Paraneoplastic Neuropathy With Positive Anti-Hu. A Case Report

Neuropatía paraneoplásica con anti-Hu positivo. A propósito de un caso

To the Editor,

We report the case of a 73-year-old man, active smoker with a history of 60 pack-years, a former alcohol habit, hypertension and ischemic heart disease, with acute myocardial infarction 15 years previously. He was seen for a 12-month history of pain, weakness and paresthesia in the lower limbs, and lumbago. He also reported cough, mucopurulent expectoration and dyspnea on slight exertion, with no associated toxic syndrome. Physical examination revealed mild tachycardia and generalized bilateral diminished breath sounds with no adventitious sounds. Neurological examination showed no changes in campimetry or cranial nerves, and functional tests were normal. Gait was cautious, with proximal weakness of the lower limbs and loss of triceps, patellar and Achilles reflexes. The patient was referred to the neurology department, from where he was admitted to hospital.

General laboratory tests showed no significant findings. Protein levels and cerebrospinal fluid were normal, as were tumor markers AFP, CEA, Ca 125, Ca 19.9, Ca 15.3 and PSA. No pathological findings were seen on chest X-ray. The neurophysiological examination suggested demyelinating polyneuropathy. Head computed tomography (CT) showed bilateral frontotemporal atrophy, and the initial chest CT was normal. Magnetic resonance imaging of the cervical, dorsal and lumbar spine revealed only a foraminal disc protrusion with no radicular involvement. An antibody study was negative for antigangliosides and anti-MAG (anti-myelin-associated glycoprotein) and positive for anti-Hu antibodies.

In view of the strong suspicion of a neoplastic process, PET-CT was performed, revealing a slightly hypermetabolic focus over a small infiltrate in the right subpleural lung base, and a large hypermetabolic focus in the subcarinal mediastinum, 3 cm × 2 cm in size (Fig. 1).

Fig. 1. Chest PET-CT image. A large hypermetabolic focus is seen in the subcarinal lymph node station (G7).
No pathological endobronchial findings were observed on flexible bronchoscopy. Aspirates were obtained from the G7 region, and the cytological examination of these samples provided a diagnosis of small-cell anaplastic bronchogenic carcinoma. The patient was referred to the oncology department for treatment.

The association of paraneoplastic syndromes (PSs) with malignant tumors is well known, and any body organ or tissue can be affected. PS occurs in approximately 10% of the patients with lung malignancies, and is more common in small-cell carcinoma. \(^1\) Although most of the neurological complications of lung cancer are due to metastases, there are several neurological PSs, one of the most common being polyneuropathy. Clinical features of paraneoplastic polyneuropathy include the subacute development of asymmetric sensorial changes, such as pain, paresthesia and numbness affecting the distal extremities. \(^2\) Polyneuropathy can appear more than 1 year before the diagnosis of cancer, as occurred in our case. In an adult with peripheral polyneuropathies and a long-term history of smoking, seropositivity for anti-neuronal nuclear autoantibodies type-1 (ANNA-1), also known as anti-Hu, is a marker for small-cell lung cancer. \(^3\) The pathogenic mechanism of these antibodies is probably due to these antibodies accumulating in the neurons of the nervous system. These antibodies can be detected in small-cell carcinoma patients without neurological symptoms, but not in healthy subjects. \(^4\) Management of this syndrome includes treatment of the underlying cancer, but this does not generally help the neurological symptoms, which tend to progress rapidly. \(^5\)

**References**


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**Intraluminal Lesion of the Pulmonary Artery: A Diagnostic Challenge**

**Lesión intraluminal en la arteria pulmonar: un reto diagnóstico**

*To the Editor,*

Intravascular space-occupying lesions of the pulmonary artery are uncommon and diagnosis can be delayed due to non-specific accompanying clinical data. \(^1\) Primary tumors originating in systemic blood vessels are very rare, and even rarer in the pulmonary artery. We report the first case described in the literature of small-cell lung cancer metastasis in the trunk of the pulmonary artery.

A 68-year-old woman presented with a history of colon and thyroid cancer, and in situ epiglottal carcinoma. In June 2011, fiberoptic bronchoscopy returned a diagnosis of small-cell lung cancer in the anterior segment of the left upper lobe (LUL), for which she received 6 cycles of CDDP-VP-16, and chest and whole-brain radiation therapy (RT). Treatment was completed in November 2011. On radiological studies, a space-occupying lesion was seen in the left pulmonary artery, suggestive of an intramural thrombus (Fig. 1), so anticoagulant treatment was administered for 1 year.

Follow-up radiological studies showed progression of the intrarterial lesion, suggesting that it might be a tumor. As it was impossible to obtain a sample for histology from this site, surgery was undertaken for the purposes of diagnosis and treatment. Left intrapericardial pneumonectomy with arterial section extending to the disease-free zone was performed. Pathology results confirmed small-cell lung cancer with disease-free surgical margins. No intrathoracic complications occurred during the post-operative period. The patient is currently being followed up by the medical oncologist and has shown no signs of recurrence of her lung disease.

![Fig. 1. Left pulmonary artery filling defect.](image)

Malignant tumors within the pulmonary artery may be rare, but they must be considered in the differential diagnosis of pulmonary embolism; in half the cases, diagnosis is made postmortem; \(^2\) but advances in diagnostic imaging techniques mean that more cases are being detected. Shepard et al. published 4 cases of intravascular tumor in the pulmonary artery detected in 14,000 consecutive chest CTs, and concluded that the images of the peripheral branches of dilated pulmonary arteries could be highly suggestive of tumor emboli. \(^3\) In a review of 1085 autopsies of patients with a known diagnosis of solid malignant tumors, metastases causing intrarteebral obstruction were found to occur in cancers with access to large veins, such as hepatocarcinomas, choriocarcinomas and renal cell carcinomas. \(^4\)

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