Systematic Review With Meta-analysis: Prompt Endoscopy As the Initial Management Strategy for Uninvestigated Dyspepsia in Asia

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Summary

Dyspepsia is a common gastrointestinal (GI) symptom with 10–20% of the population in the Asia-Pacific region.¹ In Western countries, 40–60% of individuals have a normal examination, whilst esophageal or gastric malignancies are detected in less than 1%.² In Asia, the prevalence of *Helicobacter pylori* infection and upper GI malignancies are substantially high.^{3,4} However, among Asian patients with uninvestigated dyspepsia, the diagnostic value of alarm features and the appropriateness of prompt endoscopy are remained uncertainly. Chen et al⁵ performed a systematic review to evaluate the detection rate of organic diseases including upper GI malignancies and then to propose the proper initial diagnostic strategy in Asian dyspepsia patients. Among 2410 possible references, finally 18 papers ($n = 152\ 314$) were included in the analysis of detection of organic disease by endoscopy among dyspeptic patients. This study revealed that overall malignancy detection rate was 1.3% (95% confidence interval 0.8–2.1%) and among cancer patients, 17.8% were younger than

45 years, 5.0% at age < 40 years and 3.0% at age < 35 years. The calculated detection rate of all organic diseases was 26.4% and that of peptic ulcer disease was 11.9% and esophageal disease was 5.5%. However, alarm features were shown to yield moderate diagnostic accuracy with an area under curve of 0.74. It meant limited accuracy for predicting malignancy. Therefore, authors concluded that an age of 35 years yielded relatively better diagnostic accuracy for malignancy.

Comments

Dyspepsia and its management remains a considerable socio-economic burden. Most Western guidelines recommended that alarm features at any age warranted prompt endoscopy and the cut-off age for recommendation of endoscopy in dyspeptic patients without alarm symptoms was 55 years as an initial strategy. In young patients, “*H. pylori* test and treat” or empirical proton pump inhibitors were recommended at first.^{6–8} However, “*H. pylori* test and treat” was unlikely to be beneficial in the high *H. pylori* positive area in aspect of cost-effectiveness.³ This large scale

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meta-analysis was conducted on the basis of evidence-based medicine in the context of the insufficient existing data and authors clearly revealed important epidemiologic features. The malignancy detection rate in this study was significantly higher than that in Western countries (1.3% vs 0.25%).⁶ Based on these data, authors recommended the age cut-off for prompt endoscopy in dyspepsia patients as 35 year or less. Among dyspepsia patients who underwent the endoscopy, upper GI malignancy might be detected about 0.23% of patients less than 45 years and 0.03% of patients less than 35 years. However, establishing the appropriate age cut-off should be conducted taking into account the cost-effectiveness analysis with gastric cancer risk stratification. Moving from evidence to recommendations is another step to be needed a consensus.

In this systematic review, authors tried to validate the quality of reporting. They assessed the diagnostic accuracy by QUADAS criteria,⁹ however, most included studies in this analysis showed the “unclear” applicability, especially key factors, such as patient selection, reference standard and index test.⁹ And the results of meta-analysis in this study mainly depended on the 2 huge studies ($n = 120\ 559$).^{3,10} These 2 studies did not clearly define the definition of dyspepsia and conducted in single tertiary hospitals. Therefore, there might be some weakness, especially related with overestimating the benefits of the intervention being studied.^{11,12} Assessment of methodology quality is crucial and this is the essential part of as systematic review.

However, even though some limitations, this systematic review gives necessary and important information that is critical for decision making, especially to East Asian countries.

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