MID ESOPHAGEAL PULSION DIVERTICULUM RESULTING FROM SPONTANEOUS INTRAMURAL ESOPHAGEAL HEMATOMA

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ABSTRACT

Esophageal diverticula have 2 types which reflect the pathological causes and locations. Traction diverticulum is resulted from chronic granulomatous adhesion and usually at mid esophagus. Pulsion type is associated with motility disorder and located in the lower esophagus. We describe a large mid esophageal pulsion diverticulum resulting from an intramural esophageal hematoma. Barium swallow reveals normal esophagogastric junction and no motility disorder. We consider intramural hematoma is another associated condition of pulsion diverticulum.

Key words: esophageal diverticulum,spontaneous intramural esophageal hematoma

CASE REPORT

A 62 year-old male who was a professional singer with a history of four-day severe cough and odynophagia,was admitted on August 19,1994. Esophagoscopy and computed tomography (CT) showed spontaneous intramural esophageal hematoma (SIEH) (fig 1). His symptoms were relieved within 5 days by conservative treatment consisting of antibiotics and total parenteral nutrition. Three months later, he complained hoarseness when singing in high notes. He had no further swallowing problem until nine months after SIEH episode when he developed dysphagia for a couple of days. Esophagoscopy found a large pulsion diverticulum,confirmed by CT and barium swallow (fig 2). The site of diverticulum corresponded with the location of previous SIEH. The rest of the esophagus and esophagogastric junction appear normal.

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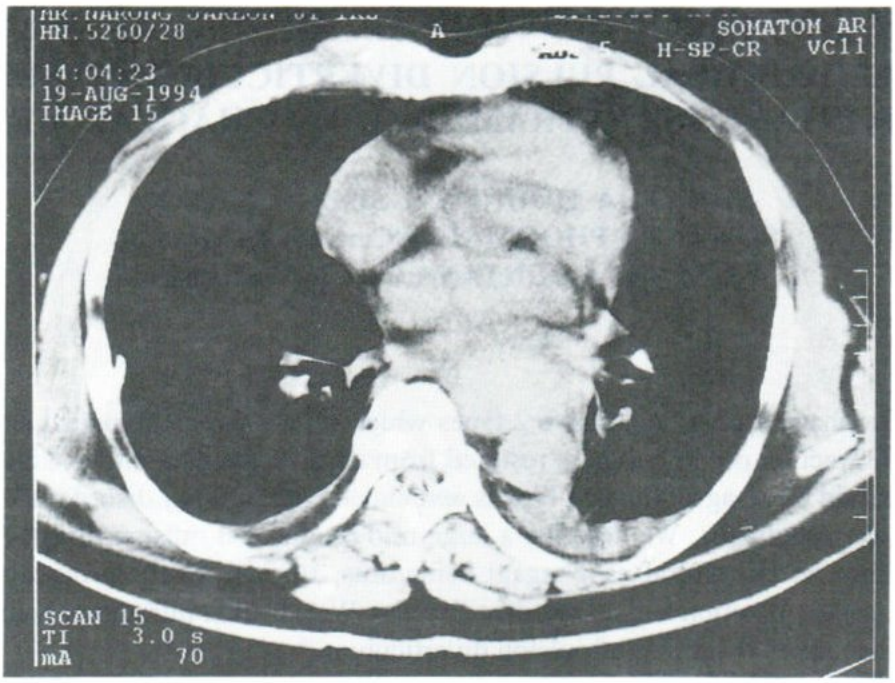

Fig. 1A. CT scan on the first day of admission showed a large intramural esophageal hematoma at mid esophagus and bilateral pleural effusion.

