G, Tonon C, Testa C, et al. Abnormal medial thalamic metabolism in patients with idiopathic restless legs syndrome. **Brain** 2012 Dec;135(Pt 12):3712-20). (Respond: Raffaele Lodi MD, PhD. E-mail: raffaele.lodi@unibo.it).

COMMENT. RLS is heterogeneous, some cases symptomatic of iron deficiency, uremia, pregnancy and polyneuropathy, and others idiopathic, especially patients with onset before age 30 years. Genetic risk variants have also been identified. (Paulus W, et al. Update of the pathophysiology of the restless-legs-syndrome. **Mov Disord** 2007;22 Suppl 18:S431-9).

Investigation of unmedicated early onset restless legs syndrome by voxel-based morphometry, T2 relaxometry, and functional MR imaging during the night-time hours reveals no regional brain volume changes but indicates increased iron content in the globus pallidus and substantia nigra, suggesting dysfunction of the basal ganglia. Activation of the striatofrontolimbic area may represent the neurofunctional substrate mediating RLS. (Margariti PN, et al. **AJNR Am J Neuroradiol** 2012 Apr;33(4):667-72).

## **HEMI-CHOREA AND BRAINSTEM GLIOMA**

A case-report from Baroda Medical College, India, concerns a 9-year-old girl who complained of difficulty in walking and involuntary movements of the left upper and lower limbs. On neurological examination she had chorea involving the left side, bilateral lateral rectus palsy, and spasticity of the right upper and lower limbs. CT scan and MRI showed a focal glioma involving the upper pons and midbrain. Following surgery for removal of the tumor, hemi-chorea decreased in intensity. Histopathological examination showed a pilocystic astrocytoma grade 1. (Patankar AP. Hemi-chorea: an unusual presentation of brainstem glioma. **Br J Neurosurg** 2012 Nov 21. [Epub ahead of print]). (Response: Dr Patankar, Baroda Medical College, Vadodara, Gujarat, India).

COMMENT. Brain tumor is an unusual cause of extrapyramidal signs and symptoms. In children treated at the Mayo Clinic between 1950 and 1960, 4% of brain tumors involved the basal ganglia but <1% were associated with involuntary movements. In a report of 2 children, ages 6 and 12 years, presenting with choreiform movements and dystonia, the tumor involved the right thalamus in one and was caudad to the thalamus, in the mesencephalon and upper pons, in the other. (Millichap JG, et al. JAMA 1962 Feb 24;179:589-93). The localization of the lesion involved with involuntary movements often shows discrepancies, and only lesions in the subthalamic nucleus of Luys are attended by a consistent clinical disorder, usually a contralateral hemichorea or hemiballism. (Denny-Brown D, Christian HA. Diseases of Basal Ganglia and Subthalamic Nuclei. New York: Oxford University Press; 1946. p. 261). Tumor as a cause of choreiform disorder should be considered when the involuntary movements are progressive and are associated with cranial nerve lesions and crossed hemiparesis and/or ataxia. (Ropper AH, Adams RD, Victor M, Samuels MA, Eds. Adams and Victor's Principles of Neurology. 9th ed. New York: McGraw-Hill Medical; 2009).