



Letters to the Editor

Vascular Manifestations of Pulmonary Adenocarcinoma: A Case Report[☆]

Manifestaciones vasculares del adenocarcinoma pulmonar: a propósito de un caso

To the Editor,

Occasionally, some neoplasia are associated with a hypercoagulable state (HCS) that increases the likelihood of thrombi formation (Trousseau sign) in the venous territory¹; arterial involvement is uncommon.

We present the case of a 58-year-old man who was seen in the emergency department of our hospital for symptoms of pleuritic pain in the right hemithorax, low-grade fever and hemoptoic expectoration. He was diagnosed with a pulmonary embolism (PE) in the right basal pyramid and a left parahilar mass infiltrating the left main pulmonary artery and tracheal carina; he also had bilateral mediastinal lymphadenopathies (Fig. 1).

Bronchoscopy revealed an infiltrated carina, from which an underlying lesion protruded; a biopsy was taken, which was positive for lung adenocarcinoma.

We requested Doppler ultrasound of the lower limbs, which confirmed deep vein thrombosis (DVT) in the right deep femoral/popliteal territory.

Forty-eight hours after admission to Respiratory Medicine, in spite of anticoagulant doses of low molecular weight heparin (LMWH), the patient experienced an episode of intense pain, with coldness and loss of pulse in the right foot. He was assessed by the Vascular Surgery department and diagnosed with acute arterial ischemia (AAI). An emergency thrombectomy was performed (histopathology of the thrombus was negative for malignancy), and sodium heparin infusion was started. The episode recurred at 5 and 14 days after admission. Repeat thrombectomy was performed after the second episode, but given the subsequent functional state of the right lower limb (RLL), pain that could not be controlled with opiate infusion, and in view of possible complications due to the start of chemotherapy (CT) treatment, we decided to amputate the RLL.

The patient subsequently began chemotherapy, and has had no further episodes of arterial ischemia to date.

The association between AAI and neoplasia is not as well defined as in the case of those of venous origin. Some neoplasia, particularly those that originate in the pancreas, lung and gastrointestinal tract, produce an HCS or cause a deficiency of some coagulant substances (proteins C and S, anti-thrombin III).² In this patient, we found an

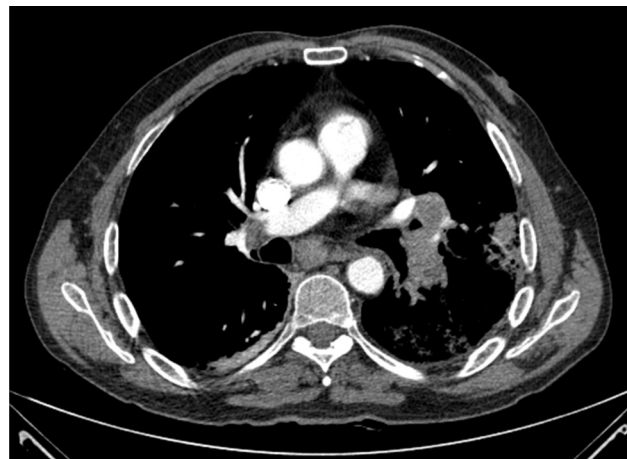


Fig. 1. Chest CT slice, showing a filling defect in the pulmonary arteries and the pulmonary mass infiltrating the left pulmonary artery.

HCS of malignancy with both venous (PE/DVT) and arterial (AAI right foot) manifestations. This HCS is usually resistant to LMWH treatment,³ and can be worsened by previous atherosclerosis and CT treatment.⁴

The primary treatment indication is surgery (thrombectomy), followed by anticoagulation with heparin, but these are generally ineffective in a high percentage of patients. Conservative treatment has a poor prognosis, and a significant number of patients require amputation, with survival rates of 50% at 3 months and 17% at 1 year after the first event. In a study by Rigdon,⁵ all patients eventually required amputation, despite surgical and anticoagulation treatment.

In conclusion, HCSs of malignancy are uncommon, especially vascular manifestations, but in these cases it is important to rule out the existence of an occult neoplasm as part of the diagnostic algorithm.

References

1. Sack GH, Levin J, Bell W. Trousseau's syndrome and other manifestations of chronic disseminated coagulopathy in patients with neoplasms: clinical, pathologic and therapeutic features. *Medicine (Baltimore)*. 1977;56:1–37.
2. Donati MB. Thrombosis and cancer. Trousseau syndrome revisited. *Best Pract Res Clin Haematol*. 2009;22:3–8.
3. Naschitz JE, Yeshurun D, Abrahamson J. Arterial occlusive disease in occult cancer. *Am Heart J*. 1992;124:738–45.
4. Sadat U, Noor N, See TC, Varty K. Peripheral arterial ischemia by a primary lung tumour invading left atrium. *Lung Cancer*. 2007;57:237–9.
5. Rigdon E. Trousseau's syndrome and acute arterial thrombosis. *Cardiovasc Surg*. 2000;8:214–8.

