specific, and the differential diagnosis should include pulmonary tuberculosis, sarcoidosis, histiocytosis X, tumorlets and pulmonary metastases. The definitive diagnosis is established by lung biopsy. In small samples it is particularly difficult to differentiate it from papillary adenoma. The natural history is not clear, but it is unlikely for it to degenerate to malignancy, and the clinical evolution is good although there have been reported episodes of death due to respiratory failure.\textsuperscript{3,5,6}

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Diagnosis of Pulmonary Adenocarcinoma Due to Hip Bone Metastasis\textsuperscript{5}

Diagnóstico de adenocarcinoma pulmonar por metástasis ósea en cadera

Dear Editor,

The fact that the first symptom of a primary tumor is bone metastasis is not uncommon and should be part of the differential diagnosis in patients with history of risk. Lung cancer has a predilection for bones, and metastases generally settle in the proximal femur.

We present the case report of a 56-year-old woman, with no personal history of interest other than being a pack-a-day smoker, who came to our consultation due to pain in the trochanteric region that had been evolving over the past 2 months. It was treated as trochanteric bursitis, with poor response to non-steroid anti-inflammatory medication. Given the lack of improvement and poor-quality radiographies, magnetic resonance imaging tests (MRI) were ordered, which revealed a central, expansive image with aggressive characteristics located at the major trochanter of the right hip (Fig. 1). With the suspicion of primary or metastatic malignant tumor, an extension study was done with thoraco-abdominal computed tomography, which revealed a left suprahilar lung mass measuring 20 × 23 mm that infiltrated the aortopulmonary window, with homolateral mediastinal lymphadenopathies and an osteolytic image in the right intertrochanteric femoral neck, measuring 45 mm with soft tissue mass. Bronchoscopy demonstrated inflammatory mucosa in the left upper lobe. Bronchial aspiration with no neoplastic cells. PET/CT: left perihilar mass 20 × 25 mm (SUV 16), lytic lesion with soft tissue mass in the trochanteric area of the right femur (SUV 8.7). Analysis: hemogram, 3750 leukocytes; hemoglobin, 8.5 g/dl; platelets, 164,000. Biochemistry: albumin, 3 g/dl; alkaline phosphatase, 113 U; lactate dehydrogenase, 130 U; the remainder was normal. Ions and coagulation, normal. Carcinoembryonic antigen, 127 ng/ml; Ca 15.3, 37 U/ml; Ca 125 and Ca 19.9, normal. We carried out percutaneous biopsy of the trochanteric region, guided by radioscopy, which was reported to be compatible with metastasis of lung adenocarcinoma.

With said diagnosis, and given the immobility of the patient, we opted for complete resection of the trochanteric metastasis and substitution of the defect by implanting a megaprostheses. Post-op was adequate, and the patient was up and walking on the 5th day with a walker, and with the use of a cane one month later.

Evolution

Systemic chemotherapy was begun with cisplatin and vinorelbin, competing 6 cycles with no incidences and an acceptable quality of life for the patient. After 7 months, the patient was hospitalized due to a process of deterioration and disorientation, and cerebral MRI diagnosed cerebral metastases. Holocranial radiotherapy was begun, but one month later the patient started to have generalized bone pain, dysphagia and progressive dyspnea secondary to the progression of the disease in the lungs and mediastinum. The patient died 13 months after the diagnosis.

Discussion

It is important to include tumor pathology within the differential diagnoses of muscular–skeletal pain, especially in patients who have risk factors like smoking.\textsuperscript{1} Clinically, it is difficult to diagnose

primary bone tumor or metastasis, but it should be suspected when
the pain is continuous, even at rest, and there is no improvement
with analgesic therapy. When given pain with these characteristics,
simple radiography should be taken of the affected region, as it is a
test that provides much information. At middle age, and mainly
over the age of 60, the differential diagnosis initially includes
a metastatic origin, and then a primary tumor such as giant-cell
tumor or osteosarcoma. Among the lung tumor types, non-small-
cell lung cancer most frequently presents bone metastasis, most of
which (66%) are detected at the time of the initial diagnosis.2 When
these lesions are metastatic, their management varies depending
on possibilities for survival. Even though the prognosis is very
poor, surgery of the area, especially if the hip is involved, provides
the patient with much better mobility and a high quality of life.
The best surgical option is complete resection of the metastasis,
especially when it is a single metastasis, and substitution of the
bone defect by implanting a megaprosthesys. The components are
generally cemented for fast bone incorporation and to be able to
rapidly make the patient mobile.3,4

