Paracaval lipoma
Published on 09.05.2017

DOI: 10.1594/EURORAD/CASE.13476
ISSN: 1563-4086
Section: Cardiovascular
Area of Interest: Veins / Vena cava Lung
Procedure: Technical aspects
Procedure: Treatment effects
Technique: CT
Special Focus: Artefact Cavitation Metastases Neoplasia
Case Type: Anatomy and Functional Imaging
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Patient: 76 years, male

Clinical History:

We present a case of a 75-year-old man who underwent computed tomography scan for lung squamous cell carcinoma follow-up after chemotherapy. There were no relevant clinical findings and laboratory data were within normal range.

Imaging Findings:

Contrast-enhanced computed tomography (CT) revealed a nodular filling defect with fat attenuation in the medial aspect of the intrahepatic portion of the inferior vena cava (IVC) above the caudate lobe (Fig. 1-3). Retrospectively, it was already present in previous CT scans (Fig. 4). No fill defects were present in the pulmonary arteries and the primary lung tumour in the left lung (Fig. 5) was stable compared to the last CT scan performed 3 months before. A secondary cavitated lesion in the right lung (Fig. 5) was also stable and there were no new secondary lesions. An abdominal aortic aneurysm was also documented (Fig. 3).

Discussion:

Paracaval lipoma or pseudolipoma is a rare pseudolesion of the IVC and represents a partial volume artefact of pericaval fat above the caudate lobe rather than a true intraluminal lesion [1-3]. Although this artefact is more frequent in patients with chronic liver disease in whom prominent pericaval fat collections commonly develop, it can be seen in up to 0.5% of CT examinations [1, 4]. The angulation and narrowing of the suprahepatic IVC just before it opens into the right atrium makes it prone to partial volume averaging artefacts on CT and Magnetic Resonance (MR) imaging [2]. Pseudolipoma can mimic bland thrombus of the IVC as well as intracaval spread of tumours on axial images and should be carefully recognized to prevent misdiagnosis and unnecessary diagnostic procedures [3]. Reformatted CT images (coronal and sagittal) or coronal MR imaging help to confirm the true nature of this finding [1].

Differential Diagnosis List: Paracaval lipoma or pseudolipoma of the inferior vena cava, Tumour thrombus, Fat embolism, Inferior vena cava tumour, Intracaval spread of renal angiomyolipoma

References:

**Description:** Axial contrast-enhanced CT shows a nodular filling defect with fat attenuation (white arrow) in the medial aspect of the intrahepatic portion of the inferior vena cava. **Origin:** Duarte I, Department of Radiology, Instituto Português de Oncologia de Lisboa Francisco Gentil, Lisboa, Portugal

![Axial contrast-enhanced CT](image)
Description: Sagittal reconstruction of CT images obtained with intravenous contrast medium shows a band of adipose tissue (white arrow) in the posterior aspect of the inferior vena cava. Origin: Duarte I, Department of Radiology, Instituto Português de Oncologia de Lisboa Francisco Gentil, Lisboa, Portugal
Description: Coronal reconstruction of CT images with intravenous contrast medium show a band of adipose tissue (white arrow) in the medial aspect of the inferior vena cava. An abdominal aortic aneurism was also documented (black arrow). Origin: Duarte I, Department of Radiology, Instituto Português de Oncologia de Lisboa Francisco Gentil, Lisboa, Portugal
Description: Axial contrast-enhanced CT performed 3 months before shows the same nodular filling defect with fat attenuation (white arrow) in the medial aspect of the intrahepatic portion of the inferior vena cava. Origin: Duarte I, Department of Radiology, Instituto Português de Oncologia de Lisboa Francisco Gentil, Lisboa, Portugal
Figure 5

**Description:** Coronal reconstruction of chest CT images reveals the primary tumour in the left lung (black arrow) and a secondary cavitated lesion in the right lung (white arrow).

**Origin:** Duarte I, Department of Radiology, Instituto Português de Oncologia de Lisboa Francisco Gentil, Lisboa, Portugal