Corpus Callosum Hyperintensity in Normal Pressure Hydrocephalus After Ventriculoperitoneal Shunt

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Figure Imaging Results

Ventriculomegaly on fluid-attenuated inversion recovery (FLAIR) axial image (A, B) and upward-displaced, thin corpus callosum on T1-weighted sagittal image (C) are visible before shunt surgery. Seven months after surgery, narrow ventricle and hyperintensities in corpus callosum on FLAIR axial images (D, E) and corpus callosum scalloping with signal change on T1-weighted sagittal image (F) are noticeable.

A 73-year-old man presented with a 10-year history of gait instability, cognitive impairment, and urinary incontinence. Brain MRI (figure, A–C) and a positive response to tap test suggested a clinical diagnosis of normal pressure hydrocephalus (NPH). Ventriculo-peritoneal shunt improved his symptoms without complications but was associated with changes in corpus callosum and narrow ventricle, possibly suggesting overdrainage (figure, D–F). Callosal stretch injury is poorly studied in NPH and rarely reported in postmortem NPH pathology.¹ Although detected in patients treated for obstructive hydrocephalus,² postshunt callosal hyperintensity is a poorly understood and little-known radiologic sign.

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Appendix Authors

Name	Location	Contribution
Jinyoung Youn, MD, PhD	Edmond J. Safra Program in Parkinson's Disease, Morton and Gloria Shulman Movement Disorders Clinic, Toronto Western Hospital, UHN, Canada	Analyzed the data, drafted the manuscript for intellectual content
Gabor G. Kovacs, MD, PhD	Edmond J. Safra Program in Parkinson's Disease, Morton and Gloria Shulman Movement Disorders Clinic, Toronto Western Hospital, UHN, Canada	Interpreted the data, revised the manuscript for intellectual content

Appendix (continued)

Name	Location	Contribution
Paul Kongkham, MD, PhD	Division of Neurosurgery, Department of Surgery, Toronto Western Hospital, Ontario, Canada	Revised the manuscript for intellectual content
Alfonso Fasano, MD, PhD	Edmond J. Safra Program in Parkinson's Disease, Morton and Gloria Shulman Movement Disorders Clinic, Toronto Western Hospital, UHN, Canada	Designed and conceptualized study, interpreted the data, revised the manuscript for intellectual content

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