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COVID19 in Multiple Sclerosis Patients in Dubai: Observational Study
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Background: Covid 19 pandemic came with its own challenges of novelty, lack of information uncertainty of treatment and its effect on chronic autoimmune diseases like Multiple sclerosis. The outcome of covid 19 with immunosuppressive and immunomodulatory treatment in multiple sclerosis was not known till this year. We share our observation of multiple sclerosis patients including neuromyelitis optica who contracted Covid 19 in Dubai UAE, during April 2020 to Sep 2021 in 2 major hospitals treating multiple sclerosis.

Material(s) and Method(s): All Multiple sclerosis Patients following in Rashid hospital and Alzahra Hospital Neurology apartment who had Covid 19 were included in this observational study.

Result(s): 55 MS patient with Covid 19 (including 2 NMO) were studied. Age of the patients ranged from 19 to 58years. There were 39 females and 16 males. 43 were RRMS, 6-SPMS, 4- CIS,1- PPMS and 2 NMOSD. 6 were on interferons, 2 on teriflunamide, 8 on dimethylfumarate, 12 on fingolimod, 3 on natalizumab, 1 on alemtuzumab, 1 on rituximab, 9 on cladribine, 12 on ocrelizumab and 1 on azathioprine. 47 had fever, 30 anosmia, 28 had fatigue and 42 had sorethroat and cough, 5/ 55 had pneumonia.39/55 had mild covid, 13/55 had moderate and 3 had severe covid 19. 3 /55 needed ICU. There were 2 deaths, first with MS,EDSS 6.5 on ocrelizumab and second with NMO (EDSS 7.0) on rituximab.

Conclusion(s): The disease course and outcomes were mostly favorable with most patients not requiring hospitalization. A higher EDSS score, progressive disease, use of rituximab, and ocrelizumab (antiCD20 therapy) were associated with the mortality encountered. Age, sex, smoking history, and duration of MS were not independent risk factors for increased severity or adverse COVID-19 disease outcomes.

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The Role of Gut Microbiota in Multiple Sclerosis
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Objectives: To evaluate the role of the gastrointestinal tract, as a key system in the immune homeostasis,
1. To emphasize the importance of the normal Flora and Microbiota in the human health.
2. To study the effects of the changes in GI Microbiota on the pathogenesis of Multiple sclerosis.
3. To evaluate the possible role of Fecal Microbiota Transplantation in the management of the disease.

Review Article: The gastrointestinal tract has one of the biggest immune and nerve cells’ reservoirs in the body. The gut microbiota is considered a microbial “organ,” and its alteration could lead to the inflammatory activation of the immune system. Studies show that MS gut microbiome, as having general alterations in specific species, some associated with the promotion of inflammatory cytokines and overall inflammation. In addition to these findings, experimental models of the disease have reported that T regulatory cells have deficits in their function as a result of the aberrant gut microbiota composition. Evidence indicates that changes in microbiota composition may result in imbalances that could result in disease, with the gut as a potential novel therapeutic avenue. By understanding the biological effects of aberrant gut microbiota composition, it is possible to postulate current therapeutic options and their efficacy. Definitely, we need more research in this field, but targeting the gut microbiota may lead to the development of some new therapeutic strategies.

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Chitinase-3 Like-Protein-1 in CSF: A Novel Biomarker for Progression in Multiple Sclerosis Patients
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Background: Chitinase-3-Like protein-1 (CHI3L1) is a glycoside secreted by monocytes, microglia, and activated astrocytes. Its distribution in inflammatory lesions suggests that it might be an important component of the astrocytic response to modulate CNS inflammation. CHI3L1 levels in CSF have been found to influence prognosis, disease severity and progression in multiple sclerosis (MS) patients.

Material(s) and Method(s): 52 patients with MS (30 RRMS and 22 Progressive MS) and 35 age, sex matched healthy controls were recruited. They all underwent full clinical assessment and CSF level of CHI3L1. Comparisons were made between patients and controls concerning CSF level of CHI3L1 and correlations between CSF level of CHI3L1 and disability and progression parameters in MS patients.

Result(s): Patients with MS had higher CSF level of CHI3L1 (p<0.001) than controls. Patients with progressive MS had higher levels than RRMS (p<0.001). There were positive correlations between age of disease onset, disease duration, number of attacks and CSF levels of CHI3L1. Also, CSF levels of CHI3L1 correlated significantly with EDSS, performance in MMSE and BICAMS and lesion load in MRI brain and spine. A cut off value of 154 ng / ml have been proposed as a cut off point between RRMS and progressive MS patients.

Conclusion(s): CHI3L1 can be considered as a biomarker of disease progression. Its higher levels were associated with more severe and disabling disease. this could help as an objective parameter in DMD choice decision.

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MRI Findings in Late-Onset Multiple Sclerosis; a Systematic Review and Meta-Analysis
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Background: Multiple sclerosis (MS) commonly affects young adults at the ages 20 to 40 years old, but it can onset at each age. Late-onset multiple sclerosis (LOMS) is defined as symptoms initiating after the age of 50. Because of similar manifestations between LOMS and other diseases of the elderly, misdiagnosis and a remarkable gap in diagnosis of LOMS is a challenge of the elderly population. Since its technical development in the early 1980s, magnetic resonance imaging (MRI) has quickly been adopted as an essential tool in supporting the diagnosis, longitudinal monitoring, evaluation of therapeutic response, and scientific investigations in MS. In this systematic review, we elevate the MRI profiles of LOMS cases, based on published studies. As spinal cord involvement is an important cause of disability in patients with MS, we also investigated the proportion of spinal cord involvement in LOMS cases.