

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Thoracic Surgery Quiz – Case 5

A 38-year-old immigrant man was admitted to the emergency department due to shivering fever for about 10 days relieved with common antipyretics, progressive difficulty in swallowing both liquid and food and a painful swelling of the neck.

His medical history was free of disease and he was married with 4 children.

On physical examination he had suffering face with high fever, tachycardia and shortness of breath. His neck was painful in moving with rubor and edematous. There were palpable submandibular and supraclavicular lymph nodes. The rest of the examination was normal.

Laboratory findings revealed an elevated white blood cell count and affected inflammation indicators. Arterial blood gases analysis was within normal limits. All the cultures were normal and the Mantoux test was negative, as were the tests for HIV, HBV and HCV.

Chest X-ray revealed mediastinum enlargement (fig. 1). He also undertook an ultrasound scan of the neck, where the thyroid isthmus was slightly enlarged and fluid collection was found around the thyroid gland about 1 cm thick. Lymphadenopathy was also found.

Subacute thyroiditis or Ludwig's angina or cervical abscesses were suspected.

Due to the unclear signs and symptoms of the patient, neck and chest CT scan was performed, where abscesses were revealed postpharyngeal, at the anterior cervix and encystments at the anterior mediastinum near the phrenic nerve and the pericardium, located at the left chest (fig. 2).

Given the critical condition of the patient, treatment consisted of IV antibiotics and emergency surgery, where a left thoracotomy was performed to clear the mediastinum and chest drainage was placed

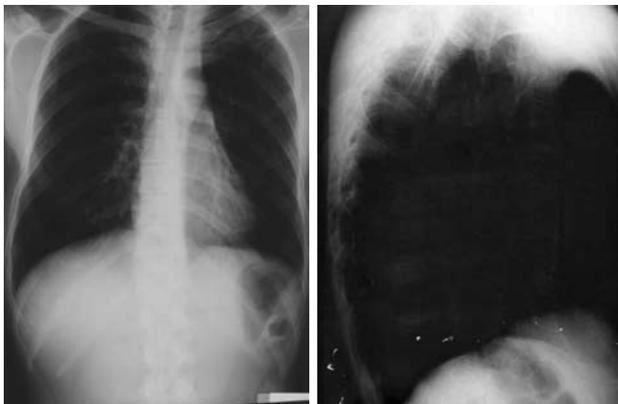


Figure 1



Figure 2

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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2009, 26(1):136-137

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(fig. 3). The patient also underwent an incision at the superior part of the sternal cut, where the pharyngeal abscess was drained (fig. 4). The otolaryngologists also through the oropharynx drained the abscess (fig. 5).

The patient was admitted to the ICU after the surgery and his condition was improved the next days. The inflammation indicators were falling and the body temperature was normal. Microbiology culture of the pus revealed *Streptococcus mitis*, sensitive at the most commonly used antibiotics. The patient recovered and was discharged home with per os antibiotics.

Comments

Mediastinitis is an infection involving the mediastinum. It is a surgical emergency with a high mortality rate. Mediastinitis may begin primarily from structures in the mediastinum, or it may be the result of an infection extending downward from the oropharynx, in which case it is called descending necrotizing mediastinitis.



Figure 3



Figure 4



Figure 5

Acute descending necrotizing mediastinitis is a rare but life-threatening infection originating in the oropharynx and characterized by rapid tissue destruction in the mediastinum. Oropharyngeal infections (such as odontogenic infection, Ludwig's angina and retropharyngeal abscess) can

occasionally descend to the mediastinum. The descent of the infection from the oropharynx to the mediastinum is enhanced by gravity and negative intrathoracic pressure.

These infections are typically polymicrobial in nature, reflecting the usual aerobic and anaerobic oral flora. *Streptococcus sp* are the most common facultative organisms, while *Bacteroides sp* are the most common strict aerobes. Other organisms include *Pseudomonas aeruginosa* and *Fusobacterium sp*, *Peptostreptococcus* and *Staphylococcus*. Case reports have identified *Eikenella corrodens* and *Prevotella*, *Haemophilus*, and *Salmonella* as responsible pathogens. Histoplasmosis and tuberculosis have also been implicated in mediastinitis. As the incidence of iatrogenic mediastinitis rises compared with infections acquired outside the hospital, MRSA infections become a cause for great concern.

These patients are critically ill and should be treated immediately. Early surgery at the neck and great drainage of the mediastinum together with appropriate antibiotic coverage is the golden standard for this disease.

Data suggest an overall mortality rate of 19–47%. Prevalence is higher among males in the mid fourth decade of life.

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Diagnosis: Acute mediastinitis

