Neuro *Images*



Figure A. External ophthalmologic examination revealed the presence of bilateral Kayser-Fleischer rings, most prominently seen laterally (arrows).

The "double panda sign" in Wilson's disease

Dina A. Jacobs, MD; Clyde E. Markowitz, MD; David S. Liebeskind, MD; and Steven L. Galetta, MD

A 36-year-old woman presented with severe dysarthria, axial and appendicular tremor, and ataxia. Symptoms began with the tremor 2 years prior to presentation. Neurologic examination revealed the presence of Kayser-Fleischer rings (figure, A), severe dysarthria and dysphonia, akathisia, truncal and appendicular tremor, left hemiparesis, and dystonia. Serum ceruloplasmin was markedly decreased at 10 mg/dL (normal 18 to 55 mg/dL). An MRI revealed diffuse white matter abnormalities with bilateral symmetric involvement of the midbrain, pons, inferior cerebellum, thalami, internal capsules, external capsules, and splenium of the corpus callosum. The MRI abnormalities in the midbrain (figure, B) reveal the "face of the giant panda" sign that is characteristic of Wilson's disease.1 In addition, a second miniature "panda face" can be seen in the high signal abnormality in the pons (figure, C). The midbrain "panda sign" on T2-weighted MRI has been previously described as preservation of normal signal intensity in the red nuclei and lateral portion of the pars reticulata of the substantia nigra, high signal in the tegmentum, and hypointensity of the superior colliculus.1 The "face of the miniature panda" is seen within the pontine tegmentum. It is delineated by the relative hypointensity of the medial longitudinal fasciculi and central tegmental tracts ("eyes of the panda") in contrast with the hyperintensity of the aqueduct opening into the fourth ventricle ("nose and mouth of the panda") bounded inferiorly by the superior medullary velum (see figure, C). The superior cerebellar peduncles form the panda's "cheeks."

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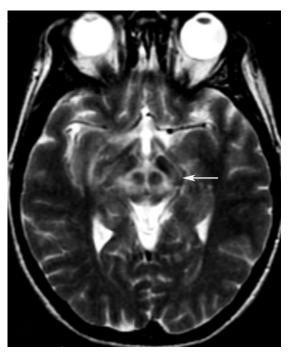


Figure B. T2-weighted axial MRI demonstrates the "face of the giant panda" in the midbrain (arrow).



Figure C. T2-weighted axial MRI reveals the "face of the miniature panda" in the pontine tegmentum (arrow).

^{1.} Hitoshi S, Iwata M, Yoshikawa K. Mid-brain pathology of Wilson's disease: MRI analysis of three cases. J Neurol Neurosurg Psychiatry 1991;



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