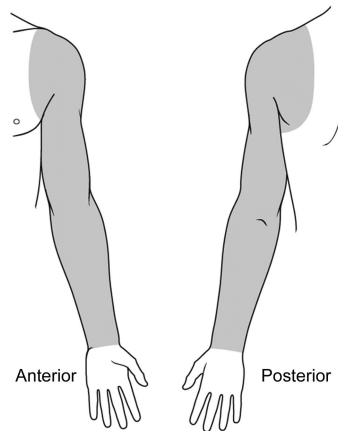


Teaching *NeuroImages*: Isolated sensory loss of the arm sparing the hand in cortical infarction

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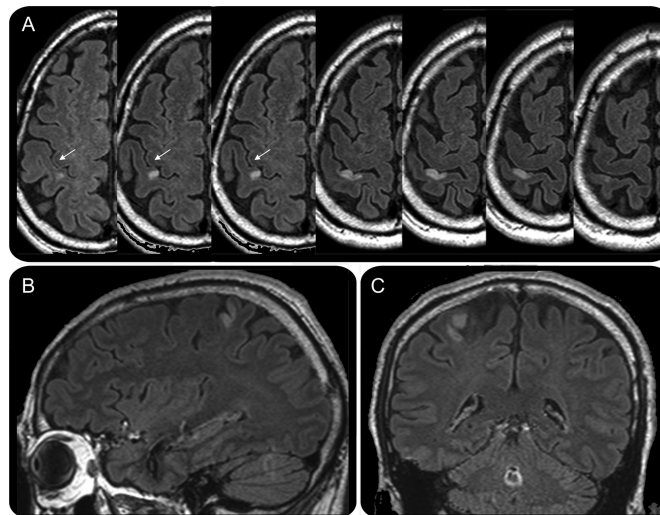
Figure 1 Drawings showing the area of decreased sensation (shaded area)



A 66-year-old man with hypertension and diabetes developed paresthesias on his left arm. Examination showed that his sensory loss involved the shoulder, arm, and forearm, but spared the hand (figure 1). MRI showed an acute cortical infarction (figure 2). Although motor areas for the shoulder-arm-forearm are located medially and superiorly to the hand area, the precise sensory areas for them are unknown.^{1,2} This case demonstrates that isolated sensory loss may be due to cortical infarctions and sensory areas for the shoulder-arm-forearm may have similar topographic arrangement in the postcentral gyrus to that of the motor areas in the precentral gyrus.

1. Maldjian JA, Gottschalk A, Patel RS, Detre JA, Alsop DC. The sensory somatotopic map of the human hand demonstrated at 4 Tesla. *Neuroimage* 1999;10:55–62.
2. Hlustik P, Solodkin A, Gullapalli RP, Noll DC, Small SL. Somatotopy in human primary motor and somatosensory hand representations revisited. *Cereb Cortex* 2001;11:312–321.

Figure 2 MRI: (A) Axial, (B) sagittal, and (C) coronal images of fluid-attenuated inversion recovery 5 days after onset showing an acute infarction in the anterior portion of the right postcentral gyrus



The lesion is located medially, superiorly, and posteriorly to the precentral hand knob area (arrow).

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