



The most widely read and highly cited peer-reviewed neurology journal The Official Journal of the American Academy of Neurology

Neurology Publish Ahead of Print DOI: 10.1212/WNL.0000000000206822

Teaching NeuroImage: Intracranial Solitary Fibrous Tumor With Liver Metastasis

Author(s):

Mason James Webb, MD, PhD¹; Jian L. Campian, MD, PhD²; Ugur Sener, MD³

Corresponding Author:

Ugur Sener, sener.ugur@mayo.edu

Affiliation Information for All Authors: 1. Department of Hematology and Oncology, Mayo Clinic, Rochester, MN; 2. Department of Oncology, Division of Medical Oncology, Mayo Clinic, Rochester, MN; 3. Department of Neurology, Mayo Clinic, Rochester, MN

Equal Author Contribution:

Contributions:

Mason James Webb: Drafting/revision of the manuscript for content, including medical writing for content; Analysis or interpretation of data

Jian L. Campian: Major role in the acquisition of data

Ugur Sener: Drafting/revision of the manuscript for content, including medical writing for content; Major role in the acquisition of data; Study concept or design; Analysis or interpretation of data

Figure Count:

1

Neurology® Published Ahead of Print articles have been peer reviewed and accepted for publication. This manuscript will be published in its final form after copyediting, page composition, and review of proofs. Errors that could affect the content may be corrected during these processes.

Table Count:

0

Search Terms:

[100] All Headache, [120] MRI, [122] PET, [213] All Oncology, [217] Metastatic tumor

Acknowledgment:

Study Funding:

The authors report no targeted funding

Disclosures:

The authors report no relevant disclosures.

Preprint DOI:

Received Date:

2022-08-08

Accepted Date:

2022-12-02

Handling Editor Statement:

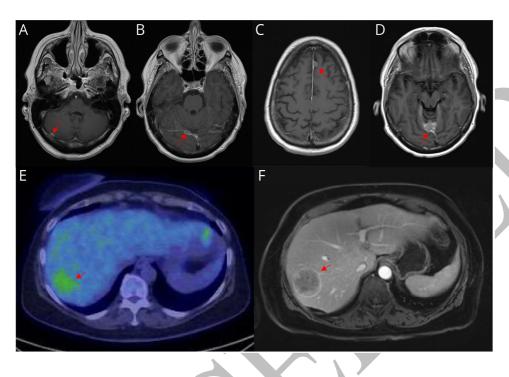
Submitted and externally peer reviewed. The handling editor was Resident and Fellow Section Editor Whitley Aamodt, MD, MPH

.

A 65-year-old woman presented with nausea, headache, and visual changes. MRI brain identified dural-based lesions involving the right cerebellum, right tentorium, and left anterior falx thought to be consistent with meningiomas (Figure, A–C). Due to unclear association between imaging findings and clinical symptoms, surveillance was recommended. Follow up was inadvertently delayed. Repeat imaging at 7 months revealed enlarging tentorial lesion, treated with gamma knife radiosurgery (GKRS) (Figure, D). Further growth prompted resection of the cerebellar lesion. Tumor cells were positive for STAT6 on immunohistochemistry, establishing solitary fibrous tumor (SFT) as the diagnosis. PET:CT identified FDG-avid hepatic lesion with biopsy confirming STAT6, CD34, and synaptophysin positive metastatic SFT (Figure, E–F). After additional GKRS, systemic therapy with sunitinib was started. SFTs are mesenchymal neoplasms predominantly affecting young adults that should be included in the differential of durally-based lesions¹. Given propensity for extracranial metastasis, systemic imaging should be obtained upon establishing tissue diagnosis².

Figure: MRI of the brain and PET:CT of the liver

Post-contrast T1-weighted MRI axial demonstrating lesions involving the right cerebellum (A), right tentorial leaflet (B), and left anterior falx (C). (D) Post-contrast T1-weighted MRI axial demonstrating increased size of right tentorial lesion. (E) PET:CT demonstrating lesion in the superior posterior right hepatic lobe. (F) MRI demonstrating hepatic metastasis.



References:

- 1. David N Louis, Arie Perry, Pieter Wesseling, Daniel J Brat, Ian A Cree, Dominique Figarella-Branger, Cynthia Hawkins, H K Ng, Stefan M Pfister, Guido Reifenberger, Riccardo Soffietti, Andreas von Deimling, David W Ellison, The 2021 WHO Classification of Tumors of the Central Nervous System: a summary, Neuro-Oncology, Volume 23, Issue 8, August 2021, Pages 1231–1251, https://doi.org/10.1093/neuonc/noab106
- 2. Ratneswaren T, Hogg FRA, Gallagher MJ, Ashkan K. Surveillance for metastatic hemangiopericytoma-solitary fibrous tumors-systematic literature review on incidence, predictors and diagnosis of extra-cranial disease. J Neurooncol. 2018 Jul;138(3):447-467. doi: 10.1007/s11060-018-2836-2. Epub 2018 Mar 17. PMID: 29551003.



Teaching NeuroImage: Intracranial Solitary Fibrous Tumor With Liver Metastasis

Mason James Webb, Jian L. Campian and Ugur Sener Neurology published online December 23, 2022 DOI 10.1212/WNL.0000000000206822

This information is current as of December 23, 2022

Updated Information & including high resolution figures, can be found at:

822.citation.full

Subspecialty Collections This article, along with others on similar topics, appears in the

following collection(s):

All Headache

http://n.neurology.org/cgi/collection/all headache

All Oncology

http://n.neurology.org/cgi/collection/all_oncology

Metastatic tumor

http://n.neurology.org/cgi/collection/metastatic_tumor

MŘI

http://n.neurology.org/cgi/collection/mri

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 © 2022 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.

