Profile of patients with Multiple sclerosis in Mosul City

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ABSTRACT

Background: This study was carried out to assess the prevalence of MS in Mosul City.

Methods: A retrospective study was applied in Mosul City for the period between (2020-2000). MS patient's outpatient of Ibn-Sina Teaching hospital in Mosul City. Assessment of MS status: for the assessment of MS status the Kurtzke EDSS was used. EDSS was based on ten scores (0-10) and categorized the MS severity into three level; mild disability (EDSS, 0.0 to 3.5), moderate disability (EDSS, 4.0 to 6.5), and severe disability (EDSS, 7.0 to 9.5). Microsoft Excel file was used to analyzed the data, number, percentage, Mean and Standard deviation were computed analyze all demographic and clinical variables. This study was approved by the Ethics Committee of the Mosul Health Directorate, at Mosul City –Iraq.

Results: the study found that the mean age of patients (34.7) among men and (32.9) among women. The mean age at onset is (28.9) among men and 27.9 among women. In relation to family history 89.8% of men and 93.9% of women don't have positive family history with MS. The majority of patent have Relapsing-remitting.

Conclusion: In conclusion, the prevalence of MS has been steadily rising in the Mosul city over the past few decades.

Key words: profile, Multiple Sclerosis, Mosul

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INTRODUCTION

Globally , Multiple sclerosis (MS) is the common a neurodegenerative and immune-mediated demyelinating disease of the among the young-adults people central nervous system.(AlJumah et al., 2020). At onset, most of patients have relapsing–remitting disease, which stereotypically is tracked by a secondary progressive course, while a minority of patients has a primary progressive course from onset (10%).(Etemadifar et al., 2020) In relation to relapsing–remitting, , most patients between 20-40 years old, their first symptoms of MS.(El-Wahsh, Ballard, Kumfor, Bogaardt, & Disorders, 2020) MS a variety of diseases representing different processes which suggested by the clinical heterogeneity, as well as, the findings of different pathological patterns.(Polat Dunya et al., 2020) In the last decade , association between risk of environmental factors, identification of new genetic factors, and increased understanding the significance of gene–environment (GxE) interactions have led to a more agreement.(Nazari, Shaygannejad, Sichani, Mansourian, & Hajhashemi, 2020) Patients with MS can impression of stigmatized whereby the individual keeps characteristics that are either internally or externally perceived to be inferior, thus resulting in devaluation, rejection or exclusion. This study was carried out to assess the prevalence of MS in Mosul City.

Methods:

A retrospective study was applied in Mosul City for the period between (2020-2000). MS patient's outpatient of Ibn-Sina Teaching hospital in Mosul City. The inclusion criteria: age of patients more than between (18 years), At least one year since diagnosed with MS. Patients who agree to participate in the study. an information sheet was used to collect the data that related to the patients like (age, gender, residency) and disease history (age of onset, family history. Assessment of MS status: for the assessment of MS status the Kurtzke EDSS (Ciotti et al., 2020) was used. EDSS was based on ten scores (0-10) and categorized the MS severity into three level; mild disability (EDSS, 0.0 to 3.5), moderate disability (EDSS, 4.0 to 6.5), and severe disability (EDSS, 7.0 to 9.5). Microsoft Excel file was used to analyzed the data, number, percentage, Mean and Standard deviation were computed analyze all demographic and clinical variables.

RESULTS:- the study found that the mean age of patients (34.7) among men and (32.9) among women. The mean age at onset is (28.9) among men and 27.9 among women. In relation to family history 89.8% of men and 93.9% of women don't have positive family history with MS. The majority of patent have Relapsing-remitting.

