

Relationship between the Characteristics of Esophageal Hiatal Hernia and Mallory-Wise Syndrome in Aged Patients

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ABSTRACT

Objective: Esophageal hiatal hernia is not such a rare disease in aged patients because they often have diaphragmatic muscle weakness and lumbar spondylosis.

Design: A clinical study.

Materials and Methods: We analysed 16 cases of esophageal hiatal hernia and 2 cases of esophageal hiatal hernia with Mallory-Weiss syndrome.

Results: An 87-year old woman was admitted to our hospital because of chest discomfort and breathing difficulty after lunch. Chest X-ray and chest computed tomography (CT) demonstrated an enlarged stomach behind the heart. The respiratory symptoms were diagnosed as a secondary esophageal hiatal hernia. She was discharged from our hospital. She was well and in good condition after then.

Conclusions: Mallory-Weiss syndrome refers to bleeding from a laceration in the mucosa at the junction of the stomach and esophagus. There is some evidence that presence of a hiatal hernia is a predisposing condition.

KEY WORDS

esophageal hiatal hernia, aged patient, Mallory-Weiss syndrome, chest discomfort

INTRODUCTION

The pathogenesis of Mallory-Wise syndrome is not completely understood. Esophageal hiatal hernia was reported in up to 80% of patients with Mallory-Wise syndrome. Esophageal hiatal hernia is suggested as a potential risk factor for Mallory-Wise syndrome. It has been proposed that during retching a high pressure gradient develops in hiatal hernias compared to the rest of the stomach, thereby increasing the potential for mucosal laceration. Tears were more frequently found in distal esophagus.

It is known that patients with sliding hernia sometimes have gastro-esophageal reflux disease (GERD)¹⁻⁶⁾. Most sliding hernia patients are asymptomatic^{1,2)}. A few aged patients have a large esophageal hiatal hernia¹⁻¹²⁾. Esophageal hiatal hernia is not such a rare disease in aged patients because they often have diaphragmatic muscle weakness. Mallory-Weiss syndrome refers to bleeding from a laceration in the mucosa at the junction of the stomach and esophagus^{1,3-8)}. There is some evidence that presence of a hiatal hernia is a predisposing condition. The symptoms of large sliding hernia are GERD, respiratory symptoms, appetite loss, and nausea^{3,9-18)}. Other patients with large sliding hernias are asymptomatic¹⁹⁻²⁴⁾. This time, we found a large sliding hernia and gave conservative treatment^{1,25-36)}. The short-term result of conservative treatment for the large sliding hernia was excellent^{2,24,36-45)}. Herein we

report 2 cases of sliding hernia with Mallory-Weiss syndrome.

MATERIALS AND METHODS

Study population: The subjects were 16 cases of esophageal hiatal hernia and 2 cases of esophageal hiatal hernia with Mallory-Weiss syndrome. Age distribution was 60-97 years. Females were 12 cases and males were 4 cases. We analysed them.

The present study conformed to the provisions of the declaration of Helsinki in 1995 (as revised in Edinburgh in 2000)¹⁻⁵⁾.

RESULTS

Case 1 was an 87-year old female. Chief complaints were Chest discomfort, difficult respiration and general fatigue. Past histories were a cataract and pneumonia. She was suspected to have a chest aneurysm. She was admitted to our hospital because of pneumonia. Her symptoms were coughing when moving and general fatigue. After pneumonia treatment, her pneumonia symptoms improved, but she sometimes experienced appetite loss, chest discomfort after eating, and difficult respira-

