Patient with nonechogenic chest and pleuritic chest pain

Nonekojen göğüs yapısı ve plöritik göğüs ağrısı olan hasta

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Answer: c) Spontaneous pneumomediastinum

We need to keep in mind acute myocardial infarction, angina pectoris, endocarditis, cardiac tamponade, mediastinitis, dissecting aneurysm, and pulmonary embolism as differential diagnoses in patients with acute chest pain. Acute pericarditis is probable diagnosis with stabbing chest pain and leukocytosis but echo images should have at least minimal effusion. ECG has no ST or PR deviation. Chest X-ray and CT have also no pericardial or pleural effusion.

Acute pulmonary embolism is also probable with hypoxia and hypocarbia but ECG has no sign suggestive of pulmonary embolism like ST deviations, right axis deviation or S1Q3D3 pattern.

Aortic dissection has low probability in patients without high blood pressure and different pressures in left and right arms. Chest X-ray has also no enlargement in mediastinum.

Spontaneous pneumomediastinum (SPM) is a rare clinical disorder and is defined by the appearance of free air in the mediastinum frequently observed in young males without obvious underlying causes (1).

The most common symptoms include acute central chest pain, which radiates anteriorly and posteriorly and to the jaw, dyspnea, neck pain, swelling and hoarse voice. Dysphagia, cough, odynophagia and dysphonia are less frequent findings. The prevalence of subcutaneous emphysema on the neck is ranging between 40-100% (1-4). We use in the emergency room a pocket sized hand held echo for facilitating the diagnosis in mostly chaotic situations. By this case we also used this device at first line after the ECG. But the all ultrasound imaging efforts in diagnosing this case were unsuccessful. Almost nothing could be seen due to air in the mediastinum. Diagnosis is established by anteroposterior chest X-ray (Fig. 1). Thus, Yellin et al. (5) recommends a routine chest X-ray for all young patients that present to emergency departments with chest pain and dyspnea. SPM is easily diagnosed through radiological examination, Caceres et al. (6) reported that chest X-ray may not detected the diseases in some cases. Hence, chest CT is thought to be the most reliable diagnostic procedure. We also used CT to exclude secondary pneumomediastinum due to the injury in tracheal bronchus and esophagus and diffuse parenchymal lung disease (Fig. 2). Especially, to exclude pneumomediastinum caused by esophageal injuries, thorough examination on clinical symptoms, history of the present illness, and past medical history are crucial. Furthermore, esophagography was performed to rule out the presence of esophageal perforation or rupture (Fig. 3).

To conclude, SPM shows a benign course and usually does not require additional treatment, however, we should keep in mind nonechogenic chest with pleuritic chest pain should remember us a pneumomediastinum in differential diagnosis.

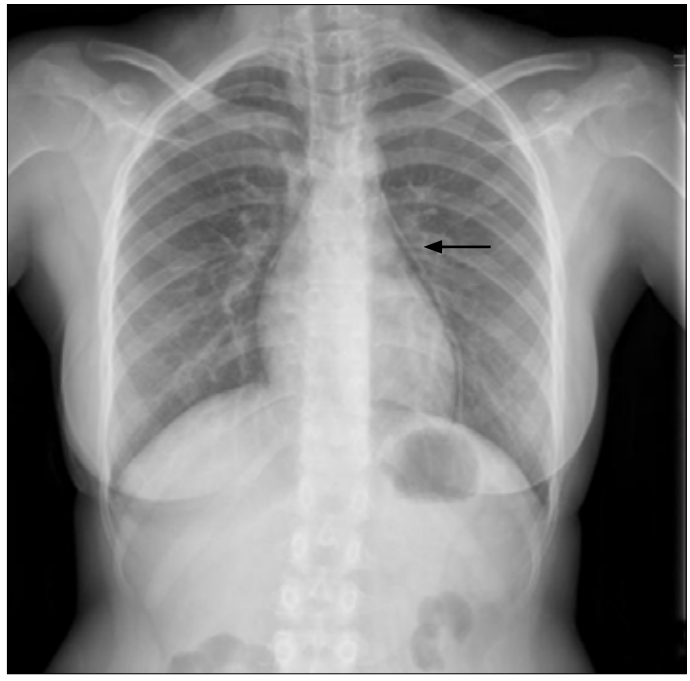

Figure 1. Thin pneumopericardium line on the left and inferior side of the heart on chest X-ray

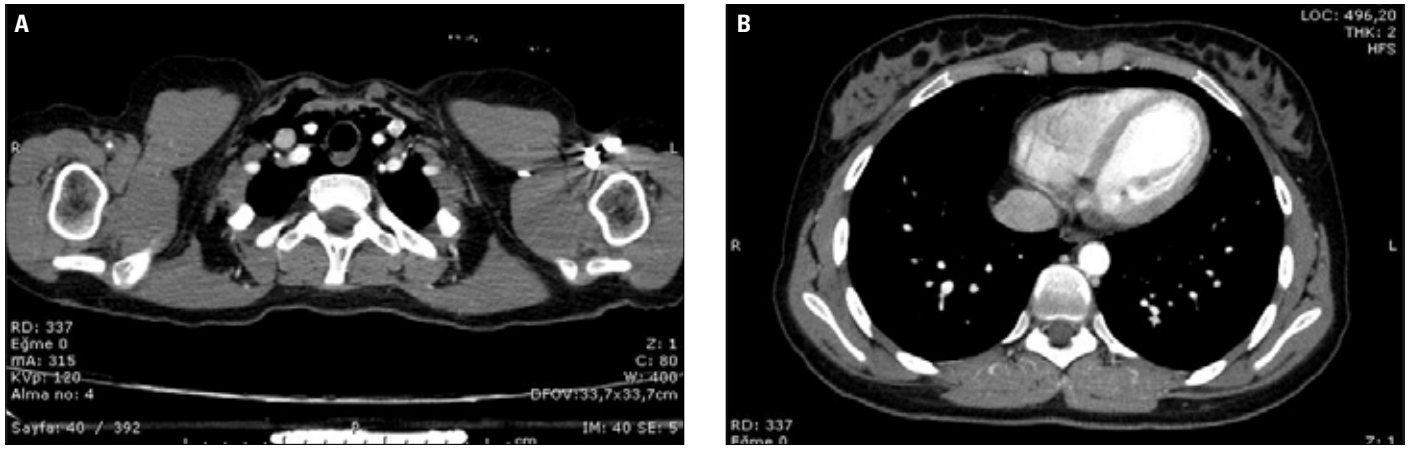

Figure 2. A) Computed tomography shows subcutaneous and paratracheal emphysema. B) paracardiac free air line

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