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A multiple esophageal epiphrenic diverticula: a case report

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Key words: Esophagus, diverticula, multiple epiphrenic.

Introduction

Esophageal diverticula are acquired rather than congenital. Diverticula virtually never occur during childhood, seldom develop before age 40 years, and then increase in frequency with age. Small asymptomatic diverticula are commonly observed as a coincidental finding. Like most gastrointestinal (GI) tract diverticula, esophageal diverticula are seldom true diverticula consisting of all wall layers, but are pseudodiverticula with mucosal eventration or herniation through the muscularis (1).

There is a tendency to classify esophageal diverticula into pulsion Zenker's diverticula, traction diverticula of the midesophagus, and pulsion epiphrenic diverticula of the distal esophagus. We have presented a seldom four epiphrenic diverticula here.

Case report

A 59 years old Turkish man has dysphagia for 15 years. Physicians examined him had make various investigations and given many medicaments. First in April 1995 he applied to Pneumophytisiology Department of our Faculty Research Hospital. He has a chest radiography. A coin lesion of 3 cm diameter was seen in the midzone of the left lung. The same lesion was seen on the chest radiograph taken in December 1992. There wasn't any change or enlargement in dimensions of the solitary nodule. All of sputum examinations were repeatedly negative. Also there was no pathologic evidence in abdominal ultra-sonography. On the computerized chest tomographic scan there was no malign lesion, lymphadenopathy and infectious process except the solitary nodule. This coin lesion was interpreted as hamartoma by specialists.

When he applied to the Internal Medicine Department on December 1995, he has complained of dysphagia, especially at the onset of eating. He hasn't reported another esophageal symptom (pyrosis, regurgitation etc.).

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His medical and familial history was absent. He smokes one packet of cigarettes daily for 30 years habitually. On his physical examination, the heart rate was 80 in minute and the blood pressure was 130/80 mmHg. The antero-posterior diameter of the chest was increased. Heart sounds were heard deeply. The expirium time was long, ronflan rales were heard in the some lung areas and the respiratory sounds were decreased in the left lower zone.

On the radiological examination four epiphrenic diverticula were observed at the distal third esophageal segment. These diverticula have level air- contrast on erect position and they are filled by contrast enema on decubitus position (Figure 1).

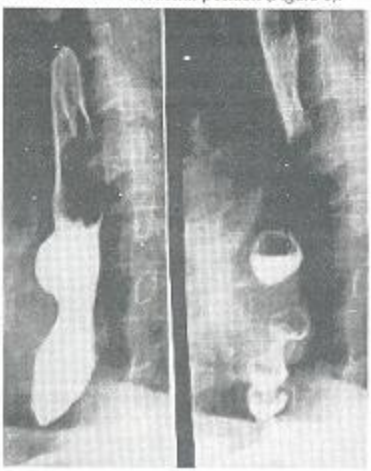

Figure 1. Diverticula are seen in radiography taken on the vertical position

However the diverticula was seen also on the radiography taken in decubitus position (Figure 2). Fluoroscopically, one spoon barium enema arrived to esophago-cardial junction in ten seconds, but barium enema was discharged in ten minutes from the oesophagus. Esophageal transit time was elonged remarkably. There was a functional spasm but no achalasia at the cardia. During peristaltic activity, diverticula were filled by air and appeared

remarkably. Thereafter, stomach, duodenum and colon were investigated by barium enema with double contrast examination. There was no another abnormal radiological finding including hiatal hernia on Trendelenburg position.

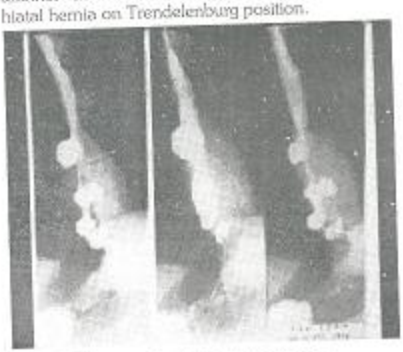

Figure 2. The same diverticula are seen in the radiography taken on decubitus position

On the upper gastrointestinal endoscopic examination, four diverticula were observed at the distal third esophageal segment, two on the right lateral side and two on the left lateral side, approximately 2-3 cm width. So four diverticula were demonstrated both at the radiological and endoscopic examination of the lower third esophageal segment.

Discussion

Esophageal diverticula are classified as pulsion type (Zenker Diverticula) at upper third esophageal segment, traction type at midesophageal segment and pulsion type (epiphrenic diverticula) at lower third esophagus. It is admitted that pulsion diverticula are due to motility disorder of the esophagus, traction diverticula are due to infectious process as tuberculosis in the mediastinum. If the coin lesion is due to tuberculosis and the diverticula are traction type, it would been a strongly relation between of these two pathological findings. There was a coin lesion on the chest radiography taken at least before 3 years without any change in the dimensions until now. Also there was no calcification and malignant transformation during three years. It is not thought a malign or tuberculous process and there isn't any relation between diverticula and this solitary nodule. Dysphagia has been the principal symptom of this patient for fifteen years period. This case is very interesting, because of four diverticula in the lower esophagus and all of them are pulsion type "epiphrenic"diverticula. Epiphrenic diverticula as with Zenker's diverticulum are due to incoordination between the sphincteric relaxation and esophageal peristalsis (2). So, lower esophageal segment would then be subject to increasing amount of pressure. A high incidence of motor abnormalities of the esophageal has been reported when the esophagus was evaluated radiologically (3). Investigation of 65 patients with lower esophageal diverticula revealed abnormalities of peristalsis in 50 (4). The manometric patterns were varied; diffuse spasm achalasia and nonspecific patterns were seen. In another study, failure of sphincteric relaxation associated high-amplitude, prolonged peristaltic waves was described (5).

