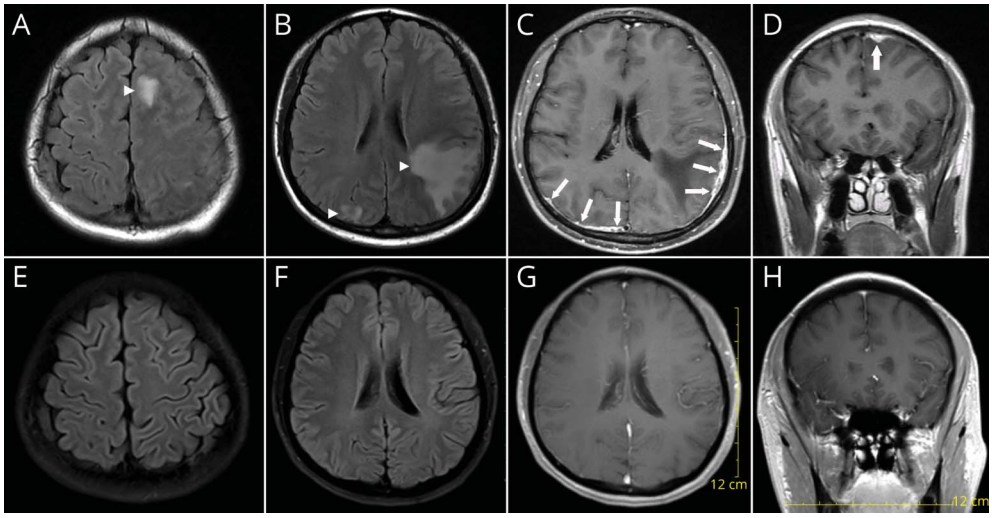
Teaching NeuroImage: Dura Mater Thickening and Enhancement in Anti-NMDAR Encephalitis

Cheng Xia, MD, and Hui-Sheng Chen, MD

Neurology® 2022;99:628-629. doi:10.1212/WNL.0000000000201060

Correspondence
Dr. Chen
chszh@aliyun.com

Figure Neuroimaging (MRI) During the Course of the Disease



FLAIR images (A and B, arrowheads) showed multiple cortical and subcortical hyperintensities with adjacent dura mater thickening and enhancement (C and D, arrows). The FLAIR hyperintensities and dural enhancement improved after treatment (E–H). FLAIR = fluid-attenuated inversion recovery.

A 33-year-old man presented with baryglossia, memory disturbance, and seizures for a month. The workup for infectious and rheumatic disease was negative. Serum and CSF anti-NMDAR antibody were positive. MRI showed cortical and subcortical hyperintensities with adjacent pachymeningeal thickening and enhancement (Figure, A–D). Treatment with immunoglobulin and high-dose methylprednisolone produced significant improvement in the symptoms and resolution of changes on the posttreatment MRI (Figure, E–H).

The frequently reported abnormalities on MRI in anti-NMDAR encephalitis are leptomeningeal enhancement and T2/FLAIR cortical and subcortical hyperintensities in the temporal lobe, followed by the frontal lobe, periventricular region, and cerebellum, rarely involving the dura mater.[1,2]

MORE ONLINE

Teaching slides
links.lww.com/WNL/C217

Study Funding
No targeted funding reported.

Disclosure
The authors report no relevant disclosures. Go to Neurology.org/N for full disclosures.

From the Department of Neurology, General Hospital of Northern Theater Command, Shenyang, China.

Go to Neurology.org/N for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the article.

Publication History

Received by *Neurology* March 19, 2022. Accepted in final form June 17, 2022. Submitted and externally peer reviewed. The handling editor was Roy Strowd III, MD, Med, MS.

Appendix Authors

Name	Location	Contribution
Cheng Xia, MD	Department of Neurology, General Hospital of Northern Theater Command, Shenyang, China	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data

Appendix *(continued)*

Name	Location	Contribution
Hui-Sheng Chen, MD	Department of Neurology, General Hospital of Northern Theater Command, Shenyang, China	Study concept or design; analysis or interpretation of data

References

1. Bacchi S, Franke K, Wewegama D, et al. Magnetic resonance imaging and positron emission tomography in anti-NMDA receptor encephalitis: a systematic review. *J Clin Neurosci.* 2018;52(1):54-59.
2. Suzuki H, Kitada M, Ueno S, et al. Anti-NMDAR encephalitis preceded by dura mater lesions. *Neurol Sci.* 2013;34(6):1021-1022.

Teaching NeuroImage: Dura Mater Thickening and Enhancement in Anti-NMDAR Encephalitis

Cheng Xia and Hui-Sheng Chen

Neurology 2022;99;628-629 Published Online before print July 20, 2022
DOI 10.1212/WNL.0000000000201060