up 12.8% and 4.2% respectively. Among the idiopathic NMDAR encephalitis group, the most common presenting symptom was focal weakness associated with altered gait and speech regression (39.6%), while 12% presented with isolated psychiatric symptoms. Within our cohort, 100% had behavioral/cognitive symptoms, 79% had seizures, 73% had speech problems, 67% had movement disorder, and 61% had memory deficits.

#### **Conclusions**

Our study describes the clinical characteristics which help define the presenting symptoms and potential etiologies in a heterogenous population from the largest single center pediatric cohort of anti-NMDAR encephalitis to date.

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## A Case of Bilateral Sequential Optic Neuropathies With Pachymeningitis and Aortitis: Difficulty in Differentiating Erdheim-Chester Disease From IgG4-Related Disease

Tefani Perera, Erica McKenzie, Katayoun Alikhani

## Objective

We describe a case of bilateral sequential optic neuropathies with pachymeningitis and aortitis, with findings that raised suspicion of Erdheim-Chester disease versus IgG-4 related disease.

#### **Background**

Erdheim-Chester disease (ECD) is a rare histiocytic neoplasm characterized by tissue infiltration by foamy histiocytes, and chronic, uncontrolled inflammation. IgG4-related disease (IgG4-RD) is an insidiously progressive immune-mediated fibrotic disease typified by tumour-like mass formation in many affected organs. Neurologic manifestations are diverse.

## Design/Methods

A 58-year-old male was transferred to our centre for acute onset sequential optic neuropathies. His visual acuity was light perception for the right eye and 20/50 in the left eye.

#### **Results**

Enhanced MRI of the brain and orbits showed focal pachymeningeal thickening and enhancement in the anterior cranial fossa and over the left frontal lobe with eccentric enhancement of the right optic nerve sheath. CRP was elevated (23 mmol/L to 62 mmol/L); extensive CSF and serum infectious and inflammatory investigations were unrevealing. PET body demonstrated aortitis and CT angiography suggested coronary artery vasculitis. Bone scan showed symmetric involvement of the long bones. Dural biopsy was delayed due to the Covid-19 pandemic and was completed following a protracted steroid course and a 15 mg/kg dose of cyclophosphamide. Pathology showed mixed inflammatory infiltrate and increased expression of IgG4 neutrophils. Clusters of CD68+, CD1a, and S100-negative macrophages were seen in all layers of dura. No BRAF mutation was identified.

#### Conclusions

This case demonstrates classic imaging findings of ECD including pachymeningitis, symmetric long bone involvement and aortitis. Pathology in ECD may show characteristic foamy histiocytes, that were absent in this case. This case demonstrates the challenge of biopsy interpretation following immunosuppressive and cytotoxic therapy and the difficulty of differentiating ECD from IgG4-RD.

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## Clinical Characteristics of Double SeroPositive Myasthenia Gravis

Chirag Lalwani, Hamsini Movva, Sudheeran Kannoth, Vivek Nambiar, Sibi Gopinath, Anand Kumar, Udit Saraf, Sreelakshmi N, Bijoy Jose, Annamma Mathai, Jyothi V. Leelamani

#### Objective

This study aims to delineate the clinical phenotype of DSP-MG and assess the histopathological correlation with thymoma.

### **Background**

Double SeroPositive Myasthenia Gravis (DSP-MG), a rare autoimmune disease that affects neuromuscular transmission, is characterized by antibodies against both AChR and MuSK receptors. This is the second study to be conducted in the world which attempts to define the clinical phenotype of DSP-MG patients.

### Design/Methods

This is a retrospective case series conducted at a tertiary care hospital in South India conducted between February 2018 and October 2021. All patients who were diagnosed with DSP-MG based on typical clinical presentation and positive titres of both Anti- AChR and Anti-MuSK antibodies were included in the study.

#### **Results**

This study consisted of 13 DSP-MG patients (7 Females, Mean age-60.77 +/-14.24). The presentation was generalized in 9 patients, bulbar in 3 and ocular in 1 patient. Severity of the disease was assessed using the Modified Osserman System wherein 5 patients were Grade 4, 4 patients in grade 3, 3 patients in grade 2 while 1 patient was grade 1. The muscle groups affected first were the limbs (n = 6), ocular (n = 5), bulbar (n = 3) and respiratory (n = 1). MDCT done in 11 patients showed thymoma in five and thymic hyperplasia in 1. Four patients underwent thymectomy whose histopathology showed Type A, B2 (n = 2) and AB thymomas. Four patients had associated thyroid dysfunction and 3 patients were found to have developed MG post stroke. All 13 patients improved with Anticholinesterases, 9 patients were administered immunosuppressants, 3 patients were given IVIg and a single patient underwent plasmapheresis.

#### **Conclusions**

Our study shows that DSP MG is more similar to the clinical phenotype of AChR-MG, rather than MuSK-MG that has been previously defined in literature.

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