Midbrain Panda Sign in a Patient with Wilson’s Disease

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A 22-year-old woman presented with asymmetrical tremors, slurred speech and gait disturbance. A physical examination revealed Kayser-Fleischer rings, and a diagnosis of Wilson’s disease (WD) was confirmed on the basis of serum ceruloplasmin and urine copper studies. Brain MRI revealed bilateral hyperintensity on T2-weighted images involving the putamen, globus pallidus and brain stem. In the midbrain, hyperintense signals in the tegmentum and normal signals in the lateral portion of the pars reticulata of the substantia nigra and the red nuclei resembled the characteristic “face of the giant panda” (Picture). WD is an autosomal recessive genetic disorder of copper homeostasis caused by mutations in the \textit{ATP7B} gene. The neurological manifestations of WD include tremors, dysarthria, ataxia, bradykinesia, dystonia, behavioral changes, depression and psychosis. Brain MRI often shows involvement of the midbrain (1), and modifications of MRI abnormalities on follow-up often correlate with clinical symptoms and thus can be used to evaluate the response to treatment (2).

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References