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

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

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, 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. Since the upper face motor representation is in both middle and anterior cerebral arteries territories, 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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**References**

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