

ing from sequelae, generally associated with tuberculosis. The occurrence of lung cancer in cavities mimicking fungus ball or air crescent sign is quite rare^(1,2,5). The tumor tends to infiltrate in the adjacent pulmonary parenchyma causing a paracatricial effect, and may lead to emphysematous or cystic changes adjacent to the neoplastic process⁽¹⁾.

In conclusion, lung cancer must be considered in the differential diagnosis for patients who present with a fungus ball-like lesion, particularly in cases where the nodule is fixed to the cavity wall.

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<http://dx.doi.org/10.1590/0100-3984.2015.0119>

Extramedullary plasmacytoma in the right pulmonary hilum

Plasmocitoma extramedular no hilo pulmonar direito

Dear Editor,

A 53-year-old black, asymptomatic man, driver, being assessed to be released for physical activity. The patient denied smoking as well as having comorbidities.

Chest radiography performed on February 1st, 2011 showed ovoid opacity in the right hilar region, with no other abnormality (Figure 1A). Chest computed tomography (CT) performed on March 13, 2011 identified circumscribed round opacity with soft parts attenuation in the right hilar region, presenting enhancement after intravenous contrast agent injection, adjacent to the ipsilateral main pulmonary artery and its branches. Absence of other findings (Figures 1B and 1C).

Lesion biopsy result: *macro/microscopy* – hypercellular light-brownish fragments showing well-differentiated plasmacytoid cells with small, eccentric and hyperchromatic nuclei; *immunohis-*

tochemical analysis – positive for CD138 and lambda antibodies; and negative for CD3, CD20, AE1/AE3 and kappa antibodies.

The investigation proceeded with abdominal CT (on May 16, 2011) that showed the presence of a liver cyst and signs of fat infiltration into the liver; normal blood count; negative Bence-Jones proteinuria; protein electrophoresis with no abnormalities; absence of noteworthy findings at bone scintigraphy and bone marrow aspiration.

Radiotherapy was the treatment of choice, with satisfactory response.

Chest CT performed on November 9, 2012 (Figure 1D) and other radiological studies with no suspect finding of disease recurrence/progression until May 20, 2015.

Diagnosis: extramedullary plasmacytoma (EMP) in the pulmonary hilum.

Plasmacytoma are primarily classified into solitary bone marrow/bone plasmacytoma (solitary myeloma), extramedullary plasmacytoma or one of multiple myeloma components^(1,2). Such

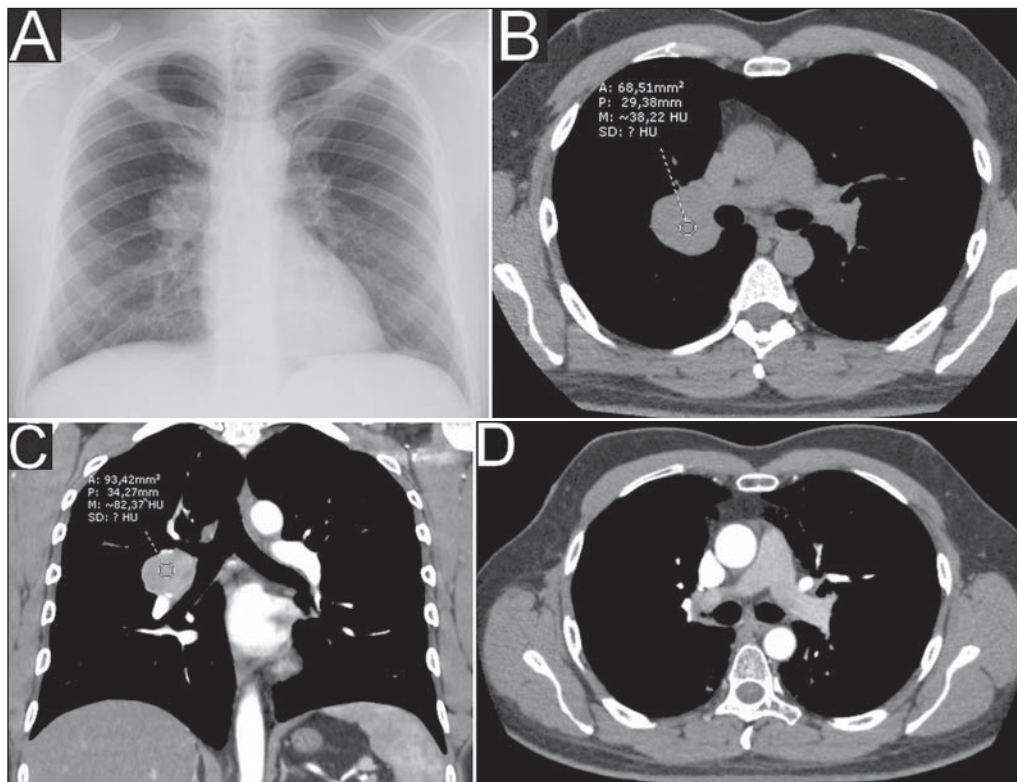


Figure 1. Chest radiography (A) showing ovoid opacity in the right hilar region. Axial chest CT section (B) at precontrast phase demonstrating circumscribed, round opacity with soft parts attenuation in the hilar region at right, and presenting enhancement after intravenous contrast agent injection, observed at coronal tomographic reconstruction (C). Contrast-enhanced axial chest CT section (D) after radiotherapy, where the previously described opacity is not characterized anymore, suggesting a good therapeutic response.

tumors are constituted of plasmacytoid cells, presenting malignant degeneration and producing a specific immunoglobulin molecule⁽³⁻⁷⁾.