Table 1: Comparison of the clinical patterns and disability according by sex

Variables	Male	Female	P
Age: mean (SD) in years	34.7 (9.31)	32.9 (8.8)	0.093
Age at onset: mean (SD) in years	28.9 (8.3)	27.9 (8.2)	0.736
Early onset of MS (≤16 years)	8 (3.0)	47 (6.4)	0.034**
Variables	N (%)	N (%)	P
Family history of MS			
No	239 (89.8)	679 (93.9)	0.028**
Yes	27 (10.2)	44 (6.1)	
EDSS: mean (SD)	3.7 (2.1)	3.3 (2.2)	0.452
*Diagnostic delay : months (SD)	21.8 (32.8)	21.4 (33.8)	0.757
Variables	N (%)	N (%)	P
Relapsing- remitting	159 (64.6)	471 (68.8)	0.122
Primary progressive	10 (4.1)	16 (2.3)	0.178
Secondary progressive	29 (11.8)	75 (10.9)	0.811
Relapsing- progressive	17 (6.9)	18 (2.6)	0.003**
Clinically isolated syndrome	31 (12.6)	105 (15.3)	0.245

DISCUSSION

Previously, Iraq was regarded as a low-risk area for MS. In this study the prevalence of MS in Mosul city, Iraq was determined to be 27.7/100,000. This study shows that the prevalence of MS in Mosul city falls into the medium frequency range. Reports of prevalence studies of MS in other neiboughr to Iraq also show similar finding. Abedini and colleges estimated that the MS prevalence in north of Iran was 20.1/100,000.(Baghbanian, Cheraghmakani, HabibiSaravi, Azar, & Ghasemihamedani, 2020) Etemadifar and Sadatnia8 reported higher prevalence of MS in Isfahan, central region of Iran, as 35.5 and 43.8/100,000 respectively.(Etemadifar et al., 2020). We believe that in our study, only negligible numbers of patients were missed by CDTMS. This was because the cost of MS treatments was too expensive for the average individuals without access to governmental resources, and CDTMS provided for the treatment for all patients diagnosed with MS. In this study approximately two thirds of our patients were females. This female preponderance is higher than other Arabic countries in the Middle East such as Kuwait(El-Muzaini, Akhtar, & Alroughani, 2020), Saudi Arabia and Jordan.(AlJumah et al., 2020) In Lebanon, Yamout and colleagues found a high female/ male ratio of approximately 3. (Yamout et al., 2020). A number of previous studies have reported that 0.4–5.6% of MS patients have their onset of symptoms before the age of 16.(Deiva et al., 2020). In our study, there were 24 cases (5.6%) of early-onset of MS. The female/male ratio in the early-onset patients was 5.8. This ratio was higher than the study in Isfahan.(Moradi et al., 2020) Ashtari and her colleagues also reported a

high female/ male ratio in early-onset MS of 4.47.(Ashtari, Shaygannejad, Farajzadegan, & Amin, 2010). As for previous studies from the Arabic countries, the data on early-onset MS is difficult to interpret. This is mainly because there were varied definitions of early-onset MS in the different studies. For example, in a study from Oman where patients under 19 years old were defined as early-onset MS, the female to male ratio was 5:1.15 Consistent with prior studies conducted in Tehran and Isfahan the most prevalent clinical form of MS in our study was RRMS (67.7%).(Nabavi, Sh, & Ghassemi, 2006) The RRMS affected 60–90% of patients in the Arabic populations.15,17-20 PRMS featured in 2.8% of our patients. The proportion of PRMS in Mosul city appears to be lower than that reported from the other parts of Middle East. (Aleyasin, Sarai, Alaedini, Ansarian, & Lotfi, 2002). In our cohort of MS patients, there was a family history of MS in 71 patients (7.2%). Of these, 63.8% had first-degree affected relatives. The proportion of patients with positive family history in the other regions was higher (approximately 12%).(Etemadifar, Janghorbani, Shaygannejad, & Ashtari, 2006) A positive family history of MS in studies from elsewhere varied from 0 to 9.3%.15,18-20 There is a very strong evidence that familial aggregation is determined by multiple genes. This is based on the data from twins, adoptees, half-sibling and the offspring of conjugal pairs.(Scalfari et al., 2010)

Conclusion :

In conclusion, the prevalence of MS has been steadily rising in the Mosul city over the past few decades. The clinical phenotype of MS in the Mosul City is similar to what has been described in the other countries except for an earlier age at onset and a more aggressive clinical course leading to earlier disability.

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