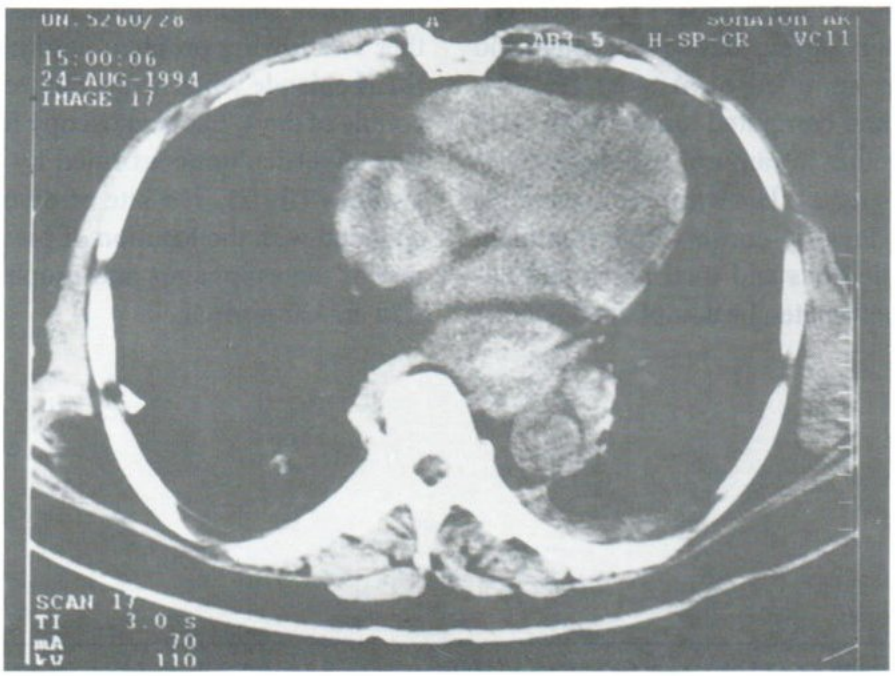

Fig. 1B. There is marked reduction of hematoma on the fifth day of admission and the symptom has much improved.

