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ANSWER: PROGRESSIVE SUPRA-NUCLEAR PALSY (PSP)

Figure 1: A) Axial T1 weighted MRI image showing atrophy of the superior cerebellar peduncles (white arrows). Note the dilatation of the fourth ventricle medial to the peduncles, B) Sagittal T1 weighted MRI image showing atrophy of the superior cerebellar peduncle (white arrow). The inferior colliculus is noted superiorly, and anteriorly it is bordered by the body of the pons. No hummingbird sign is noted

The Parkinson-plus syndromes are an entity of neurodegenerative diseases that includes progressive supranuclear palsy (PSP), multiple system atrophy (MSA), and corticobasal degeneration (CBD). Unlike Idiopathic Parkinson's Disease (IPD), Parkinson-plus syndromes deteriorate faster and their response to the regular dopamine-based treatments are poor. The differentiation of these Parkinson-plus syndromes from IPD is undoubtedly challenging, but crucial, as the treatment approach and prognosis are different.[1]

The most common MRI findings for PSP includes midbrain atrophy (i.e Mickey Mouse sign; due to enlargement of third ventricle) and hummingbird sign (due to flattening of superior aspect of the midbrain). These findings, when present, are able to discriminate PSP from MSA and IPD with sensitivity of 100% and specificity of 100%. [2]

The MRI in this case however, did not show the typical radiological findings of midbrain atrophy, instead there was evidence of superior cerebellar peduncle (SCP) atrophy with dilatation of the fourth ventricle which are characteristic findings of PSP [Figure 1A-B]. The SCP contains fibres from the dentate nucleus in the cerebellum. The loss of these fibres is the primary basis of the postural instability in these patients.[3]

It is important to differentiate PSP from IPD, as IPD has good response to levodopa and other dopamine agonists. On the other hand, patients with MSA who present with postural instability can be managed efficiently with mineralocorticoids. Unfortunately, the treatment approach to PSP is more arduous, and requires a multidisciplinary approach that mainly consists of symptomatic treatment to help alleviate the symptoms.[1]

CONFLICT OF INTEREST

The author(s) declared no conflict of interest in this work.

CONSENT

Consent has been obtained from patient and hospital authority to publish this article.

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