The incidence of EMP is higher in men than in women, at a 3–4:1 ratio, most frequently occurring around the age of 50–60^(1,4,6,7). It is estimated that such tumor represents 2–4% of plasmacytoid neoplasms whose most relevant representative is the multiple myeloma^(1,3-7), the latter representing up to 1% of all general malignancies⁽⁸⁾.

Approximately 80–90% of EMP cases involve craniocervical structures (upper aerodigestive tract; larynx; nasopharynx; tonsilla; nasal and paranasal cavities)⁽¹⁻⁸⁾, but the number of cases does not reach 1% of all neoplastic head and neck lesions⁽⁵⁾. Other sites such as gastrointestinal and urogenital tracts, central nervous system, thyroid, parathyroid glands, salivary glands, lymph nodes, skin, lungs, and breasts are uncommon^(2,3,5,6). Lymph node involvement in pulmonary hila is extremely rare, with rates as low as less than 2% of cases⁽²⁾.

Generally, they present as masses with nonspecific soft parts density⁽³⁾. Histologically, such tumors do not originate directly from the bone marrow and cannot be distinguished from multiple myelomas. Also the differentiation from plasmacytoid cell granulomas and other inflammatory reactions is difficult, essentially requiring immunophenotyping^(1,4).

The diagnosis of EMP is made after rigorous investigation to rule out the presence of multiple myeloma, highlighting the histological confirmation by means of immunohistochemical analysis, biopsy/bone marrow puncture showing < 5% of plasmacytoid atypia; to rule out the presence of osteolytic lesions, serum and urinary protein dosage and electrophoresis (to rule out the presence of M and Bence-Jones proteins, respectively); and non-existence of anemia^(1-4,6,7).

EMP may be the initial manifestation of multiple myeloma, with progression in about 30% of cases^(1,2,7).

Treatments of choice include radiotherapy due the high radiosensitivity in 80–100% of cases, and surgery for localized lesions^(1,3-5,8). With such treatments, one observes recurrence and dissemination rates between 20% and 40%^(1,2,5-7), and ten-year survival in 70% of cases^(1,5-7).

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<http://dx.doi.org/10.1590/0100-3984.2015.0074>

PET/CT and brown fat in the evaluation of treatment response in Hodgkin lymphoma

PET/CT e gordura marrom na avaliação da resposta terapêutica no linfoma de Hodgkin

Dear Editor,

A female, 15-year-old patient presented with insidious onset of weight loss and low fever. Hodgkin's lymphoma was diagnosed after biopsy of a palpable enlarged lymph node. ¹⁸F-FDG PET/CT was performed during the initial staging, demonstrating hypermetabolic mediastinal, axillary and cervical lymph node enlargement (Figure 1). The findings were interpreted as lymphoma in activity in the mentioned sites. At basal PET/CT study, one could not observe metabolic activity in brown fat. Chemotherapy was initiated with adriablastine, bleomycine, vinblastine and dacarbazine at days D1 and D15 for every 28-day cycles.

Six chemotherapy cycles were uneventfully performed. A new FDG PET/CT performed after about three months to evaluate the therapeutic response demonstrated complete regression of all the lesions interpreted as lymphoma in activity at the first study.

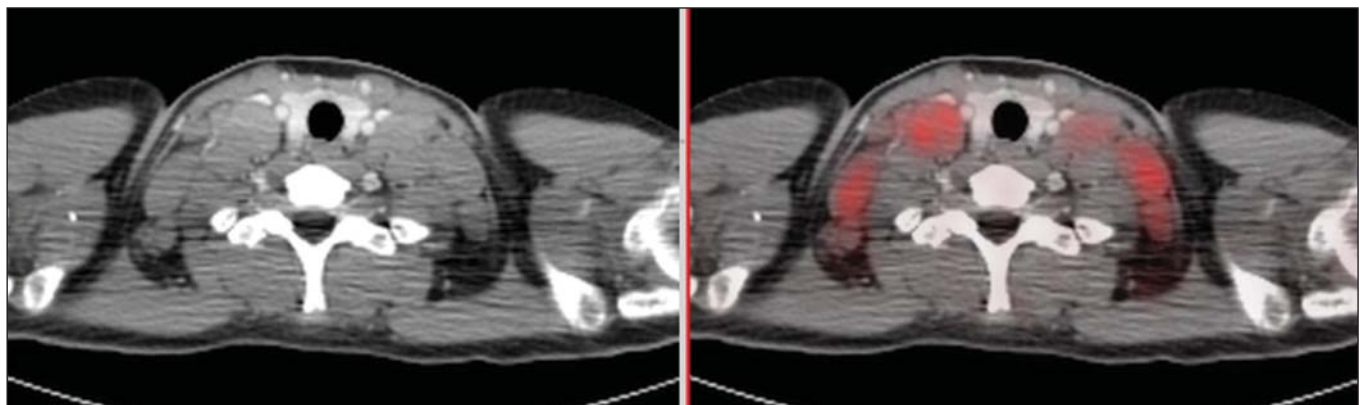


Figure 1. Pre-chemotherapy PET/CT image showing hypermetabolic lymph node enlargement in the cervical chains.