

Slit Sign of Magnetic Resonance Image in Multiple System Atrophy

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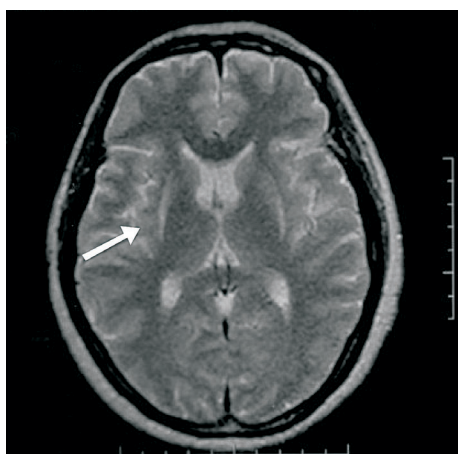


Figure. Axial T2-weighted image (TE= 87.5 ms, TR= 4050 ms) at the basal ganglia level in a patient with multiple system atrophy. There is a hyperintense rim (arrow) lateral from the putamen.

The 50-year-old woman developed forward toppling and tendency of fall while walking for 1 year. Slowness of motion and bilateral hand shaking when holding objects were also present concomitantly. A half year ago, she began to have bladder dysfunction and had to be catheterized for pissing in recent several months. Dizziness and occasional fainting elicited by postural change were suffered in recent 6 months. Neurological examination revealed parkinsonian features with stimulus sensitive myoclonic tremor of 4 limbs. Her gait was in short stride with a bit wide base. Orthostatic hypoten-

sion was detected with blood pressure change from 120/94 mmHg on lying to 90/68 mmHg on standing. These features suggest the diagnosis of multiple system atrophy (MSA)⁽¹⁾. In addition to the salient clinical manifestations, her brain magnetic resonance imaging study revealed typical 'slit-like' marginal hyperintensity lateral from the bilateral putamina. (Fig.)

Slit sign may appear in 36% of MSA patients and, occasionally, in some patients with progressive supranuclear palsy or cortical basal degeneration⁽²⁾. Pathological and imaging correlation study showed that 'slit sign' corresponds to the areas of microgliosis, astrogliosis and the highest amounts of ferric iron deposition⁽³⁾. Although the differential diagnosis of parkinsonian syndrome is challenging, the presence of characteristic image pattern and clinical features may, however, lead a way to secure the appropriate answer.

References:

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