

**Is the Paroxysmal Kinesigenic Choreoathetosis might associated
with Alteration of Neuronal Metabolism in the Basal Ganglia?
- From Proton MR Spectroscopy in the Brain of the Patients**

Jeong-Wook Park, Kwang-Soo Lee, Yeong-In Kim, Bo-Young Choe.*

Department of Neurology and Radiology* Catholic University Medical College.

Purpose: The idiopathic paroxysmal kinesigenic choreoathetosis (PKC) have not be enclarified its proper pathophysiology till now. However the some case reports of PKC in patients with multiple sclerosis or stroke suggested the basal ganglia as a possible neuropathologic source. Herein we reported case with PKC who showed interesting result from proton MR spectroscopy in the brain.

Case: 21-year-old man visited to hospital because of brief existing recurrent paroxysmal dyskinesia exclusively induced by exercise for several years. Brain MRI and other laboratory finding did not reveal any abnormality. The proton MR spectroscopy showed low level of NAA/Cr ratio (1.0) with significant neuronal laterality in substantia nigra (NAA=N-acetyl- aspartate, Cr=Creatine). But in the putamen-globus pallidus, it wasn't revealed any abnormality

Conclusion: To our knowledge, this may be the first report of proton MR spectroscopy of PKC. From this study, it could suggest that metabolic neuronal alteration of substantia nigra might have an important role in the pathogenesis of PKC through their influence to the basal ganglia.