

Serendipitous Diagnosis of Achalasia Cardia on a Radionuclide Study

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Abstract: Achalasia cardia is a motility disorder, involving the distal esophagus, resulting in elevated lower esophageal sphincter pressure, increased intraesophageal pressure, incomplete relaxation of lower esophageal sphincter in response to deglutition and loss of esophageal peristalsis. It usually presents between third and fifth decades of life with the most common symptom of dysphagia. We present a case of middle-aged lady who complained of intermittent vomiting after meal and excessive postprandial sense of fullness in abdomen. It was suspected to be related to delayed gastric emptying. Therefore, a gastric emptying time study was requested. The solid bolus of radioactive meal was held up in the lower end of esophagus, thereby suggesting achalasia. Barium meal examination confirmed the diagnosis.

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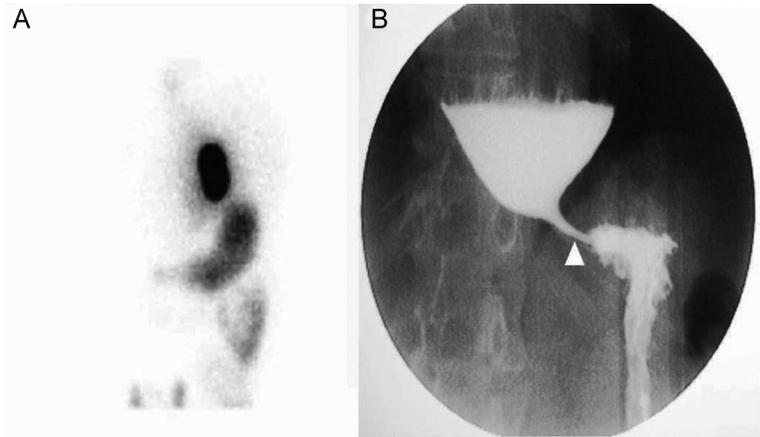


FIGURE 1. A 45-year-old lady complained of intermittent vomiting and excessive sense of fullness after meal. She was normotensive and euglycemic with unremarkable physical examination. An endoscopy revealed *Candida* esophagitis. She was not immunocompromised. Ultrasonography of abdomen was normal. In view of persistent symptoms, she was referred for radionuclide gastric emptying study. A solid bolus of radioactive meal (comprising of 1 millicurie Technetium-99m-phytate mixed with a cup of mashed potatoes) was administered orally. There was significant hold up of the bolus at the lower esophagus. A small liquid radioactive meal (comprising of 0.2 millicurie of Technetium-99m-phytate mixed with water) was administered immediately to delineate the stomach. The figure shows static image acquired within minutes of administration of the meal. Please note that the solid bolus of radiotracer is held up at the lower end of esophagus. However, the liquid radioactive meal has escaped into the stomach to delineate the gastric mucosa (A). The above finding prompted the suggestion of achalasia (especially as an organic cause of obstruction was ruled out in the preceding endoscopy). Esophageal transit time studies using radionuclide method have been done in the past to demonstrate functional improvement postpneumatic dilatation of achalasia.^{1–6} Barium meal examination revealed dilated distal esophagus because of raised hydrostatic pressure in the aperistaltic segment of esophagus with air-barium level (B). There is beak-like narrowing of the lower esophageal sphincter because the gastroesophageal junction fails to open freely giving rat tail appearance (arrowhead), which is typical of achalasia.⁷ Achalasia has been diagnosed earlier incidentally on Iodine 123 scan during evaluation of suspected retrosternal goiter.⁸