Background We present a 25-year-old woman with a background history of Multiple sclerosis (MS) on Ocrelizumab who presented with symptoms of meningoencephalitis. She initially presented with a 2-day history of worsening occipital headache, neck stiffness and photophobia. She had symptoms of Hand Foot and Mouth disease (HFMD) 2 weeks prior to this presentation.

Investigation and treatment progress

- The first CSF study performed was positive for enterovirus within the CSF. However, enterovirus DNA was negative in the second CSF PCR study and was only found to be positive when the study was repeated using a nested PCR technique.
- MRI scans showed symmetrical FLAIR hyperintensities within both thalamus and a non-enhancing signal abnormality within the left splenium of the corpus callosum.
- The use of IVIG was considered but was held off as the patient's conditioned improved rapidly with supportive therapy.

Teaching Points

- Cases of enterovirus encephalitis in adults have been reported among patients receiving other B cell depleting therapy such as rituximab but has never been described in patients on Ocrelizumab which is also a B cell depleting agent.
- Unusual opportunistic infection should be considered in patients on B cell depleting therapies despite having a normal IgG level. Furthermore, more sensitive PCR techniques such as a double nested PCR may need to be employed to confirm the diagnosis of opportunistic infections.

2677 CEREBELLAR DYSFUNCTION POST COVID INFECTION

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10.1136/bmjno-2023-ANZAN.86

Background

- Since the emergence of SARS COVID-2 which resulted in a global pandemic infecting million, post-COVID encephalitis is an increasingly recognized entity.
- The current literature reports cases with brainstem, limbic and cerebellar involvement with good correlation with radiological findings.
- We report a case of post-COVID seronegative autoimmune encephalitis with predominant cerebellar dysfunction in a 19-year-old university student with radiological findings involving the temporal lobe and thalamus.

Investigations and treatment progress

- Serum and CSF investigations confirmed to diagnosis of COVID upper respiratory tract infection (URTI). However extensive serum and CSF screen for autoimmune encephalitis was negative for any antibodies.
- MRI scan showed FLAIR hyperintensities within the temporal lobe, thalamus, pons and cerebellar region.
- He was treated with pulse methylprednisolone and prolonged steroid wean with excellent response.

Goals and learning points of this presentation

- Neuroimaging is an important tool in the diagnosis of autoimmune encephalitis as there may be more extensive involvement beyond the initial clinical presentation.
- Antibodies may be negative in COVID related encephalitis. Hence the diagnosis can be made based on clinical presentation and neuroimaging.
- Steroids can be an effective immunosuppression therapy which should be considered when managing patient's with COVID related encephalitis.

2678 MYASTHENIA GRAVIS TREATMENT IN A TERTIARY MELBOURNE HOSPITAL – A DESCRIPTIVE RETROSPECTIVE AUDIT

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10.1136/bmjno-2023-ANZAN.87

Objectives Intravenous immunoglobulin (IVIg) and plasma exchange (Plex) are used to treat exacerbations of myasthenia gravis (MG) in inpatients. There is limited evidence of superiority of one modality. We aimed to compare the time to improvement in disease severity and duration of improvement between patients receiving IVIg or Plex for an exacerbation of MG.

Methods We retrospectively identified patients admitted with an exacerbation of MG over a 10-year period. We measured disease severity by the Myasthenia Gravis Foundation of America (MGFA) clinical classification and defined improvement as an increase in 1 Class of MGFA. We calculated the time to improvement from the start of treatment.

Results We identified 31 patients (22 females; median age 62.5 years) with generalised MG who had 48 admissions. 38 patients received IVIg first-line and 10 received Plex; 7 patients received both. 2 admissions were for ocular weakness (Class 1 in MGFA), mild weakness: 29 (Class 2a/2b), moderate weakness: 16 (Class 3a/3b), severe weakness: 5 (Class 4a/4b), intubated: 2 patients (Class 5). There was no significant difference in number of days to improvement with either treatment (median for both groups 3.0 days, $p > 0.05$). Median length of stay in hospital was 7.5 days. 9/19 patients treated with IVIg and 5/9 patients treated with Plex and inpatient at day 7 had persistent improvement in MGFA Class.

Conclusion Onset of improvement in disease severity and stability at day 7 do not differ significantly in patients treated with IVIg or Plex for an acute exacerbation of myasthenia gravis.

2680 SPINAL NERVE ROOT BIOPSY TO DIAGNOSE PRIMARY NEUROLYMPHOMATOSIS. A CASE REPORT

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10.1136/bmjno-2023-ANZAN.88

Introduction Primary neurolymphomatosis is the direct infiltration of lymphomatous neoplastic cells into the nerve roots and/or peripheral nerves and is the first manifestation of an underlying haematological malignancy. The natural history, management and prognosis of the condition are not well understood, given its rarity.

