**BRAZILIAN CONGRESS OF NEUROLOGY 2022**

**Title**

**Acute Transverse Myelitis Associated with Vaccination against COVID-19: a systematic review of the literature**

Introduction:Longitudinallyextensive transverse myelitis (LETM) is a rare complication of different vaccines. Due to the pandemic,several COVID-19 vaccines have been used worldwide. Among the reported side effects,LETM deserves to be highlighted, being a condition with high morbidity.Objective: To conduct a systematic review of the literature on transverse myelitis associated with vaccination against Covid-19.Method:A systematic review of the literature was carried out, that included articles published between March 2021 and January 2022. Initially, 86 articles were found. After applying the inclusion and exclusion criteria, we encountered 21 publications. Results:There were a total of 23 cases, with the highest number in Germany, followed by Japan. The remaining cases were reported in Italy, United States, China, United Kingdom, Malaysia, Iran, Brazil, Portugal, Turkey, India. The vaccines involved were: AZD1222AstraZeneca, ModernRNA-1273, the BNT162b2 vaccine,BBIBP-CorV andAd 26.COV2.S, Johnson and Johnson.34.7% of the cases occurred in female patients and 47.8% in male Hypertension and diabetes were the most commonly present. The interval between vaccination and the LETM ranged from 24 hours to three weeks. The most common radiological findings on MRI were:extensive involvement of the cervical cord up to the thoracic spine, involvement of the cervical and thoracic cord separately.Among the alterations found in the CSF, mild hyperproteinorraquia up to above 500mg/dL with unaltered cellularity were reported. Among the clinical manifestations, tetraparesis, paraparesis or paraplegia were reported, with or without paresthesia, sensory level and urinary sphincter dysfunction. The majority of patients received pulse therapy with methylprednisolone 1g/day, from three to five consecutive days. In 26% of cases, there was additional therapy with plasmapheresis. In one case, the patient spontaneously improved. In five cases reported there was complete remission of symptoms, in three cases the clinical outcome after treatment was not reported. And in the remaining cases there was partial improvement. In only one case, the patient died. Conclusion:Vaccines against COVID-19 have a significant impact on morbidity and mortality, being indispensable in the fight against the pandemic. Post-vaccination LETM is a rare event, but early recognition is important as treatment can reduce long-term disability.