Result(s): Of 1750 patients included in this study, 261 (14.9%) cases had a family history of M.S. Age was significantly higher in the familial group (P-value = 0.02). Sibling relationship was the most common (46%). The patient's sister was most likely to be involved in 46 (18.9%). In the familial group, 209(83.9%) cases had one affected family member, 33(13.3%) cases had two affected family members, and 7 (2.8%) cases had three or more affected family members. Of note, after first-degree relatives, 97(40%), maternal relatives 62(25%), and paternal relatives 47(19%) involvement were observed in the order of frequency. In our assessments, the risk of having a child with MS increases when three or more of the family members have MS. Our observations showed that the average disability rate of patients with a family history is higher than patients without a family history. (P-value<0.001).

Conclusion(s): The prevalence of familial M.S in Mazandaran province can be considered as one of the highest reports of familial MS in Iran. It was more than that of the global familial M.S. rate (12.9%). One of the reasons for the higher prevalence of familial MS in this region may be the high probability of consanguineous marriage between these people4. However, differences in environmental factors cannot be ignored. Higher mean disability in familial MS compare to nonfamilial in this study may suggest that a potent drug is better to start at the beginning of treatment in patients with a positive family history.

Challenges of MS Patients for Receiving Health Care Services

Sharareh Eskandarieh

Multiple Sclerosis Research Center, Neuroscience Institute, Tehran University of Medical Sciences, Tehran, Iran

Background: Multiple sclerosis (MS) is a debilitating non-traumatic neurological disorder in young adults and can reduce quality of life (QoL) by interfering with work ability, leisure activities, and routine living tasks. Various studies have shown the dissatisfaction of people with MS in different areas of care services. Regarding the patient's dissatisfaction with care services, in this study, we sought to identify the care challenges of MS patients in Iran.

Material(s) and Method(s): The cross-sectional study was conducted in 2016-2019 through a researcher-made questionnaire (designed by MS Specialists in MS research center).

The questionnaire examined the care challenges in four areas:

1) Costs of medication, hospitalization, and rehabilitation services

2) Family support, insurance system and job protection

3) Access to transportation system and treatment team

4) Quality of care and provided services. The participants answered the challenges based on a five-point Likert scale.

Result(s): Completed questionnaires were received for 945 respondents. Prioritizing care services challenges are as follows: The cost of pharmaceutical services (49.1%), lack of telephone counseling (47.4%), uninsured home rehabilitation (44.7%), lack of qualified care centers (41.2%), rehabilitation costs (40.2%). There is a significant correlation between the level of education and challenge of medication's cost (p-value≤0.01), transportation systems (p-value≤0.01), and lack of familial support (p-value≤0.01).

Conclusion(s): We found that patients who can't walk at least 20 meters and Unemployed people had more problems and lower QoL. The patients who had non-academic education had more challenges with the cost of medication, transportation and lack of familial support.

This study shows Challenges of MS patients in receiving health care in Iran that vary in age, education, employment and ability to walk. As challenges mentioned above are of great importance in determining quality of life of people with MS, an appropriate solution is recommended by this study to overcome these challenges.

Incidence, Severity, Outcomes, and Risk Factors of COVID-19 in Multiple Sclerosis: An Observational Study in the Middle East

Raed Alroughani [a], Jihad Said Inshasi [b], Jasem Al-Hashel [c], Jaber Alkhaboury [d], Abdullah Alsalti [d], Reem Al Suwaidi [b], Loqman H. Hassino [e], Samar Farouk Ahmed [f,g]

[a] *Division of Neurology, Department of Medicine, Amiri Hospital, Kuwait City, Kuwait*
[b] *Neurology Department, Rashid Hospital and Dubai Medical College, Dubai, United Arab Emirates*
[c] *Faculty of Medicine, Kuwait University, Kuwait, Kuwait*
[d] *Neurology Unit, College of Medicine and Health Sciences, Sultan Qaboos University and Sultan Qaboos University Hospital, Muscat, Oman*
[e] *Neurology Unit, Department of Medicine Jahra Hospital, Jahra, Kuwait*
[f] *Ibn Sina Hospital, Kuwait City, Kuwait*
[g] *Faculty of Medicine, Minia university, Minia, Egypt*

Objective(s): To evaluate the incidence, severity, and outcomes of coronavirus disease (COVID-19) and to identify demographic and clinical risk factors in patients with multiple sclerosis (MS).

Material(s) and Method(s): A cross-sectional hospital records-based study was conducted on MS patients from clinics in Oman, Kuwait, and the United Arab Emirates (UAE) between March 2020 and February 2021. Patients diagnosed with MS using the 2010 McDonald criteria or previously accepted diagnostic criteria and with a positive diagnosis of COVID-19 were included in the study. Association between patient demographics, disease characteristics, use of disease-modifying therapies, and outcome of COVID-19 illness was evaluated statistically using an odds ratio estimation.

Result(s): A total of 134 MS patients with COVID-19 (overall incidence rate of 3.7%) were analyzed in the study (116 with relapsing-remitting MS [RRMS], 11 with progressive MS; and 7 with clinically isolated MS). The median age of patients was 35.5 years. Of the total cohort, 127 (94.8%) patients were on disease-modifying therapy (DMT). A majority of the patients (126 [94.0%]) had mild COVID 19 illness and 122 (91.0%) made a full recovery while 1 (0.7%) patient died. A total of 8 patients (6.0%) were hospitalized; 3 (2.2%) required intensive care, while 2 (1.5%) reported ventilator requirement. The mean EDSS scores reported in the study were low (1.74) with 127 (94.8%) reporting a score between 0 – 4.5. Univariate logistic regression analysis identified a high EDSS score and progressive MS disease as a risk factor for moderate to severe COVID-19 requiring hospitalization. Rituximab use and anti CD20 therapy were also associated with a statistically significant higher risk of developing moderate/severe COVID-19. The presence of comorbidities was associated with a higher risk of non-recovery from the viral infection in both univariate and multivariate analyses.

Conclusion(s): COVID-19 showed an incidence rate of 3.7% in the studied cohort of MS patients. The disease course and outcomes were mostly favorable with most patients not requiring hospitalization. A higher EDSS score, progressive disease, use of rituximab, and use of antiCD20 therapy were associated with statistically significant increased risk of developing moderate/severe COVID-19, while the presence of comorbidities was associated with a higher risk of non-recovery from COVID-19. Age, sex, smoking history, and duration of MS were not independent risk factors for increased severity or adverse COVID-19 disease outcomes.