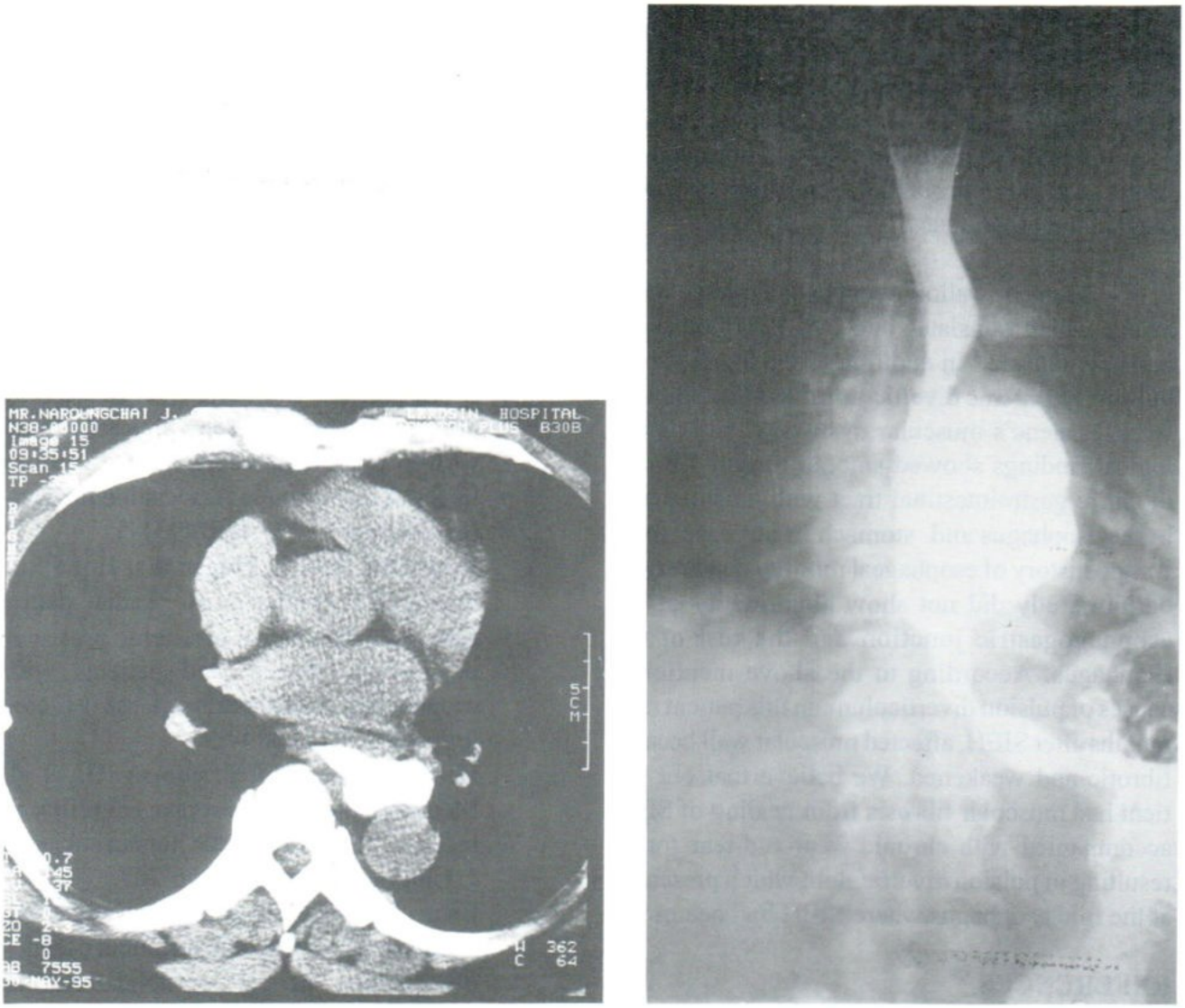

Fig. 2. A large pulsion diverticulm occurred at mid esophagus where the previous SIEH was found.

DISCUSSION

Pulsion esophageal diverticulum is actually more commonly found than traction type. The commonest site is at lower esophagus. It is however commonly believed that traction diverticulum occurs frequently and is found at mid esophagus.[1] Most esophageal diverticula are asymptomatic.[1,2] Dysphagia, chest pain and reflux symptoms are usually related to the underlying motor disorder. Apart from that, dysphagia may be caused by diverticulum of larger size or its complications.[1] Regurgitation also occurs when diverticulum reaches a large size.[2] Causes of pulsion diverticulum include esophageal motility disorder, mechanical obstruction and chronic wear-and-tear forces.[1] Therefore evidence of motility disorder or obstructive lesion is usually found with pulsion diverticulum especially at lower esophagus. However, Penagini[3] reported pulsion diverticulum associated with achalasia at mid esophagus and Suzuki[4] described a traction epiphrenic diverticu-

lum associated with a giant esophageal leiomyoma. Stewart[1] believes that chronic wear-and-tear forces appear to account for most pulsion esophageal diverticula. During each normal peristaltic sequence, substantial radial pressure forces exist in the esophagus.[5]

Human swallow about once a minute while awake which translates into 2 to 3 million swallows per decade.[6] In addition to the 3 categories, pulsion epiphrenic diverticulum has been reported with Duchene's muscular dystrophy[7] and pathological findings showed smooth muscle fibrosis of entire gastrointestinal tract with most marked in the esophagus and stomach.In our case, there was no history of esophageal motility disorder and barium study did not show abnormality of the esophagogastric junction and the rest of the esophagus. According to the above mentioned causes of pulsion diverticulum, in this patient nine months after SIEH, affected muscular wall became fibrotic and weakened. We believe that our patient had muscular fibrosis from healing of SIEH accompanied with chronic wear-and-tear forces resulting in pulsion diverticulum which presented at the mid esophagus where SIEH had occurred.

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