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【 PICTURES IN CLINICAL MEDICINE 】

Degeneration of the Substantia Nigra Following Ipsilateral Striatal Infarction

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Key words: exo-focal post-ischemic neuronal death, substantia nigra degeneration, striatal infarction

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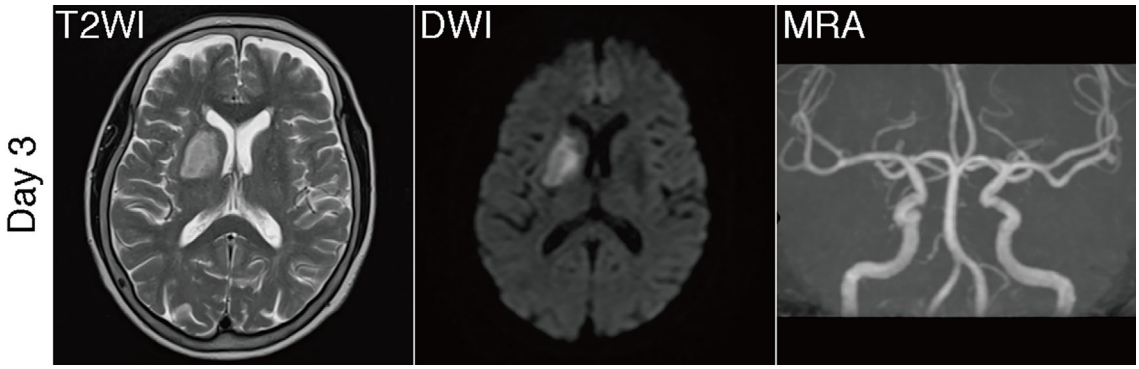
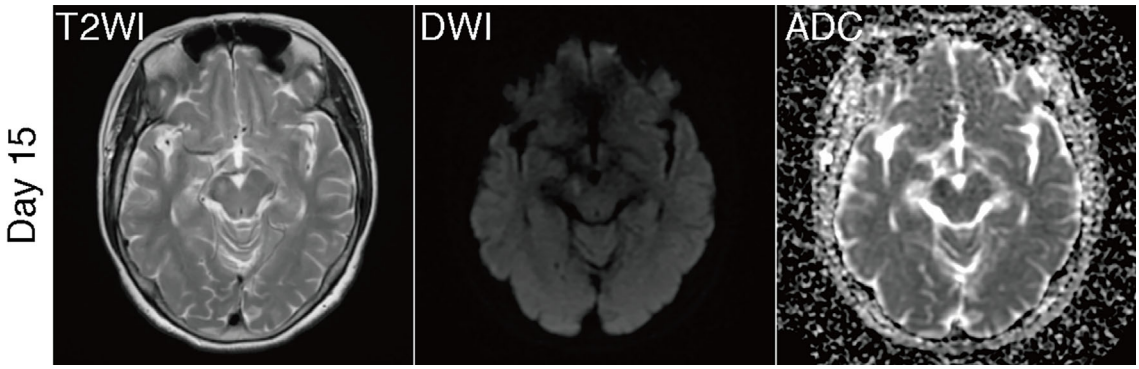


Picture 1.



Picture 2.

A 74-year-old woman was admitted due to a 4-day history of disorientation. Although her symptoms showed improvement, brain magnetic resonance imaging (MRI) (Day 3) revealed a high-intensity lesion in the right basal ganglia in diffusion-weighted images and T2WI without any changes on magnetic resonance angiography (Picture 1), which supported a diagnosis of striatal infarction, presumably due to embolic occlusion of the middle cerebral artery with recanalization. Despite showing a favorable clinical course with anticoagulant therapy, a new lesion appeared in the right substantia nigra (SN) on Day 15 (Picture 2).

The destruction of the striatonigral pathway, an inhibitory GABAergic pathway, evokes excessive neuronal excitation in the SN, leading to exo-focal post-ischemic neuronal death (1, 2). The ipsilateral SN shows high-intensity on T2 imaging, which develops within 7-14 days after the onset

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and which spontaneously disappears within 2 months without any neurological sequelae (3). This condition has the potential to be misdiagnosed as an additional ischemic event; thus, excessive anticoagulant therapy should be avoided.

The authors state that they have no Conflict of Interest (COI).

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