High-riding superior pericardial recess

Clinical History:

A 50-year-old woman underwent a CT examination of the chest after thoracic trauma.

Imaging Findings:

The CT shows a hypodense lesion in the right paratracheal area along the course of the ascending aorta (Fig. 1, 2, 3).

Discussion:

The high-riding superior pericardial recess was first described by Choi [1]. It represents an extension of the superior aortic recess above the level of the aortic arch into the right paratracheal region between the brachiocephalic vessels and the trachea, contiguous with the superior pericardial recess and without any definable wall. There is usually no fat plane between the fluid and the aorta.

It does not exert any mass effect on adjacent structures.

With thin-section MDCT, the prevalence reaches 6.6% [2]. This fluid-containing lesion has a round, oval, triangle, half-moon or irregular-shaped configuration on the axial images.

The fluid can easily migrate to other pericardial recesses within some minutes [3].

High-riding superior pericardial recess occurs in physiological conditions, without significant pericardial effusion.

The differential diagnosis includes low attenuation adenopathy, bronchogenic cyst, pericardial cyst, aortic dissection or thrombus.

Clues for the correct diagnosis of high-riding superior pericardial recess are homogenous water density, continuity of the fluid with the adjacent pericardium, the typical location along the aortic arch or at the right paratracheal region, lack of fat plane adjacent to the aorta, lack of definable wall and absence of mass effect.

Treatment is not required and it is very important not to confuse this pseudolesion with other mediastinal masses, in order to avoid unnecessary invasive diagnostic procedures, especially in the setting of trauma.

Differential Diagnosis List: High-riding superior pericardial recess, Low attenuation lymph node, Mediastinal cyst, Aortic dissection or thrombus, Mediastinal haematoma

Final Diagnosis: High-riding superior pericardial recess
References:

Description: Contrast-enhanced axial CT on mediastinal windows showing a hypodense lesion in the right paratracheal area along the course of the ascending aorta.

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Figure 3

Description: Contrast-enhanced sagittal CT on mediastinal windows. Origin: Pilate T, AZ Sint-Maarten Mechelen-Duffel, Belgium
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