Short Communication

iMedPub Journals
www.imedpub.com

Neurological Science Journal

2022
Vol.6 No.3

Criteria-unfulfilled multiple system atrophy at an initial stage exhibits laterality of middle cerebellar peduncles

Yoshio Ikeda, MD, PhD
Gunma University Graduate School of Medicine, Japan

Abstract

To elucidate clinically useful imaging characteristics of multiple system atrophy with predominant cerebellar ataxia (MSA-C) at the initial stage showing pure cerebellar ataxia but unfilling consensus criteria (MSA-pc), clinical and neuroradiological analyses on cerebral MRI and single-photon emission computed tomography (SPECT) for measuring regional cerebral blood flow (rCBF) were performed. Seven MSA-pc patients meeting the above condition at an initial evaluation were identified, and all the MSA-pc patients later developed autonomic dysfunction and finally fulfilled the criteria for probable or possible category of MSA-C. For comparison, two patients with spinocerebellar ataxia type 6 and three patients with idiopathic cerebellar ataxia who did not exhibit autonomic dysfunction for more than three years were enrolled in this study (non-MSA-pc). As non-ataxic controls without cerebellar involvement, seven patients with Parkinson's disease were also enrolled. As a result, MRI analysis clarified a smaller pontine area and significant laterality of middle cerebellar peduncle (MCP) width in MSA-pc in comparison to non-MSA-pc and controls. SPECT analysis revealed that pontine rCBF was reduced even at the initial stage of MSA-pc. Moreover, the laterality of cerebellar rCBF values and the laterality of MCP width in MSA-pc patients exhibited a significant positive correlation, indicating anatomical and functional laterality of afferent projections to cerebellum is a characteristic finding for MSA-pc. These neuroimaging characteristics could be clinically useful to consider the possibility of the criteria-unfulfilled MSA and promote an earlier intervention after obtaining a diagnosis of probable MSA-C.

Received date: May 09, 2022 **| Accepted date:** May 17, 2022 | **Published date**: May 23, 2022

Biography

Dr. Yoshio is Graduate of Osaka Medical College. He studied cosmetic surgery and aesthetic surgery.