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tion. At that time, her symptoms were thought to be due to ischemic heart disease or some mental reaction. She was discharged. She usually comes to our hospital once a month to be treated with hypertension drugs, H2 blockers, rilmazafone, triazolam, and indometacin compresses. She has been going to a day care center three times a week, and staying at a nursing home every weekend. After eating lunch at a daily care service meeting she felt chest discomfort and difficult breathing. She was admitted to our hospital again. Her body temperature was 36.4°C, pulse rate 72 /min, and blood pressure was 102 /56 mm Hg. Her face color was good and the extremities had no edema. She had no hearing loss, slight anemia, WBC 4900 /mm³, RBC 390X10⁵ /mm³, Hb 10.6 g/dl, Ht 33.7% and Plt 22.9 X10⁵ /mm³. Elevation of alkaliphosphatase 284 IU/l and total cholesterol was 227 mg/dl. Electrocardiogram showed that the pulse rate was 96 /min, with sinus arrhythmia, ST-T change, and anti-clockwise rotation. Chest X-ray film showed an air-fluid level in the mediastinum. Chest CT revealed that the enlarged stomach was dislocated toward the mediastinum. The respiratory symptoms were diagnosed as being secondary symptoms of esophageal hiatal hernia. Remission of the respiratory symptoms caused by the hiatal hernia was achieved by conservative treatment. She was discharged from our hospital. She was well and in good condition. Chest CT after that showed that the stomach was still dislocated toward the mediastinum. But it had become smaller in the cavity. The shape was not round, but rather flat. It was almost three times thinner.

Case 2: An 87-year old female. She was diagnosed as being esophageal hiatal hernia. She eats the meal with help of the stuff. She has GERD and medication. She had subdural hematoma, heart disease, brain infarction and dementia.

Case 3: An 84-year old female. She was diagnosed as being esophageal hiatal hernia with endoscopic examination. She does not eat the meal so much. Her condition is not so good. She has hypertension and Alzheimer disease. She had heart failure and hyponatremia.

Case 4: An 85-year old female. She was diagnosed as being esophageal hiatal hernia with chest X-ray examination. She sometimes vomits and hypoxia. She easily catches a cold. She had right pleural effusion.

Case 5: An 87-year old female. She was diagnosed as being esophageal hiatal hernia. She has no special symptoms according to esophageal hiatal hernia. She had Alzheimer disease, heart pacemaker, hypertension, liver cyst, osteoarthritis and bilateral femoral bone fracture.

Case 6: A 78-year old female. She was diagnosed as being esophageal hiatal hernia. She had vomiting, hematemesis and hypoalbuminemia.

Case 7: An 87-year old female. She was diagnosed as being esophageal hiatal hernia with endoscopic examination. She has appetite loss. She had Alzheimer disease, hypertension and lumbago. She has iron deficiency anemia, hematemesis, melena, gastric ulcer, atrophic gastritis and renal failure. She died at 87-year old.

Case 8: A 70-year old male. He was diagnosed as being esophageal hiatal hernia with endoscopic examination. He has atrophic gastritis and reflux esophagitis.

Case 9: A 93-year old female. She was diagnosed as being esophageal hiatal hernia with chest X-ray. She could walk and was well being. She has diabetes mellitus, Alzheimer disease, and vomiting. She had hypertension, gastritis and neurogenic bladder.

Case 10: An 89-year old female. She was diagnosed as being esophageal hiatal hernia with CT. She had vomiting and operated with adhesive ileus.

Case 11: An 89-year old female. She was diagnosed as being esophageal hiatal hernia. She has dementia and reflux esophagitis.

Case 12: A 87-year old male. He had esophageal hiatal hernia, appetite loss and vomiting. He had dementia, cerebrovascular Parkinsonism, old myocardial infarction and sleep tendency.

Case 13: A 72-year old male. He had vomiting. He had bleeding with reflux esophagitis.

Case 14: A 97-year old female. She had appetite loss and esophageal hiatal hernia. Now she can eat good, walk. She is rather small and has spinal deformity.

Case 15: An 83-year old female. She was diagnosed as being esophageal hiatal hernia with Mallory-Wise syndrome by endoscopic examination. She had atrophic gastritis and gastric posterior wall liner erosion. She had tarry stool, Alzheimer disease, Parkinsonism, persecutory delusion, restless, urinary incontinence, brain infarction, brain atrophy, myocardial infarction, coronary artery syndrome, right coronary stenting, hypertension and bradycardia.

Case 16: A 60-year old male. He was diagnosed as being esophageal hiatal hernia with Mallory-Wise syndrome by endoscopic examination. He had chronic hepatitis, gastric polyp, alcohol dependency, dementia, reflux esophagitis, blood vomiting, multiple lacuna brain infarction,

hydronephrosis. He died at 70 year old from sudden shock status.