Distal esophageal diverticula (epiphrenic) also are thought to develop secondary to motility disorders. However, they may be seen in patients with long-standing distal esophageal stricture and achalasia. Symptoms such as dysphagia and chest pain likely are due to the underlying motility disorder or esophageal stricture (6).

In our case, nor achalasia neither esophageal stricture was present. Therefore we thought that these multiple epiphrenic diverticula were related to underlying motility disorders demonstrated by the esophageal empty time's prolongation fluoroscopically. Multiple epiphrenic diverticula are very rare pathological findings. We couldn't find any case report about multiple epiphrenic diverticula in the medical literature last 30 years period.

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Brucella spondylitis: a case report

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Key words Brucella, spondylitis, back pain.

Introduction

A patient with back pain is described in whom spondylitis in the lomber vertebrae was caused by brucellae infection. Systematic investigation revealed no evidence of degeneratif osteophitic changes in other sites.

Brucellosis has a worldwide distribution, but pathogenic species depends on the geographic location. The clinical menifestations and the severity of the disease vary according to the responsible species and the host. Brucella has a spondylitic form with involvement of the disc and adjacent vertebrae (1). Spondylitis is most common (6.8%) in the lumbosacral region, generally affecting older patients with more chronic infection. It's pathogenesis is beleived to represent a septic discitis with contagious involvement of the adjecent vertebral body and eventual vertebral osteomyelitis (2). Brucellosis may cause generalized backache, peripheral joint pains, fever and constitutional symptoms that are far more profound than those of typical cause of ankylosing spondylitis (3).

Case report

A 65 year old man was admitted to the hospital with a three months history of increasing pain in the lower back. In his history there was exposure to infected animals and animal products. For three days prior to admission the back pain had become more intense and he had been unable to sleep at night. Fever, malasia was present, hepatic and splenic enlargement was absent. On examination he had paravertebral muscle spasm with limitation of anterior lumbar flexion. Straight leg raising to 70 degree induced pain in both legs. Neurological examination didn't reveal any pathology. Power and sensation were normal. General exemination was normal. Full blood count (Erytrocyte: 5630000 mmcub, leucocytes: 5100 mmcub). ESR 8 mm in half an hour and 25 mm in one hour. Liver function tests, immunglobulins and protein electrophoresis were normal. Brucella agglutination tests were positive in 1/350 titres and showed high titrations in three consequent trials. Chest X-ray showed chronic fibrotic changes (Figure 1). In the lateral view lumbar X-ray showed osteolytic lesions and osteophyts in forth and fifth lumbar vertebrae (Figure 2). In CT vacuum phenomena in L 5- S1 intervertebral space and degenerative changes were seen (Figure 3).

Figure 1. Chronic fibrotic changes in chest x-ray

Figure 2. Osteophyts in lumbar vertebrae

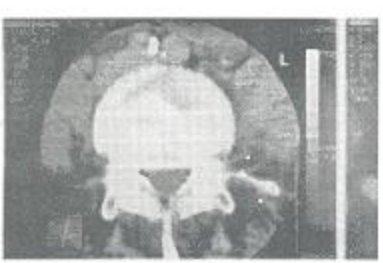

Figure 3. Vacuum phenomena in L5-S1 intervertebral space

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He was treated with streptomycin, tetracyclin, and trimethoprim. Symptoms improved in two months. Therapy is being continued since the admission to the hospital and he went into remission. We followed him for six months.

Discussion

A patient presented with low back pain and subsequent investigation revealed to be due to brucella spondylitis. He had improving symptoms after therapy. The typical x-ray findings of brucella is osteolytic lesions together with osteophitic spur formation. In this case in the lateral view lumbar x-ray showed osteolytic lesions and osteophyts in forth and fifth lumbar vertebrae (Figure 2). In CT vacuum phenomena in L 5- S1 intervertebral space and degenerative changes were seen (Figure 3). Characteristic findings of brucella spondylitis included predilection for the lower spine (% 68 of lesions), bone destruction limited to the end the plates and disk collapse. Tuberculous spondylitis was characterized by predilection to midthoracic spine (%73), vertebral destruction with gibbus deformity (% 60), disk collapse and paraspinal abcesses (4). Spondylitis occurs in 3 to 15 per cent of cases and usually involves the lumbar spine, although there may be involvement of the thoracic and cervical regions (5). The clinical picture of brucellosis is characterized by localized abcess and bacteriemie, the extend of symptoms varying with the infecting species. Both B. abortus and B. melitensis are the causes of reactive and septic arthritis and osteomyelitis (6). In this case we identified it as B. melitensis. Brucella is uncommon cause of spondylitis and reactive arthritis. The arthritis associated with brucellosis may be caused by direct seeding of the synovium by the organism. Some causes however clearly reactive in nature where as brucella septic arthritis is usually monarticular and persistent to therapy (7).

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