Teaching *NeuroImages*: FDG-PET imaging in primary diffuse leptomeningeal gliomatosis

Amerins Weijenberg, MD
J. Marc C. van Dijk, MD,
PhD
Jan Pruim, MD, PhD
Gert-Jan Luijckx, MD,
PhD

Correspondence to
Dr. Weijenberg:
a.weijenberg@umcg.nl

Figure 1 Sagittal postcontrast T1-weighted MRI

Sagittal postcontrast T1-weighted MRI shows diffuse enhancement of the arachnoid membrane and radicles.

A 50-year-old man presented with progressive tetraparesis and loss of vision. Inflammation and malignancy were considered based on diffuse meningeal enhancement on MRI (figure 1) and CSF content (very high protein, mild pleocytosis, and low to normal glucose). CSF cultures and cytologic examinations, including flow cytometry, were normal. FDG-PET showed increased uptake in the spinal cord and brain (figure 2), matching primary diffuse leptomeningeal gliomatosis (PDLG), leptomeningeal carcinomatosis/lymphoma, or isolated CNS infection.¹ A temporal leptomeningeal-cortical biopsy confirmed PDLG.

Although rarely performed, FDG-PET in PDGL characteristically demonstrates increased uptake isolated to the CNS.²

AUTHOR CONTRIBUTIONS

Amerins Weijenberg: drafting/revising the manuscript, study concept or design, analysis or interpretation of data, accepts responsibility for conduct of research and final approval, acquisition of data. J. Marc C. van

Dijk: drafting/revising the manuscript, study concept or design, accepts responsibility for conduct of research and final approval, study supervision. Jan Pruim: drafting/revising the manuscript, analysis or interpretation of data, accepts responsibility for conduct of research and final approval, acquisition of data. Gert-Jan Luijckx: drafting/revising the manuscript, accepts responsibility for conduct of research and final approval, study supervision.

STUDY FUNDING

No targeted funding reported.

DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

REFERENCES

1. Intriago B, Danus M, Ananos M, Trampal C, Montero M, Calvo N. ¹⁸F-FDG PET detection of spinal leptomeningeal metastases from cerebral glioblastoma multiforme. *Eur J Nucl Med Mol Imaging* 2011;38:1392.
2. Somja J, Boly M, Sadzot B, Moonen G, Deprez M. Primary diffuse leptomeningeal gliomatosis: an autopsy case and review of the literature. *Acta Neurol Belg* 2010;110:325–333.

Download teaching slides:
www.neurology.org

From the Departments of Neurology (A.W., G.-J.L.), Neurosurgery (J.M.C.v.D.), and Nuclear Medicine (J.P.), University Medical Center Groningen, University of Groningen, the Netherlands.

Coronal (A), sagittal (B), and transversal (C) FDG-PET show only pathologic increased uptake in the spinal cord. The SUVmax was calculated in different areas of the spinal cord according to the guidelines of the European Association of Nuclear Medicine and normalized to a glucose level of 5.0 (range 4.4–6.0).

Neurology®

Teaching *NeuroImages*: FDG-PET imaging in primary diffuse leptomeningeal gliomatosis

Amerins Weijenberg, J. Marc C. van Dijk, Jan Pruim, et al.

Neurology 2013;81:e119-e120

DOI 10.1212/WNL.0b013e3182a840db

This information is current as of October 14, 2013

Updated Information & Services	including high resolution figures, can be found at: http://n.neurology.org/content/81/16/e119.full
Supplementary Material	Supplementary material can be found at: http://n.neurology.org/content/suppl/2013/10/13/81.16.e119.DC1
References	This article cites 2 articles, 0 of which you can access for free at: http://n.neurology.org/content/81/16/e119.full#ref-list-1
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): All Oncology http://n.neurology.org/cgi/collection/all_oncology All Spinal Cord http://n.neurology.org/cgi/collection/all_spinal_cord PET http://n.neurology.org/cgi/collection/pet
Permissions & Licensing	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: http://www.neurology.org/about/about_the_journal#permissions
Reprints	Information about ordering reprints can be found online: http://n.neurology.org/subscribers/advertise

Neurology® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright © 2013 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.