testing. Narrow-band imaging (NBI) may identify small epithelial changes that suggest GERD. Additionally, novel esophageal motility metrics such as esophagogastric junction-contractile integral (EGJ-CI) and contractile segment impedance (CSI) from HRM, as well as post-reflux swallow induced peristaltic wave index (PSPWI) acquired from pH-impedance were recently proposed to increase the diagnostic yield for GERD. In the future, improving diagnostic testing of GERD is important to correctly identify the disease and provide appropriate care. The strategies should be explored to measure the long-term effect of GERD

on esophageal epithelium. The endoscopy-guided real-time measurement of MIT may become useful and instantaneous diagnostic tools for patients with reflux disease.