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**Thyroid Cyst Diagnosed by Endobronchial Ultrasound-guided Transbronchial Needle Aspiration in a Patient With Lung Cancer**

**Diagnóstico de quiste tiroideo mediante ultrasonografía endobronquial sectorial con punción-aspiración en un paciente con cáncer de pulmón**

**Dear Editor,**

We present the case of a 69-year-old patient, ex-smoker, dia-
abetic and dyslipidemic, who was referred from another center
with the diagnosis of pulmonary adenocarcinoma obtained with
bronchoscopy that demonstrated a tumor in the orifice of the
anterior segmental bronchus of the right upper lobe. Positron-
enmission tomography CT (PET-CT) confirmed a paramediastinal
mass with increased uptake (SUVmax. 15 g/ml) in the RUL
compatible with a malignant tumor, right lower paratracheal
lymphadenopathy with a fatty center with no FDG uptake and a right
upper paratracheal lesion measuring 8 mm, which was discreetly
hypermetabolic (Fig. 1A and B) and interpreted as a lymphadenop-
athy. Given these findings, the mass was staged as T3N1M0. As
the patient was a candidate for radical surgical treatment, it was
considered necessary to obtain samples in order to rule out N2
affectation.

Sectorial endobronchial ultrasound (Olympus BF-UC 180F,
Olympus, Tokyo, Japan) revealed a right lower paratracheal
lymphadenopathy measuring 13 mm × 10 mm with a fatty center
(Fig. 1C) that was aspirated and resulted negative for mali-
nant cells; in addition, there was a hypoecogenic nodule in the
upper right paratracheal region (practically subglottic), measuring
8 mm × 7 mm (Fig. 1D), which Doppler ruled out as a possible blood
vessel. The ultrasound characteristics of said lesion were suggestive
of a cyst, and needle aspiration obtained a liquid that the patholo-
gical analysis demonstrated to have follicular cells in plaques and
groups, abundant macrophages and hemosiderophages on a back-
ground of colloid material, all of which were compatible with a
thyroid cyst.

The existence of false positives from PET-CT in the mediasti-
nal staging of lung cancer requires cytohistologic confirmation
based on minimally invasive techniques such as ultrasound bron-
choscopy. In this direction, recently published studies report a
negative predictive value of PET-CT of 95%.1

Most thyroid nodules detected in patients with pulmonary neo-
plasms are usually benign lesions. Nonetheless, thyroid metastases
in lung cancer have been described by some authors.5 It is for
this reason that cytolical confirmation is essential when given
a patient with malignant lung disease.

Thyroid cysts are nodules with liquid content, located in the
thyroid and differentiated from the rest of the parenchyma. Some
papers have been published about the clinical implications and rec-
ommended management in neoplastic patients in whom uptake
is detected by PET in the thyroid. The prevalence of this finding
ranges between 1.2% and 4.3% of cases. The risk for malignancy
of these lesions can reach 33%, corresponding with thyroid carci-
nomas (medullar or papillary), and in no case was it a metastasis of
a primary neoplasm. In addition, the value of the SUVmax is not
useful in order to differentiate between the benign or malignant
nature of these lesions; therefore, cytohistologic confirmation is
highly recommended.3,4

After reviewing the literature to date, we have only identi-
fied one single case published in a patient with small-cell lung
cancer.5

We would like to emphasize the importance of confirming
positive PET-CT findings in the mediastinum in patients with
lung cancer, as well as the usefulness of sectorial endobronchial
ultrasoundography for the identification and complication-free
needle-aspiration of thyroid cysts.

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