

学位論文の要旨

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学位論文名 Five-Year Follow Up Study of Patients With Reflux Symptoms and Reflux Esophagitis in Annual Medical Check-Up Field

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論文内容の要旨

INTRODUCTION

Gastroesophageal reflux disease (GERD) is characterized by the presence of esophageal mucosal injury or symptoms associated with the abnormal reflux of gastric contents into the esophagus. Patients with GERD can be divided into those with and without endoscopically proven erosive esophagitis. The majority of patients with reflux symptoms have been reported to not have endoscopically proven erosive esophagitis, even when the symptoms are severe. However, the long-term course of patients with GERD, especially those without erosive esophagitis, has not been fully clarified. In this study, we investigated changes in the presence of reflux symptoms over a period of 5 years in Japanese subjects in order to elucidate possible risk factors for the persistence of symptoms and reflux esophagitis over a long term.

MATERIALS AND METHODS

The study subjects were individuals who initially visited Shimane Institute of Health Science for gastric cancer screening between April 2000 and March 2001. After obtaining written informed consent, the possible presence of reflux symptoms and endoscopically proven erosive esophagitis were investigated. The presence or absence of reflux symptoms was assessed

using the Japanese version of the Carlsson-Dent self-administered questionnaire (QUEST), with subjects with scores greater than 6 considered to be positive for reflux symptoms. Among the individuals who underwent screening during the initial period, 555 returned for gastric cancer screening between April 2005 and March 2006, at which time reflux symptoms and endoscopically proven erosive esophagitis were investigated again. Individuals with a history of gastric surgery or eradication therapy for *Helicobacter pylori* infection were not included in this study. In addition, individuals who had taken medication, such as proton inhibitors, H2 receptor antagonists, and prokinetic drugs, in the 3-month period preceding each examination were also excluded. As a result, 539 individuals (408 males, 131 females; mean age 47.3 years in 2000) were designated as subjects. This study was performed in accordance with the Declaration of Helsinki and approved by the Ethics Committee of Shimane Institute of Health Science.

RESULTS AND DISCUSSION

Eighty-eight of the 539 subjects were diagnosed as positive for reflux symptoms at the beginning of the study and 44 had endoscopically proven reflux esophagitis. The percentage of subjects with reflux symptoms and reflux esophagitis who consumed alcohol was significantly greater than those with symptoms but without reflux esophagitis. After 5 years, 58 subjects had reflux symptoms, which was a decrease from the initial examination, and 53 were diagnosed with reflux esophagitis, which was an increase. Only 23 subjects with reflux symptoms at the start of the study had symptoms after 5 years, thus those symptoms disappeared in the remaining 65. However, reflux symptoms in subjects with reflux esophagitis at the beginning of the study tended to remain after 5 years, while newly developed reflux symptoms were also more frequently seen in those subjects after 5 years as compared to subjects who did not have reflux esophagitis at the initial examination.

Multiple logistic regression analysis showed that the presence of reflux esophagitis or hiatal hernia, as well as an increase in BMI and habitual alcohol consumption were each significant predictive factors of reflux esophagitis after 5 years. On the other hand, the presence of reflux symptoms at the initial examination and an increase in BMI were the only significant

risk factors for the presence of reflux symptoms after 5 years. The presence of reflux esophagitis or hiatal hernia at the beginning of the study was not a statistically significant risk factor for reflux symptoms after 5 years.

The presence of erosive esophagitis and hiatal hernia at enrollment, as well as an increase in BMI and habitual alcohol consumption following enrollment were significant predictive factors for the presence of endoscopically proven erosive esophagitis after 5 years. These factors have been repeatedly demonstrated as risk factors for the presence and development of reflux esophagitis, thus it might be easy to predict which individuals will develop reflux esophagitis after 5 years based on their clinical characteristics. On the other hand, gender, hiatal hernia, gastric mucosal atrophy, smoking, and habitual alcohol consumption were not significant risk factors for the presence of reflux symptoms after 5 years. Reflux symptoms in individuals with functional heartburn are not considered to be caused by gastro-esophageal acid reflux. Thus, there may have been a number of individuals with functional heartburn among our study subjects with reflux symptoms and those symptoms may have remained for a number of years. Another possibility is that biased individuals were enrolled in this study, since only those who received annual medical checks and were not taking related medication were studied, and we considered that the symptoms of the present subjects were milder than other clinical populations with typical reflux symptoms. Therefore, a large-scale population-based study is needed to demonstrate more clearly the natural course of patients with reflux symptoms.

CONCLUSION

Reflux symptoms frequently disappeared within a 5-year period in the present subjects. Unlike those with reflux esophagitis, it is difficult to identify individuals who will have reflux symptoms after 5 years on the basis of their clinical characteristics.