[☆] Please cite this article as: Segrelles Calvo G, García Pérez S, Cabrera I. Manifestaciones vasculares del adenocarcinoma pulmonar: a propósito de un caso. *Arch Bronconeumol*. 2015;51:201–202.

Gonzalo Segrelles Calvo,^{a,*} Silvia García Pérez,^a Irene Cabrera^b

^a Servicio de Neumología, Hospital Universitario 12 de Octubre, Madrid, Spain

^b Servicio de Medicina Interna, Hospital Universitario 12 de Octubre, Madrid, Spain

* Corresponding author.
E-mail address: gsegrelles@hotmail.com (G. Segrelles Calvo).

Thoracic Endometriosis: The Role of Imaging[☆]



Endometriosis torácica: papel de las técnicas de imagen

To the Editor:

We read with great interest the well-presented clinical note from Ucvet et al.,¹ describing 2 interesting cases of women with thoracic endometriosis. One of them had intermittent hemoptysis associated with her menstrual cycle, and the other had recurrent pneumothorax.

We would like to highlight the role of imaging techniques, particularly magnetic resonance imaging (MRI), as an important tool in the evaluation of patients with thoracic endometriosis. The length of time required for performing an MRI and the lack of follow-up devices compatible with MRI initially led to generally poor acceptance of this technique. In recent years, significant technical advances have been made in lung MRI, including parallel imaging and view sharing, time-resolved echo-shared angiography, and steady-state free precession sequences.² These techniques have reduced MRI capture time, have made it less sensitive to movement artifacts, and have improved spatial resolution. MRI does not require ionizing radiation or iodinated contrast, and is associated with less renal function deterioration than computed tomography. As a result of these improvements, MRI has become a useful tool in the evaluation of thoracic endometriosis, particularly pleural endometriosis.²

Pleural endometriosis can present in the form of pneumothorax, hemothorax and pleural nodes. Chest X-ray and computed tomography can reveal hydrothorax and/or pneumothorax, but are of little help in detecting associated pleural endometriosis nodules.^{3–5} Studies have shown that MRI plays an important role in the evaluation of these patients. It not only identifies hydropneumothorax, but is also very accurate for detecting endometriosis nodules, given its greater ability to characterize hemorrhagic tissues.^{3,5}

Endometrial foci are commonly seen in the form of hyperintense nodules on the pleural surface, but a different signal intensity can be observed in T1 and T2-weighted images, with variable diffusion restriction, depending on the age of the lesion. Pleural effusion may also show signal hyperintensity in T1-weighted sequences.⁵

A combination of surgery and hormone therapy appears to be the best therapeutic option. Various thoracic surgery techniques, such as diaphragmatic repair, pleurodesis, and resection or electrocoagulation of the endometrial deposits, have been used.¹ MRI-assisted identification and resection of endometrial deposits help to reduce recurrence rates. Thus, MRI may become an important tool for assisting the surgeon in cases of catamenial pneumothorax, by providing better evaluation of pleural endometriosis than computed tomography or chest X-ray.

References

1. Ucvet A, Sirzai EY, Yakut FC, Yoldas B, Gursoy S. Thoracic pulmonary endometriosis: two reports of a rare disease. Arch Bronconeumol. 2014. <http://dx.doi.org/10.1016/j.arbres.2013.11.018>.
2. Hochhegger B, Marchiori E, Irion K, Souza AS Jr, Volkart J, Rubin AS. Magnetic resonance of the lung: a step forward in the study of lung disease. J Bras Pneumol. 2012;38:105–15.
3. Alifano M. Reply: Pleural endometriosis and recurrent pneumothorax: the role of magnetic resonance imaging. Ann Thorac Surg. 2012;93:697.
4. Lee YR, Choi YW, Jeon SC, Paik SS, Kang JH. Pleuropulmonary endometriosis: CT-pathologic correlation. Am J Roentgenol. 2006;186:1800–1.
5. Marchiori E, Zanetti G, Rodrigues RS, Souza LS, Souza AS Jr, Francisco FA, et al. Pleural endometriosis: findings on magnetic resonance imaging. J Bras Pneumol. 2012;38:797–802.

Edson Marchiori,* Bruno Hochhegger, Gláucia Zanetti

Department of Radiology, Faculty of Medicine, Rio de Janeiro Federal University, Rio de Janeiro, Brazil

* Corresponding author.
E-mail address: edmarchiori@gmail.com (E. Marchiori).

[☆] Please cite this article as: Marchiori E, Hochhegger B, Zanetti G. Endometriosis torácica: papel de las técnicas de imagen. Arch Bronconeumol. 2015;51:202.