PAST 80, NOT PAST NMOSD: A CASE OF POSTERIOR OPTIC NEURITIS

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INTRODUCTION

Neuromyelitis Optica spectrum disorder (NMOSD) typically presents between ages 30-50 years with marked female predominance (F:M ratio ~ 9:1). **Very late-onset NMOSD** (VLO-NMOSD, **age >75** years) is rarely recognized, especially when presenting as isolated optic neuritis. VLO-NMOSD shows distinct features including **lower F:M ratio**, **rarer ON at onset, and more frequent spinal cord involvement.** **Timely recognition is crucial as delayed diagnosis worsens visual prognosis.**

CASE REPORT

81-year-old male, history of prostate Cancer

Clinical Presentation:
- Progressive, painless vision loss in right eye
- Initial VA: 20/60-20/80 → progressed to no light perception
- Scintillating scotomas, pupillary afferent defect
- Normal fundoscopy, no optic disc oedema

Investigations:
- MRI: T2 hyperintensity and enhancement of posterior right optic nerve. No spine lesions.
- CSF: 35 mg/dL protein, 4 cells, type 2 OCB pattern
- Serum: AQP4-IgG seropositive
- Extensive workup excluded vascular, infectious, autoimmune, and neoplastic aetiologies

Treatment & Outcome:
- IV methylprednisolone (1g/day × 5 days) + oral prednisone taper
- IVIG with additional benefit
- Long-term rituximab initiated
- Visual recovery: VA improved to 20/30, marked visual field improvement

LITERATURE REVIEW

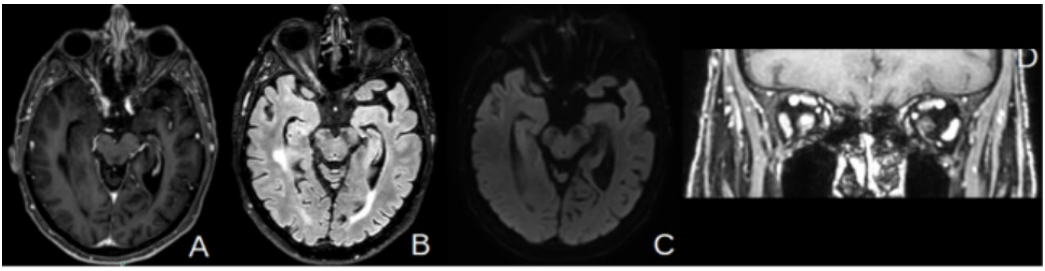
29 VLO-NMOSD cases with isolated ON at onset:

Demographics:
- Mean age at diagnosis: 80.3 years (±6.7 SD)
- Gender: 21F (72%), 5M (17%), 3 NR (10%)
- F:M ratio: 4.2 (lower than typical NMOSD)

Clinical Characteristics:
- Unilateral ON: 51.7% | Bilateral ON: 41%
- Severe visual impairment/blindness: 34%
- MRI optic nerve inflammation: 100%
- Optic disc oedema: 27%
- AQP4-IgG seropositivity: 100%
- CSF OCB detection: 3%

Disease Course & Subsequent Involvement:
- Relapsing/progressive course: 90%
- Subsequent myelitis: 51%
- Brainstem lesions reported

Treatment Response:
- All received IV methylprednisolone (500-1000 mg/day)
- Additional therapies: plasma exchange (10%), azathioprine (20%), mycophenolate mofetil (24%), rituximab (3%)
- Clinical/radiological improvement observed in all cases



MRI brain 3T sequences showing contrast enhancement in T1-weighted contrast-enhanced imaging in the posterior intraconal segment of the right optic nerve (**A**), with corresponding hyperintensity in FLAIR/T2 (**B**), diffusion restriction in DWI (**C**), and hyperintensity in the coronal Dixon sequence (**D**), suggestive of subacute inflammatory or ischemic optic neuropathy

CONCLUSIONS

VLO-NMOSD should be considered in elderly patients with isolated optic neuritis. Comprehensive workup with AQP4-IgG testing and spine MRI is essential. Early immunotherapy can improve visual outcomes, though long-term treatment requires careful risk-benefit assessment due to immunosenescence.

Increased awareness of atypical NMOSD presentations in older adults is crucial for timely diagnosis.