Presentation and Clinical Findings A 67 year old male presented to the emergency department with a 24 month history of progressively worsening, severe neuropathic pain in the left lower limb, weakness of ipsilateral ankle dorsiflexion, and associated gait disturbance.
Diagnosis and Intervention Initial serum biochemistry was unremarkable. A paraneoplastic screen, lymphocyte surface markers, and tumour markers were negative. Cerebrospinal fluid analysis demonstrated raised proteins of 0.69 g/L without neoplastic cells visualised on cytology. Gadolinium enhanced magnetic resonance imaging (MRI) demonstrated thickening and enhancement of the cauda equina, L5, S1 and S2 nerve roots. Marked hypermetabolism within the same nerve root distribution was observed in ^{18}fluorodeoxyglucose (^{18}FDG) positron emission tomography (PET). A biopsy of the L5 nerve root was performed histopathology revealed lymphocytic infiltrate. Immunohistochemistry of the specimen was positive for B-lymphocyte antigen CD20, B-cell lymphoma 2 (Bcl-2) and multiple myeloma 1 (MUM1). These features were consistent with diffuse large B-cell lymphoma (DLBCL).
Outcomes The patient subsequently underwent chemotherapy with R-CHOP, and went into remission following one cycle.
Conclusion Primary neurolymphomatosis presents a diagnostic challenge and as such formal diagnosis is often delayed. Whilst biopsy is the gold standard for diagnosis, gadolinium enhanced MRI and ^{18}FDG-PET are useful in characterising lesions and determining feasibility of biopsy.

2681 TRIGEMINAL NEURITIS DUE TO EMTRICITABINE/ TENOFOVIR FOR HIV PRE-EXPOSURE PROPHYLAXIS

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10.1136/bmjno-2023-ANZAN.89

Toxic peripheral neuropathies have been described, and are typically cumulative in their pathophysiology. Cranial neuropathies secondary to medication toxicity are extremely rare. Use of emtricitabine/tenofovir as pre-exposure prophylaxis (PrEP) is recommended as standard of care for people at risk of HIV infection. Cranial neuropathies as an adverse effect of this drug have only been described once in the literature (Van Slyke, 2018). We present the case of a 22-year-old information technology worker who developed acute right trigeminal neuritis within 24 hours of initiating emtricitabine/tenofovir. MRI with gadolinium contrast demonstrated abnormal T2 signal hyperintensity and enhancement affecting the maxillary and mandibular divisions of the right trigeminal nerve, with the ophthalmic division involved to a lesser degree. Symptoms resolved within 6 weeks following medication cessation and repeat MRI imaging showed near resolution of enhancement. Despite advice, the patient rechallenged the medication and within 24 hours his symptoms recurred. The proposed mechanism of trigeminal neuropathy is a toxic neuritis due to tenofovir, with some studies showing modulation of mitochondrial biogenesis and inflammatory pathways (Fields, 2019).

REFERENCES

1. Van Slyke L, Scott M. Acute trigeminal neuralgia associated with initiation of emtricitabine/tenofovir for HIV pre-exposure prophylaxis. *J Int Assoc Provid AIDS Care.* 2018;**17**:2325958218760846.
2. Fields JA, Swinton MK, Carson A, Soontornniyomkij B, Lindsay C, Han MM, Frizzi K, Sambhwani S, Murphy A, Achim CL, Ellis RJ, Calcutt NA. Tenofovir disoproxil fumarate induces peripheral neuropathy and alters inflammation and mitochondrial biogenesis in the brains of mice. *Sci Rep.* 2019 Nov 20;**9**(1).

2683 A PERFECT MINI-STORM: UNCOMMON AETIOLOGY FOR A COMMON PRESENTATION OF BELL'S PALSY

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10.1136/bmjno-2023-ANZAN.90

Objective To discuss a rare presentation of bilateral facial nerve palsy in a 32 year old Australian female with Lyme neuroborreliosis, SARS-CoV-2 and positive Epstein-Barr virus (EBV) serology.
Case A 32 year old female presented to the emergency department with a right sided, lower motor neuron (LMN) facial palsy in the setting of a recent viral upper respiratory tract infection. Magnetic resonance imaging of the brain showed enhancement of the right facial nerve. She was diagnosed with Bell's palsy and given a short course of oral prednisone. She re-presented 11 days later having developed a left sided LMN facial palsy. Serum EBV viral capsid antigen (VCA) IgM was equivocal in the setting of both VCA and nuclear antigen IgG positivity.

Further history revealed a recent SARS-CoV-2 infection and travel to the USA and Canada. Cerebrospinal fluid (CSF) analysis showed a lymphocytosis but negative EBV polymerase chain reaction. She was treated with further steroids and antiviral therapy. Her travel to Borrelia endemic areas prompted empiric treatment with doxycycline and testing which confirmed a diagnosis of Lyme neuroborreliosis with positive Borrelia IgG and IgM. Immunoblot was positive in both serum and CSF. The patient has made a near-complete recovery.
Conclusion Bilateral Bell's palsy has been reported with Lyme neuroborreliosis, SARS-CoV-2 and EBV infection previously, but this is the first case to report co-infection. This case highlights the importance of tailoring investigations to the clinical context and serves to remind clinicians of the value of a travel history.

2684 TWO FORMS OF NEUROPATHY ASSOCIATED WITH IMATINIB THERAPY: A CASE REPORT

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10.1136/bmjno-2023-ANZAN.91

Introduction Imatinib is a tyrosine kinase inhibitor (TKI) widely used in the treatment of chronic myeloid leukaemia and other malignancies in which tyrosine kinases are over expressed. The first case of neuropathy associated with imatinib was reported in 2011.[1] A distal mixed axonal neuropathy is now recognised as an uncommon late adverse effect of imatinib,[2] however other types of neuropathy have not been described previously. We report a case in which both a mixed axonal neuropathy and an acute, relapsing, steroid responsive neuroplexopathy occurred.