acutely obtunded patient with relatively innocuous hyperacute vascular imaging, may suggest a transient BA thrombus. Therefore, these patients may benefit from thrombolysis despite initially poor prognostic indicators.

REFERENCES

1. Chandra RV, Law CP, Yan B, Dowling RJ, Mitchell PJ. Glasgow coma scale does not predict outcome post-intra-arterial treatment for basilar artery thrombosis. *American Journal of Neuroradiology [Internet]*. 2011;**32**(3):576–80. Available from: http://www.ajnr.org/content/32/3/576
2. Jovin TG, Li C, Wu L, Wu C, Chen J, Jiang C, *et al*. Trial of thrombectomy 6 to 24 hours after stroke due to basilar-artery occlusion. *New England Journal of Medicine*. 2022;**387**(15):1373–84.
3. Tao C, Nogueira RG, Zhu Y, Sun J, Han H, Yuan G, *et al*. Trial of endovascular treatment of acute basilar-artery occlusion. *New England Journal of Medicine*. 2022;**387**(15):1361–72.

2674 TREATMENT EFFICACY OF SWITCHING CGRP MONOCLONAL ANTIBODY THERAPIES FOR CHRONIC MIGRAINE IN AUSTRALIA: A MULTICENTRE RETROSPECTIVE COHORT STUDY

[1,2]Shuli Cheng*, [3,4]Bronwyn Jenkins, [5]Nicole Limberg, [1,2]Elspeth Hutton. *[1]Alfred Hospital, Melbourne, VIC, Australia*; *[2]Monash University, Melbourne, VIC, Australia*; *[3]Royal North Shore Hospital, St Leonards, NSW, Australia*; *[4]Department of Medicine, University of Sydney, Sydney, NSW, Australia*; *[5]Migraine Specialist Brisbane, Brisbane, QLD, Australia*

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Objectives To determine the treatment response when switching from one class of calcitonin gene related peptide receptor monoclonal antibody (CGRP-receptor mab) to another class of calcitonin gene related peptide monoclonal antibody (CGRP mab) in chronic migraine in the real world setting in Australia.

Methods Patients were prescribed erenumab (CGRP-receptor mab) in the setting of either a product familiarisation program or private pay access in 3 headache centres in Australia in 2018 which was discontinued in 2020. In 2021, galcanezumab and fremanezumab (CGRP mab) were made available on the Pharmaceutical Benefits Scheme. We retrospectively analysed the treatment effectiveness to CGRP mab in this cohort with chronic migraine and compare this to their treatment response to erenumab.

Results We analysed 170 patients with chronic migraine treated with erenumab in our original cohort. Out of the 170, we had 88 patients who switched to either galcanezumab or fremanezumab. The average age was 48 years old (rage 18–73), female n= 79 (90%), baseline monthly migraine days, mean 18.6 (SD 7.6), monthly migraine days at 3 months on erenumab was 9.4 (SD 7.6), monthly migraine days at 3 months on CGRP mab was 8.7 (SD 8.2). Out of the 36 patients who were non-responders to erenumab, 24 patients (67%) had a 50% treatment response rate when switched to a CGRP mab.

Conclusion Our analysis support that the CGRP mab treatment effectiveness is similar to CGRP-receptor mab at 3 months in chronic migraine. Non-responders to erenumab benefited from a treatment switch to a CGRP mab.

2675 LONGITUDINAL EPIDEMIOLOGY OF MULTIPLE SCLEROSIS IN TOWNSVILLE, QUEENSLAND, AUSTRALIA 2012–2022

[1]Duncan Maddox*, [2]Jeanette Lechner-Scott, [3]Cameron Shaw, [4]Bruce Taylor, [5]Tomas Kalincik, [1]Mike Boggild, [6]Steve Simpson-Yap. *[1]Department of Neurology, Townsville University Hospital, Douglas, QLD, Australia*; *[2]School of Medicine and Public Health, University of Newcastle, Newcastle, NSW, Australia*; *[3]School of Medicine, Deakin University, Geelong, VIC, Australia*; *[4]Multiple Sclerosis Research Flagship, Menzies Institute of Medical Research, University of Tasmania, Hobart, TAS, Australia*; *[5]Clinical Outcomes Research Unit, University of Melbourne, Melbourne, VIC, Australia*; *[6]Neuroepidemiology Unit, Centre for Epidemiology and Biostatistics, Melbourne School of Population and Global Health, The University of Melbourne, Melbourne, VIC, Australia*

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Background Multiple sclerosis (MS) is the most common cause of nontraumatic disability in young adults. Though Australia is a high frequency region for MS, North Queensland is regarded as a region of low prevalence. However the previous estimate of 11.1/100,000, dates from 1981.

Aims To study the epidemiology of MS in Townsville, Queensland, between 2012–2022.

Methods Cases identified from records at the tertiary hospital in the region, extracting information about demographics, MS diagnosis, and phenotype. Cases within the Townsville statistical region were included for prevalence estimates in 2012 and 2022. Cases with onset between 2012–22 were included in incidence estimates. Residents with MS dying between 2012–22 were included in mortality estimates. Prevalence, incidence and mortality rates were age-standardised. Differences in prevalence over time were assessed by Poisson regression.

Results Females comprised over two-thirds of cases, mostly relapsing-remitting phenotype. 73 cases were identified in 2012, yielding a prevalence of 39.7/100,000 (42.7 age-standardised), higher among females (59.3 vs 25.9/100,000, F/M=2.3). Prevalence increased by 125.4% in 2022, 175 cases yielding crude prevalence of 89.5/100,000 (94.6 age-standardised), higher among females (134.6 vs 54.0/100,000, F/M=2.5). MS onset incidence rate over 2012–22 was 3.7/100,000 PY (age-standardised 3.7). Age-standardised 2012–22 mortality rate was 0.9/100,000, average age increased from 47.8 to 58.3 years.

Discussion Northern Queensland is no longer a low-frequency region for MS, with 2022 prevalence on par with higher latitudes in Australia. These results have implications for clinical practice and resource allocation. These results bear implications for the oft-described latitudinal gradient in MS in Australia.

2676 ENTEROVIRUS INFECTION POST OCRELIZUMAB THERAPY

[1]Samuel Kwok*, [1]Jessica Jia, [1]Andrew Duggins, [1]Jessica Oon, [2]Simon Hawke. *[1]Nepean Hospital, Penrith, NSW, Australia*; *[2]Central West Neurology and Neurosurgery, Orange, NSW, Australia*

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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

Samuel Kwok*, Jessica Jia, Sameen Haque. *Nepean Hospital, Penrith, NSW, Australia*

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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

Matthew Megens*, Wen Wen Zhang, Edrich Rodrigues, Mahima Kapoor. *Alfred Health, Melbourne, VIC, Australia*

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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

[1]Sangruthai Sriweerawanidchakun*, [2]Samantha Saunders, [3]Samantha Giang. *[1]St. Vincent's Hospital, Epping, NSW, Australia*; *[2]General Medicine, Gosford Hospital, Gosford, NSW, Australia*; *[3]General medicine, Concord Hospital, Concord, NSW, Australia*

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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.