Fluoro-2-deoxy-D-glucose positron emission tomography/computed tomography imaging in the investigation of Lambert–Eaton myasthenic syndrome

FDG-PET/CT na investigação da síndrome miastênica de Lambert-Eaton

Vera L. Braatz1, Cláudia S. K. Kay1, Paulo J. Lorenzoni1, Vinicius B. Ludwig2, Milton M. Machota Junior3, Sergio O. Ioshii3, Rosana H. Scola1, Lineu C. Werneck1

A 56-year-old smoker woman presented with progressive gait disturbance, dysarthria, cerebellar ataxia, limb weakness, hyporeflexia, and weight loss. Electromyography was compatible with Lambert–Eaton myasthenic syndrome (LEMS). Serum anti-P/Q-type voltage-gated calcium channel antibody was detectable. Thoracic computed tomography (CT-thorax) showed a non-specific mediastinal mass. Whole-body [(18)F]fluoro-2-deoxy-D-glucose positron emission tomography/computed tomography (FDG-PET/CT) imaging revealed abnormality in the same topography (Fig 1A and B). Mediastinal biopsy showed lymph node infiltrated by small-cell lung cancer (SCLC) (Fig C).

Fig 1. (A) Thoracic computed tomography showed posterior mediastinal mass. (B) [(18)F]fluoro-2-deoxy-D-glucose positron emission tomography/computed tomography imaging revealed area of abnormal FDG accumulation in posterior mediastinal topography. (C) Histopathology of the mediastinal mass biopsy showed lymph node infiltrated by poorly differentiated malignant neoplasm (HE, 100×, 400×), the imunophenotyping of which was consistent with small-cell lung cancer.
LEMS, especially the classical forms with positive antibody, should be extensively investigated to locate the tumor site\textsuperscript{1,2}. Additional tests such as FDG-PET are complementary tools of great value when conventional methods are inconclusive\textsuperscript{1,3}. Recommendation from European Federation of Neurological Societies is screen for SCLC by CT-thorax, followed by FDG-PET or integrated FDG-PET/CT\textsuperscript{1}.

References