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Clinical Vignette

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Atypical posterior reversible encephalopathy syndrome (PRES) as onset of giant cell arteritis (GCA)

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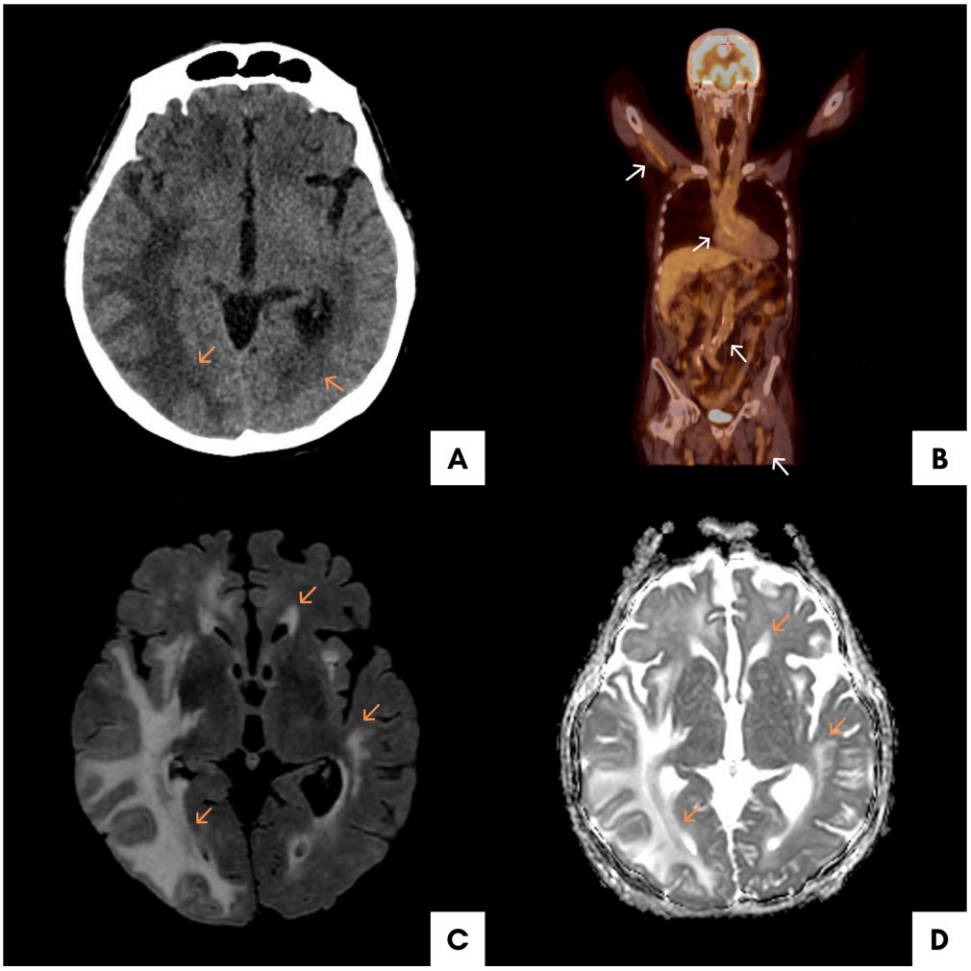

Figure 1. Neuroimaging of posterior reversible encephalopathy syndrome in the context of a GCA. (**A**) Non-contrast-enhanced head CT scans of the head showing hypodensity of the right cerebral hemisphere and left temporal-polar region. (**B**) 18-Fluorodeoxyglucose PET/CT showing an increased glucose uptake of the walls of large vessels. Contrast-enhanced MRI of the vasogenic oedema, revealed in the same areas as (A), as (**C**) hyperintensity in fluid-attenuated inversion recovery images and (**D**) increased apparent diffusion coefficient map values in diffusion-weighted imaging sequences

An 87-year-old man presented to the Emergency Department of our Hospital with a 1-week history of headache, mental confusion, disequilibrium and left arm weakness. Moreover, arterial hypertension was found for the first time. Non-contrast-enhanced CT of the head showed a large subcortical and deep white matter hypodensity in the right cerebral hemisphere and left temporal-polar region (Fig. 1A). Contrast-enhanced MRI confirmed diffuse hyperintensity in fluid-attenuated inversion recovery images (Fig. 1C) and increased apparent diffusion coefficient map values in diffusion-weighted imaging sequences (Fig. 1D), without areas of restricted diffusion or pathological enhancement. This pattern suggested a vasogenic oedema and the diagnosis of posterior reversible encephalopathy syndrome (PRES) was made. An 18-fluorodeoxyglucose PET/CT showed an increased glucose uptake of the walls of large vessels, from carotids to femoral arteries (Fig. 1B). A halo sign on temporal artery US confirmed GCA. Oral prednisone 1 mg/kg and angiotensin-converting enzyme inhibitor therapy were started, with immediate neurologic improvement. Rheumatologic disorders, such as vasculitides, are often associated with PRES [1]. To date, PRES has been occasionally described in Takayasu arteritis, and only in one patient in GCA, but not at the onset [2]. Hence, we report the first case of GCA presenting with atypical asymmetric PRES, possibly related to cerebral vessel inflammation and subsequent endothelial dysfunction.

Data availability

Data are available upon reasonable request by any qualified researchers who engage in rigorous, independent scientific research, and will be provided following review and approval of a research proposal and Statistical Analysis Plan (SAP) and execution of a Data Sharing Agreement (DSA). All data relevant to the study are included in the article.

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