Precentral gyrus infarct presenting as isolated contralateral peripheral-type facial palsy

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Figure 1 Photograph of the patient demonstrates a right peripheral-type facial palsy

We observed decreased movement of both the upper and lower part of the face with asymmetry of eyelid closure during maximal effort.

A 78-year-old hypertensive woman was assessed for acute right facial weakness. Examination showed isolated right peripheral-type facial palsy (weakness of upper and lower face) (figure 1). Brain MRI revealed focal restricted diffusion in the left precentral gyrus (figure 2). Weakness of

Figure 2 Brain MRI

(A) Axial diffusion-weighted imaging sequence demonstrates a small area of restricted diffusion in the left precentral gyrus. (B) Axial fluid-attenuated inversion recovery image shows a hyperintensity signal in the same area.

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upper facial muscles can be seen in central facial paralysis^{1,2} but is not usually isolated. Studies in monkeys suggest that both upper and lower facial nucleus receive bilateral cortical inputs; our case suggests that the upper facial nucleus could receive less cortical input than the lower.³ Since the upper face motor representation is in both middle and anterior cerebral arteries territories,⁴ we hypothesize that involvement of critical zones of the Rolandic area can account for upper facial weakness, a crucial diagnostic challenge, the differential being Bell palsy.

Author contributions

Dr. Hebant: study concept and design. Dr. Costentin: critical revision of the manuscript for important intellectual content. Dr. Slama: critical revision of the manuscript for important intellectual content. Dr. Guegan-Massardier: critical revision of the manuscript for important intellectual content.

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