

# MIDBRAIN MENINGIOMA CAUSING A SUBACUTE MULTIPLE SYSTEM ATROPHY: A CASE REPORT



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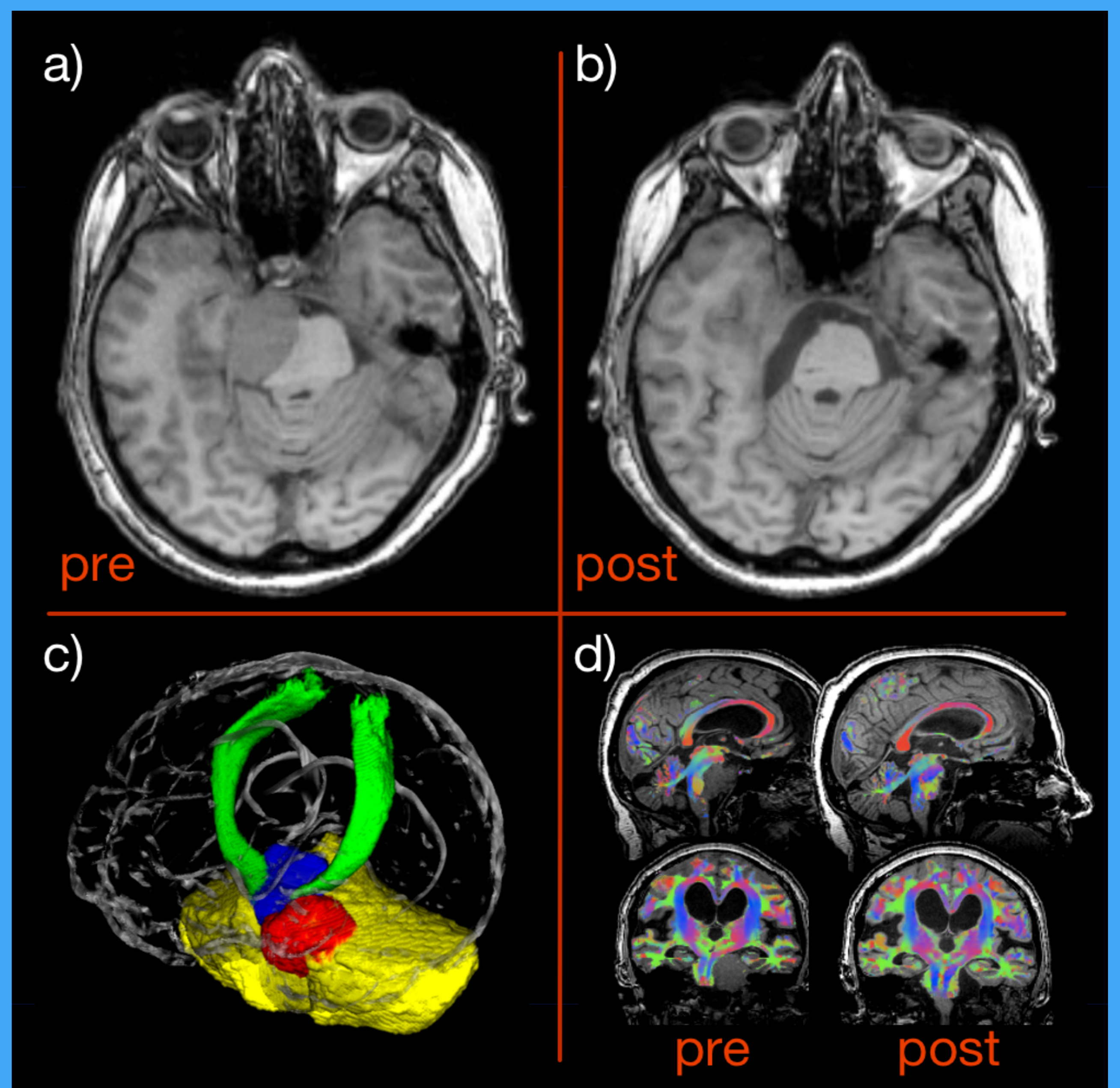
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## INTRODUCTION

Multiple system atrophy (MSA) is an adult-onset sporadic neurodegenerative disorder characterized by combination of parkinsonism, cerebellar ataxia, autonomic failure and pyramidal tract signs. Interestingly, MSA might have a wider range of clinical features masking several diverse aetiologies that can be clinically misdiagnosed as MSA for many years. We present a patient with subacute onset of neurological symptoms resembling the typical features of MSA due to a clival meningioma of the posterior fossa.

## CASE REPORT

A 67-year-old woman had a four-month history of progressive ataxia, slight orthostatic hypotension and bladder dysfunction. Neurologic examination showed hyper-reflexia, gait ataxia, bradykinesia, rigidity, postural and resting tremor in the arms. The Unified Parkinsonism's Disease Rating Scale (UPDRS) was 51. She was levodopa unresponsiveness. She fulfilled criteria for probable MSA. Cerebral dopamine-transporter single photon emission tomography (DAT-SPECT) showed the integrity of the nigro-striatal system. Brain MRI showed a mass lesion (hypointense on T1-weighted imaging, hyperintense on T2 FLAIR, enhanced homogeneously with gadolinium contrast) in the left posterior fossa displacing the pons, midbrain, basilar artery and middle cerebellar peduncle. She underwent surgery and histology confirmed a meningothelial meningioma (World Health Organization grade I). At clinical follow-up, her bradykinesia, tremor and gait ataxia improved significantly.



T1-weighted MRI revealing compression and dislocation to the right of the pons, midbrain, basilar artery, middle cerebellar peduncle and triventricular dilation, pre (a) ad post (b) surgery; (c) three-dimensional reconstruction showing the meningioma (red) displacing the brainstem (blue) and the motor pathways (green); (d) Diffusion Tensor Images pre- and post-surgery

## DISCUSSION AND CONCLUSIONS

We report a patient with clival meningioma presenting as a probable MSA with an unusual subacute onset. Usually, posterior cranial meningiomas present with headache, dizziness and seizures, but rarely also with a gradual progressive ataxia and cranial neuropathy. Meningioma is the most common type of tumor associated with parkinsonism, mostly when it is located in the sphenoidal ridge, frontal or parietal area. To our knowledge, this is the first case of a clival meningioma displacing the brainstem and presenting as MSA-like phenotype. The tumour induced displacement of the substantia nigra and pons that may have caused parkinsonian and cerebellar signs. We believe that subacute onset of MSA should suggest clinicians of possible posterior cranial fossa meningioma. Thus, clival meningioma should be considered in the diagnostic workup of MSA-like phenotype.

## REFERENCES

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