Microembolism detection in giant cell arteritis

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A 75-year-old woman was admitted to our neurology department with acute confusional syndrome. The patient was fully independent until the day before admission when she was cooking and suddenly fell to the ground. Past medical history was unremarkable and did not reveal previous symptoms of giant cell arteritis. MRI (figure, A) showed multiple bilateral infarcts of posterior territory including both thalami. Thickening and pulse absence in both temporal arteries were observed. Giant cell arteritis was suspected (sedimentation rate 98 mm/h). Doppler study revealed the halo sign (smooth hypoechogenic mural thickening) in both vertebral arteries (figure, C) and right occipital artery (figure, B). Transcranial study detected microembolic signals in both vertebral arteries (figure, D). The diagnosis of giant cell arteritis was confirmed by biopsy and steroid treatment was initiated. We believe that acute confusional syndrome in this patient was derived from the embolic process.¹ A second Doppler study performed 10 days later showed no changes. The patient died of pneumonia on day 15.

Ultrasonography is a usual test for giant cell arteritis diagnosis. The recognition of halo sign and microembolic detection in intracranial arteries allow prompt diagnosis and treatment.²

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AUTHOR CONTRIBUTIONS

Susana Arias-Rivas: study concept and drafting the manuscript for intellectual content. María Santamaría Cadavid: revision of the manuscript for intellectual content. Manuel Rodríguez-Yáñez: revision of the manuscript for intellectual content. Miguel Blanco: study supervision.

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Figure Microembolism detection in giant cell arteritis

(A) MRI diffusion-weighted imaging sequence shows multiple bilateral infarcts of posterior territory including both thalami. (B) Halo sign in right occipital artery. (C) Halo sign in vertebral artery. (D) High-intensity transient signals indicating multiple microembolic detection in left intracranial vertebral artery (arrows).