



## Effects of smoking on esophageal motility function

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### Abstract

**AIM:** To study the relationship of smoking and esophageal motility disorder.

**METHODS:** From all 380 patients with digestive symptoms and esophageal manometry detection, we selected 2 groups to study: the smoking group consisted of 65 patients who have been smoking for at least 10 years, the non smoking control group consisted of 89 patients. All subjects were detected by pneumohydrolic 4 channel catheter infused by sterile water with a rate of 0.6 mL/min. Lower esophageal sphincter (LES), esophageal body motility and upper esophageal sphincter (UES) function were recorded and analyzed.

**RESULTS:** (1) In smoking group, the abnormal manometric rate was 92.3%; In control group, the abnormal manometric rate was 76.4%. The difference between the 2 values was statistically significant ( $\chi^2$  test:  $P < 0.05$ ). (2) The frequency of low LES in esophagitis and non esophagitis group was respectively 56.9%, 33.7% ( $P < 0.01$ ); The frequency of low amplitude of esophageal body contractions was respectively 36.9%, 15.7% ( $P < 0.05$ ).

**CONCLUSIONS:** (1) In 380 patients with digestive symptoms, the rate of long time smoking patients is 17.7%. So in some degree smoking is correlated with digestive disease, especially in males. (2) In smoking group, the rate of esophageal motility disorder was higher than that of nonsmoking group. This indicated that long time smoking may be the important reason to induce esophageal motility disorder diseases. (3) The main effect was to decrease lower and upper sphincter function and decrease esophageal body cleaning function. The danger of smoking is a generalized damage to the body far from causing esophageal motility disorder.

**Key words:** Smoking; Esophageal manometry

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