Teaching NeuroImage: Subacute Quadripleasis From Intramedullary Spinal Cord Infiltrating Glioma With TERT Promoter Mutation

A 68-year-old man without a medical history developed 2 months of progressive weakness and cervicalgia. Examination showed quadripleasis with T10 sensory level. Spine MRI revealed an expansile intramedullary lesion from obex to T11 with peripheral nodular enhancement (Figure, A–D). Brain MRI, body PET/CT, and broad serum diagnostics were normal (eTable 1, links.lww.com/WNL/C653). CSF showed protein 2,505 mg/dL, 0 cells/μL, glucose 88 mg/dL, and CSF cell-free DNA sequencing identified a pathogenic variant in TERT p.C250T, suspicious for glioma. Thoracic spinal cord biopsy was pursued to exhaust reversible etiologies and revealed infiltrating glioma with TERT promoter mutation (Figure, E and F). Owing to progressive quadriplegia, respiratory failure, and poor prognosis, care was directed toward comfort.

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Spinal masses are classified as extradural, intradural extramedullary, or intradural intramedullary.2 Differential diagnosis for intramedullary cord lesions includes demyelination, paraneoplastic myelopathies (e.g., anti-CRMP5), neurosarcoidosis, infection, vascular abnormalities (e.g., dural arteriovenous fistula/malformation), nutritional deficiency, toxic insult, or tumor. Although noninvasive diagnostics should be exhausted, definitive diagnosis of neoplastic myelopathy generally requires biopsy. Novel cell-free DNA sequencing may complement or eventually supersede certain diagnostics, especially where biopsy is unsafe.

**Author Contributions**

S. Gritsch: drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; and analysis or interpretation of data. Y. Aghajan: drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; and analysis or interpretation of data. L. Kozanno: drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; and analysis or interpretation of data. D. Chiu: drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; and analysis or interpretation of data. M. P. Frosch: drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; and analysis or interpretation of data. G. Shankar: drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; and analysis or interpretation of data. W. T. Kimberly: drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; and analysis or interpretation of data.

**Study Funding**

No targeted funding reported.

**Disclosure**

S. Gritsch, Y. Aghajan, L. Kozanno, and D. Chiu report no disclosures relevant to the manuscript. J. T. Jordan reports consulting income from Navio Theragnostics, Recursion Pharmaceuticals, and CEC Oncology, holds stock in Navio Theragnostics and The Doctor Lounge, and receives royalties from Elsevier. M. P. Frosch and G. Shankar report no disclosures relevant to the manuscript. W. T. Kimberly reports consulting fees from NControl Therapeutics, research grants from Biogen, and equity in Woolsey Pharmaceuticals. Go to Neurology.org/N for full disclosures.

**Publication History**

Received by Neurology October 5, 2022. Accepted in final form January 19, 2023. Submitted and externally peer reviewed. The handling editor was Resident and Fellow Section Editor Whitley Aamodt, MD, MPH.

**References**


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Simon Gritsch, Yasmin Aghajan, Liana Kozanno, et al.
*Neurology* 2023;100;1164-1165 Published Online before print February 20, 2023
DOI 10.1212/WNL.0000000000207148

This information is current as of February 20, 2023

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