A clinical spectrum of Movement Disorder in Acute Demyelinating disease in a Tertiary Care centre

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Introduction

The spectrum of Movement Disorder is vivid and unique in its own way. Primary demyelination comprises of diseases like Multiple sclerosis (MS), neuromyelitis optica spectrum disorder (NMOSD), Myelin Oligodendrocyte Glycoprotein antibody associated diseases (MOGAD), seronegative longitudinally extensive transverse myelitis (LETM) with their exclusiveness in affecting several parts of Central nervous system. In recent years, it has been shown that people with MS have a history of Movement Disorder, and that this is mainly the consequence of brainstem and spinal cord involvement. Having in mind above mentioned, it is surprising that only few case reports exist describing Movement Disorder in people with NMOSD, a disease that primarily involves areas of the CNS. The spectrum of Movement Disorder in demyelination disorders is less vividly projected in literature. The Movement is a critical regulator of biological homeostasis at rest and in response to stress via an intricate network of central and peripheral neurons. Movement disorders have diverse clinical presentations, which may be localized to generalize and hence diagnosis mandates an organized approach of which the most important element is a detailed medical history and specific clinic-electrodiagnostic evaluation.

Aims & Objectives

- Explore the spectrum of Movement Disorder in patients with primary demyelination

Materials & Methods

Study area –Department of Neurology, Bangur Institute of Neurosciences (BIN) (IPGMER & SSKM Hospital Annex-1), Ramrikdas Harlalka Hospital (RDHH) (IPGMER & SSKM Hospital Annex-4), Kolkata
Timeline – 1 year (Augutt 2024 to August 2025)
Definition of population – All primary demyelination patients admitted to BIN and RDHH indoor at their first attack
Study design– prospective observational study

