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Measuring cord blood b cells in neonates with possible exposure in utero to Anti-B cell therapies

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Background: The increasing use of anti-B cell therapies in managing multiple sclerosis(MS) around the time of conception has raised important considerations for neonates exposed in utero. International recommendations suggest assessing neonatal B cell count in potentially exposed neonates. Practical implementation of cord blood collection at birth requires coordinated care across specialties, including paediatric haematology, neurology and obstetrics. Methods: This workshop, scheduled for 01/30/2025, will address clinical and logistical challenges of neonatal B cell assessments following in utero exposure to anti-B cell therapies. Presentations by MS pregnancy specialists from Toronto,Ontario, will be complemented by collaborative problem-solving among participants, including a paediatric haematologist, MS neurologists, obstetricians, paediatricians, and a quality specialist. A patient with lived experience will contribute to discussions. Results: The workshop will develop a care pathway for cord blood B cell testing, optimizing vaccine scheduling at London Health Sciences Center (LHSC) in London Ontario. Outcomes will include enhanced multidisciplinary collaboration, participant feedback, development of a practical clinical care plan for B cell collection and interpretation and measures of the pathway's impact on patient satisfaction and clinical decisions. Conclusions: This initiative will improve care for mothers and neonates exposed to anti-B cell therapies, addressing critical gaps in clinical practice through collaboration and a standardized approach.

P.012

Myelin water imaging in Anti-NMDA receptor autoimmune encephalitis; a pilot study

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Background: This study explored whether Myelin Water imaging could detect myelin injury in Anti-NMDA receptor autoimmune encephalitis (NMDAr-AIE), where traditional neuroimaging is often normal. Myelin Water Fraction (MWF) quantifies myelin content by distinguishing myelin sheath water from other brain water compartments. Methods: Adult participants with confirmed NMDAr-AIE diagnoses and healthy controls (HC) underwent 3T brain MRI including MWF mapping. Participants were recruited after discharge from the hospital. Mean MWF was calculated for 4 white matter regions of interest (ROI). Patient demographics, clinical assessments, treatment, and outcomes were collected. Results: Five participants with NMDAr-AIE (4F/1M, mean age 30, SD 7) and four HC (3F/1M, mean age 36, SD 6) were included. All NMDAr-AIE participants had normal or non-specific T2 hyperintensities on initial imaging and had received immunotherapy. The mean Modified Rankin Score (MRS) on discharge was 2. MWF (mean ± SD) for normal-appearing white matter, corpus callosum, corticospinal tract, and superior longitudinal fasciculus were 0.10±0.02, 0.12±0.02, 0.15±0.03, 0.12±0.02, which were very similar to HC at 0.09±0.02, 0.11±0.01, 0.15±0.02, and 0.11 ±0.02, respectively. Conclusions: Myelin Water imaging showed no myelin pathology in five NMDAr-AIE patients, with MWF values comparable to HC. This suggests that myelin pathways are relatively preserved post-recovery from AIE.

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Psychosocial Impact of COVID-19 pandemic among Omanis with Multiple Sclerosis: a single tertiary center experience

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Background: The COVID-19 pandemic posed significant challenges for people with multiple sclerosis (PwMS) in Oman, including heightened stress, treatment disruptions, and risks associated with immunosuppressive therapies. This study aimed to evaluate the pandemic's impact on MS management, COVID-19 incidence and outcomes, psychosocial and mental health effects, and demographic and clinical predictors influencing these outcomes among Omani PwMS. Methods: In this cross-sectional study conducted from January to April 2021, 104 PwMS aged 18–60 participated in structured interviews and completed the Expanded Disability Status Scale (EDSS) and the World Health Organization Well-being Index (WHO-5). Clinical data on relapse rates, disease-modifying therapies (DMTs), and treatment adherence were analyzed using descriptive and inferential statistics. Results: Of the participants, 76 (73.1%) were female, and 23 (22.1%) reported contracting COVID-19, with fatigue being the most common symptom (87%). Female sex ($p = 0.042$), younger age (18–34 vs. 35–45 years; $p = 0.014$), COVID-19 diagnosis ($p = 0.037$), and lower mental well-being scores ($p = 0.021$) were strongly associated with COVID-19-related effects. Conclusions: Key predictors of self-reported COVID-19 effects in Omani PwMS were a confirmed diagnosis, female sex, younger age, and lower mental well-being. These findings highlight the need for exploration of mental resilience in this group and interventions during crises.

P.014

Decision-making in the use of corticosteroids for treating multiple sclerosis relapses: a retrospective study from a single Canadian center

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Background: Multiple sclerosis (MS) is a chronic inflammatory disease of the central nervous system characterized by acute attacks. High-dose steroids (HDS) are the primary treatment, with no significant differences between oral and intravenous (IV)