

Prevalence and Risk Factors of Gastroesophageal Reflux Disease in Patients with Type 2 Diabetes Mellitus (*Diabetes Metab J* 2016;40:297-307)

Jun Ouk Ha¹, Tae Hee Lee², Chang Won Lee¹

¹Department of Internal Medicine, Busan St. Mary's Hospital, Busan,

²Department of Internal Medicine, Konyang University College of Medicine, Daejeon, Korea

We thank Dr. Yi for his comments in response to our study, "Prevalence and risk factors of gastroesophageal reflux disease in patients with type 2 diabetes mellitus" [1]. Prevalence of gastroesophageal reflux disease (GERD) in Korea has gradually increased after westernized diet and lifestyle changes [2]. The prevalence of GERD in our study showed 32.6% in the type 2 diabetes mellitus (T2DM) group and 35.9% in the control group. We mentioned that the possibility of overestimation of the prevalence and symptoms of GERD cannot be ruled out by selection bias.

As Dr. Yi mentioned, esophageal pH monitoring and manometry are the gold standards for diagnosis of GERD and esophageal dysmotility [3]. Therefore, we agree that the application of pH monitoring and manometry in our study could possibly alter the prevalence of GERD. However, esophageal pH monitoring and manometry are not widely used compared with esophagogastroduodenoscopy (EGD) in real practice.


A recent meta-analysis by Sun et al. [4] identified a significant association between diabetes and risk of GERD. Although esophageal manometry and 24-hour pH monitoring are the gold standards for detecting GERD, the diagnosis of GERD in this study was established on the basis of reflux symptom questionnaires and the frequency of the cardinal symptoms [4]. Sun et al. [4] also mentioned several study limitations. Firstly, most of the included studies were cross-sectional. Secondly, there may

be a certain selection bias. Finally, the data were not adjusted for body mass index. As pointed out by Dr. Yi, the prevalence of asymptomatic GERD confirmed by pH monitoring was significantly higher in diabetic patients than in healthy controls [5].

On the contrary to the meta-analysis and pH study, we concluded that the prevalence of GERD in patients with T2DM showed no difference from that of controls. In our study, we diagnosed as GERD when a patient had erosive esophagitis or nonerosive esophagitis with a frequency scale for symptoms of GERD score ≥ 8 and minimal change. A different diagnostic tool for GERD may oppositely affect the prevalence of GERD. We think the diagnostic method of GERD using EGD and symptoms is relatively objective compared with symptom-based diagnosis of GERD.

A recent research reported a higher prevalence of GERD symptoms among diabetes mellitus patients with neuropathy [6]. On the contrary, no significant correlation was observed between autonomic or peripheral neuropathy and GERD symptoms and occurrence in our study. Further studies that evaluate the diagnostic value of EGD and symptoms of GERD compared with pH monitoring and manometry in diabetic patients will be necessary in the future.

We appreciate Dr. Yi for the valuable comments and suggestions.

Corresponding author: Chang Won Lee  <http://orcid.org/0000-0002-6184-7171>
Department of Internal Medicine, Busan St. Mary's Hospital, 25-14, Yonghoro 232beon-gil, Nam-gu, Busan 48575, Korea
E-mail: koje94@hanmail.net

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CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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