Teaching NeuroImages: The lentiform fork sign

An MRI pattern of metformin-associated encephalopathy

Gustavo C. Fernandes,
MD
Tássia Koltermann, MD
Lillian Campos, MD
Leonardo Vedolin, MD,
PhD
Carlos R.M. Rieder, MD,
PhD

Correspondence to
Dr. Fernandes:
gcostafernandes@yahoo.com

Figure The lentiform fork sign

(A) Axial noncontrast CT shows bilateral hypodensities in the basal ganglia. (B) Brain MRI reveals a pattern of vasogenic edema with T2/fluid-attenuated inversion recovery hyperintensity in the basal ganglia compatible with the lentiform fork sign.

A 63-year-old woman with type 2 diabetes mellitus on hemodialysis presented with subacute onset of slurred speech and difficulty walking after 1 week of inadvertent metformin use.

On examination, she had a wide-based gait, symmetric upper limb rigidity, bradykinesia, and slurred speech.

Brain MRI revealed a pattern of vasogenic edema with T2/fluid-attenuated inversion recovery hyperintensity in the basal ganglia compatible with the lentiform fork sign¹ (figure).

Basal ganglia pathology has been described on the setting of metabolic acidosis and metformin use in hemodialysis patients, resulting in a parkinsonian syndrome.²

AUTHOR CONTRIBUTIONS

Gustavo C. Fernandes: drafting/revising the manuscript, study concept or design, analysis or interpretation of data, accepts responsibility for conduct of research and final approval, study supervision. Tássia Koltermann: study concept or design, accepts responsibility for conduct of research and final approval, acquisition of data. Lillian Campos: drafting/revising the

manuscript, analysis or interpretation of data, accepts responsibility for conduct of research and final approval, acquisition of data. Leonardo Vedolin: drafting/revising the manuscript, study concept or design, analysis or interpretation of data, accepts responsibility for conduct of research and final approval. Carlos R.M. Rieder: drafting/revising the manuscript, accepts responsibility for conduct of research and final approval.

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