3113 ANTI-MA1/MA2 PARANEOPLASTIC NEUROLOGICAL SYNDROME ASSOCIATED WITH MALIGNANT MESOTHELIOMA AND DEMYELINATING NEUROPATHY

Amir Mousapasandi*, Gi Tae Kwon*, Stephen Evans, Sameen Haque. *Nepean Hospital, NSW Health, Penrith, NSW, Australia*

10.1136/bmjno-2024-ANZAN.102

Anti-Ma1/Ma2 paraneoplastic neurological syndrome (PNS) is a rare disorder often associated with malignancies. We present the case of a 74-year-old left-handed man who initially presented with mild gait ataxia. Neuroimaging revealed T2 signal hyperintensity in the right amygdala and hippocampus, as well as in the left caudate head. Serum and cerebrospinal fluid (CSF) analysis confirmed the presence of anti-Ma-1/Ma-2 antibodies. Despite extensive radiological and serum biomarker investigations, no malignancy was initially detected. However, over two months, the patient exhibited progressive neurological decline, including severe gait ataxia, opsoclonus, and left-sided distal weakness indicative of ulnar nerve dysfunction.

Electrophysiology studies demonstrated demyelinating large fiber polyneuropathy. Treatment involved high-dose corticosteroids, intravenous immune globulins (IVIG), mycophenolate, and Rituximab. While neurological symptoms stabilized, the patient developed insidious respiratory distress four months later, secondary to right-sided parapneumonic effusion. Subsequent biopsy confirmed malignant mesothelioma.

This case underscores the rare association between anti-Ma1/Ma2 PNS and mesothelioma, emphasizing the necessity for vigilant surveillance even if initial extensive screening for malignancy yielded no results. Only three similar cases have been reported to our knowledge, with mesothelioma diagnosis emerging usually after few years of clinicoradiological surveillance. Although an association with axonal peripheral neuropathy has been reported previously, our case exhibited demyelinating neuropathy. Despite the rarity of the association between anti-Ma1/Ma2 PNS and mesothelioma, awareness of this association is vital for prompt diagnosis and treatment. This report contributes to the limited literature on this subject and underscores the importance of clinical awareness of anti-Ma1/Ma2 PNS and its associated malignancies.

3114 A RARE CAUSE OF INTERMITTENT TONGUE PARESIS

[1]Ivonne M Lichtenberg*, [1]Mina Botrous*, [2,3,4]Andrew Cheung, [1,5]Stephen R Duma. *[1]Department of Neurology, St George Hospital, Sydney, NSW, Australia; [2]School of Clinical Medicine, UNSW South West Sydney Clinical Campuses, Sydney, NSW, Australia; [3]Interventional Neuroradiology, Prince of Wales Hospital, Randwick, NSW, Australia; [4]Interventional Neuroradiology, Liverpool Hospital, Liverpool, NSW, Australia; [5]School of Clinical Medicine, UNSW Medicine & Health, Sydney, NSW, Australia*

10.1136/bmjno-2024-ANZAN.103

Introduction The hypoglossal canal is an uncommon location for a dural arteriovenous fistula (AVF). Case reports suggest tinnitus is a common symptom in people with hypoglossal canal dural AVF whilst hypoglossal nerve palsy has been rarely reported in this setting. We report a patient with intermittent tongue paresis in the setting of a hypoglossal canal dural AVF.
Case A 70-year-old female presented with a three week history of daily, recurrent, 5 minute episodes of difficulty speaking and difficulty controlling her tongue. She described tongue deviation to the left on protrusion and difficulty moving it to the right. She had presented to the local emergency department on two occasions with these symptoms with negative stroke protocol scans.

She has a history of hypercholesterolaemia and a recent finding of a left hypoglossal canal dural arteriovenous fistula (AVF) which was identified on magnetic resonance imaging (MRI) of the brain to investigate 6 months of left sided tinnitus which had since resolved.

MRI brain, angiogram and venogram again showed a left hypoglossal canal dural AVF with no other acute findings, and EEG was unremarkable. A catheter cerebral angiogram confirmed a left base of skull fistula, without corticovenous reflux. She was diagnosed with intermittent tongue paresis due to left hypoglossal canal dural AVF. She remains under surveillance and has not had recurrence of her symptoms.
Conclusion New onset tinnitus and/or tongue paresis should be investigated, and although uncommon, dural arteriovenous fistula should be considered with vascular imaging forming part of the investigation.

3115 LONGITUDINAL TRAJECTORIES OF DIGITAL COGNITIVE BIOMARKERS FOR MULTIPLE SCLEROSIS

[1,2]Yi Chao Foong*, [2,3]Daniel Merlo, [2,3,4]Melissa Gresle, [2]Chao Zhu, [4,5]Katherine Buzzard, [6]Jeannette Lechner-Scott, [7]Michael Barnett, [8]Bruce Taylor, [4]Tomas Kalincik, [4]Trevor Kilpatrick, [3,5]David Darby, [9]Pamela Dobay, [9]Johan van Beek, [9]Robert Hyde, [2,3]Helmut Butzkueven, [2,3]Anneke van der Walt. *[1]Royal Hobart Hospital, Hobart, TAS, Australia; [2]Monash University, Melbourne, VIC, Australia; [3]Alfred Health, Melbourne, VIC, Australia; [4]Melbourne Health, Melbourne, VIC, Australia; [5]Eastern Health, Melbourne, VIC, Australia; [6]Hunter New England Health, Newcastle, NSW, Australia; [7]Australia/Sydney Neuroimaging Analysis Centre, Sydney, NSW, Australia; [8]Menzies Institute of Medical Research, Hobart, TAS, Australia; [9]Biogen International GmbH, Zug, Switzerland*

10.1136/bmjno-2024-ANZAN.104

Background Cognitive impairment is one of the most common and debilitating symptoms of relapsing remitting multiple sclerosis (RRMS). Digital cognitive biomarkers require less time and resources and are rapidly gaining popularity in clinical settings. We examined the longitudinal trajectory of the iPad-based Processing Speed Test (PST) and predictors of change over time.
Methods We prospectively enrolled relapsing-remitting multiple sclerosis (RRMS) patients with an EDSS score of less than four. Longitudinal data was analysed with mixed effect modelling and latent class mixed models.
Results At a population level, PST trajectory was stable. A small practice effect was present up to the 4th visit. Age, baseline disability, T2 lesion volume, male gender and depression were associated with less correct PST responses, whilst years of education and full/part-time employment were associated with more correct PST responses.

We identified four trajectories of processing speed with latent class analysis. The lowest latent class was typified by the lack of a practice effect and was associated with a greater hazard of time to sustained 5% decrease in PST (HR 2.84, 95%CI 1.16–6.94, p=0.02).
Conclusion In this cohort of mild to moderate RRMS, PST scores remained largely stable over time. Membership in the worst latent class trajectory was associated with a sustained 5% PST decrease. Poor cognitive performance at baseline and the lack of a practice effect is a predictor of future cognitive decline and should prompt early intervention for maximising cognitive function such as treatment escalation.