

LETTER TO THE EDITOR

Dysarthria-clumsy hand syndrome originating in the corona radiata

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A 61-year-old hypertensive man was admitted to our hospital with writing difficulties and speech disturbance. On admission, neurological examination revealed left facial weakness was equivocal and mild pronator drift of the right arm

was noted without leg weakness. Dysarthria-clumsy hand syndrome (DCHS) was now diagnosed. The patient was examined with a 1.5-T magnetic resonance imaging (MRI) unit (Signa EchoSpeed Horizon; GE Medical Systems, Milwaukee, WI, USA). Diffusion weighted MR imaging (DWI) revealed a hyperintense lesion involving the left corona radiata (Fig. 1), and was identified as the lesion responsible for DCHS. The lesion in the corona radiata was diagnosed as lacunar infarct.

The present case clearly demonstrated lacunar infarction involving the corona radiata in a patient with DCHS. To the best of our knowledge, this is the first case with DCHS in which DWI clearly demonstrated fresh lesions in the corona radiata. Numerous cases of DCHS have been reported since Fisher first described lacunar syndromes [1]. Donnan *et al.* [2] reported that DCHS was present in six of 69 cases with the internal capsule infarction. Arboix *et al.* [3] studied that the present lesions of 35 cases with DCHS and showed that the internal capsule was found in 16 cases, but corona radiata was in only three cases.

However, previous studies have not used DWI, and might thus be unreliable for determining whether lesions were acute and corresponding to neurological manifestations. Schonewille *et al.* [4] assessed 43 acute stroke patients with

classical lacunar syndromes using DWI and reported that DCHS was seen in only two cases (Case 1 in the posterior limb of the internal capsule; Case 2 in the caudate nucleus). In light of the present report and that of Schonewille *et al.* [4], DCHS with acute ischemic stroke displayed responsible lesions not only in the internal capsule, but also in the corona radiata. The present report indicates that DWI could completely exclude the unreliable lesions and clearly demonstrate the involvement in corona radiata.

In conclusion, this report provides new and important information on the neuroimaging for DCHS in acute ischemic stroke. DWI may help to verify unclear correlations between the neurological manifestation and responsible lesion in DCHS.

References

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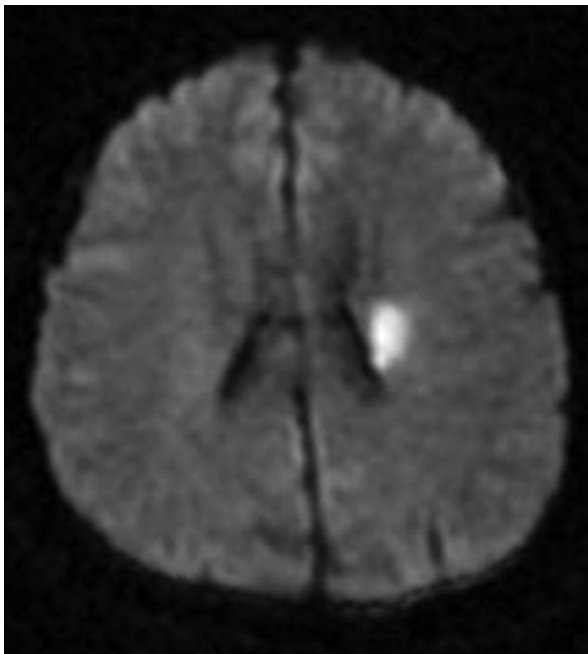


Figure 1 Axial diffusion-weighted magnetic resonance imaging shows hyperintensity in the corona radiata on initial hospitalization.