Results

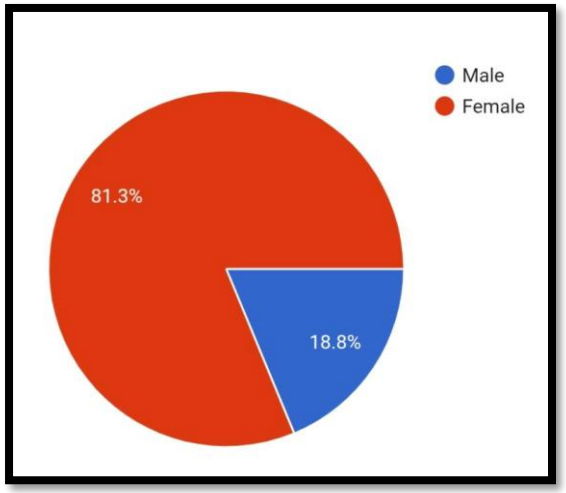

Chart 1- Sex distribution

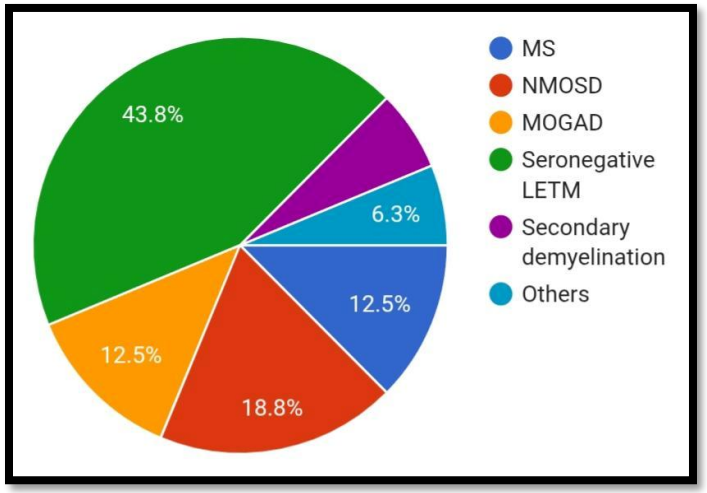

Chart 2- Disease distribution

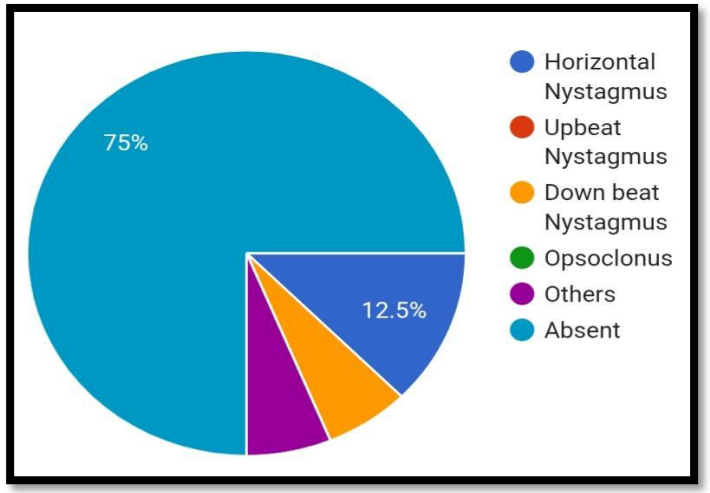

Chart 3- MD distribution

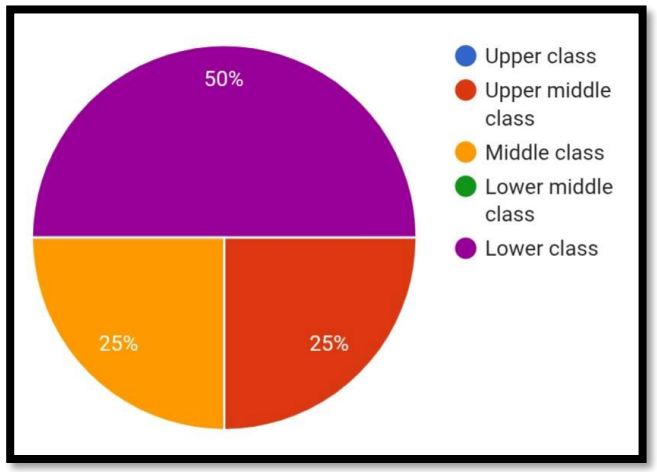

Chart 4- Socioeconomic status

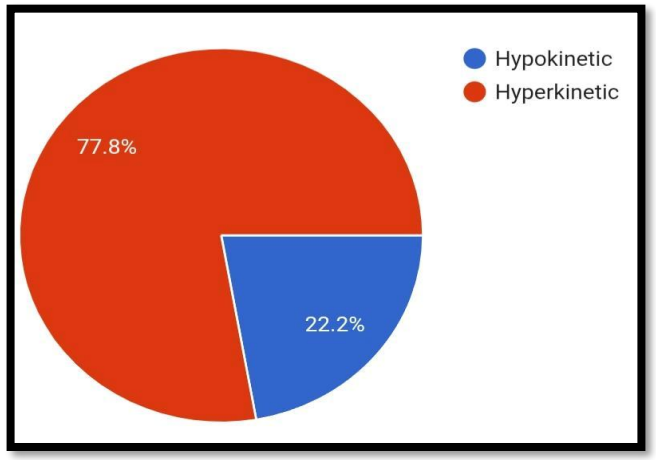

Chart 5- Characteristics of MD

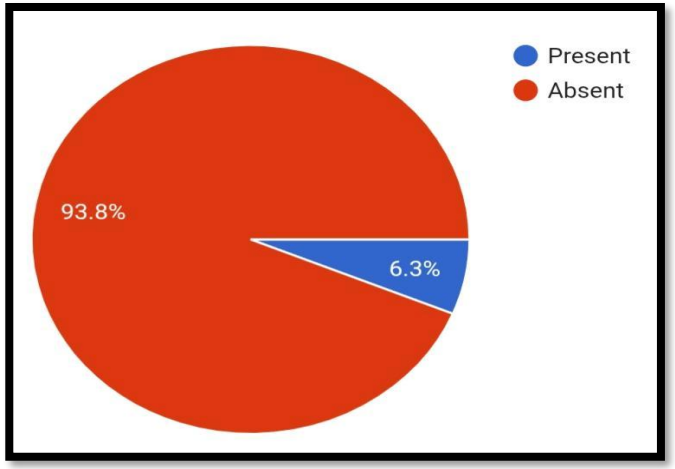

Chart 6- Facial Movement

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Discussion

32 patients are included in the study of which 6 are males and 26 are females. They are in the age group 18-42 years. They are having both primary and secondary demyelinating disease. Among the disease seronegative LETM is most common demyelinating disease. Mostly, they have presented with limb weakness or gait unsteadiness. But patient presented with movement disorder as 1st presentation of demyelination disorder is not found in my study. Prevalence of movement disorder and demyelinating disease is seen more in females and in the reproductive age group. Both hyper and hypokinetic movement is noted, among them Tremor, ataxia and dystonia is most commonly noted. Among ocular movement disorder, horizontal gaze Nystagmus is most commonly noted. It has been noted that, there is no apparent relation between movement disorder and MRI burden of the disease. The study is still continuing.

Conclusion

Movement disorders in demyelinating diseases, though less common, reflect lesions in the cerebellum, basal ganglia, or brainstem. They manifest as tremor, ataxia, dystonia, or other involuntary movements. Early recognition aids targeted therapy and improves functional outcomes

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