DISCUSSION

In a previous study, we reported that electronic endoscopic examination was performed in 35 aged patients who were 50 years or older (mean age: 74.6 years old). Results were as follows; 1) Electronic endoscopy was performed in patients with digestive tract symptoms (Epigastralgia loss of appetite, nausea and so on) (60%) and patients without the symptoms but with anemia and occult bleeding in stool (11.4%). 2) Lesions of the upper digestive tract were detected in 34 patients (97.1%), of whom 10 (28.6%) had peptic ulcer and 4 (11.4%) had gastric cancer. 3) Lesions of the upper digestive tract such as carcinoma of the stomach and peptic ulcer were often found in the aged patients. 4) Gastrointestinal electronic endoscopic examination was very safety and useful for detecting gastric cancer, peptic ulcer and atrophic gastritis in aged patients.

We reported an esophageal hiatal hernia rate of 5.7% in 35 aged patients who was underwent endoscopic examination. Esophageal hiatal hernia is not such a rare disease in aged patients because they often have diaphragmatic muscle weakness and lumbar spondylosis. The esophageal hiatal hernias of these patients are usually small. A few aged patients have large esophageal hiatal hernias. Some large sliding hernia patients have gastric volvulus.

Most patients with small esophageal hiatal hernias are asymptomatic, but some of them have symptoms of GERD. The symptoms of large sliding hernia are GERD, respiratory symptoms, appetite loss, and nausea. Other patients with large sliding hernias are asymptomatic¹⁻⁶. In case 1, we treated an 87-year old woman who was admitted to our hospital because of chest discomfort and difficult breathing after lunch. Chest X-ray and chest CT demonstrated an enlarged stomach behind the heart. The respiratory symptoms were diagnosed as secondary symptoms of esophageal hiatal hernia. We gave conservative treatment^{2,1}. The short-term result of conservative treatment for the large sliding hernia was excellent. A giant hiatal hernia can be considered as an uncommon cause of shortness of breath, especially in geriatric patients. Surgical intervention is the goal standard treatment for hiatal hernia. Sometimes, permanent remission of respiratory symptoms caused by hiatal hernias is not achieved by conservative treatment, and some patients with large sliding hiatal hernias have advanced gastric cancer^{1,3-7}. For case 1, we did not do an upper gastrointestinal series or endoscopic examination, so it is unclear if her large esophageal sliding hiatal hernia is accompanied by gastric volvulus or gastric cancer^{1,2}.

There are several operational methods for treating large sliding hernias, and the results of surgery are dramatic and excellent. Some operations are less invasive for aged patients; there is a selection of surgical treatment. However surgery has its own risks including death and disability, so that even for large or paraesophageal hernias, watchful waiting may on balance be safer and cause fewer problems than surgery. Complications from surgical procedures to correct a hiatal hernia may include gas bloat syndrome, dysphagia (trouble swallowing), dumping syndrome, excessive scarring, and rarely, achalasia. Surgical procedures sometimes fail over time, requiring a second surgery to make repairs. In case 1, we found a large sliding hernia and gave conservative treatment. The short-term result of conservative treatment for the large sliding hernia was excellent.

On her first admission of case 1 to our hospital our patient already had symptoms of a large esophageal hiatal hernia, but we misdiagnosed this, and thought her symptoms were due to ischemic heart disease or a mental reaction, because we thought that her pneumonia was well treated. Chest X-ray film is sometimes very suggestive for diagnosis, while chest CT examination is quite useful for getting more precise information on esophageal hiatal hernias^{1,3-8}. An upper gastrointestinal series also easily demonstrates sliding hiatal hernias. Endoscopic examination also effective for diagnosing sliding hiatal hernias with Mallory-Wise syndrome, but sometimes it is difficult to advance the fiberscope to the duodenum because of gastric volvulus. We should consider sliding hernias when we treat aged patient with these respiratory symptoms and upper digestive tract symptoms.

There is hope that the newly established therapy will contribute to therapeutic strategies aimed at halting or slowing down disease progression in affected patients^{1,2}. Several previous studies have demonstrated that therapy plays an important role in the regulation of disease pathogenesis⁶⁻⁸. To some extent, our therapy will make it possible to define and study novel synergistic interactions between the major players that are known to be involved in disease. To determine therapeutic effect and

explore the pathological mechanism, we suggest that further investigation are needed

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