

Mood Disorders in Multiple Sclerosis: a study from Baghdad

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ABSTRACT

INTRODUCTION: studies of psychiatric disorders in multiple sclerosis (MS) patients have shown that depression and anxiety were present in higher rates than the general population.

OBJECTIVE: to estimate the rate of mood disorders among Iraqi patients with MS.

METHODS: a cross sectional observational study of 53 patients who were attending MS clinic at Baghdad Teaching Hospital in Medical City from March 2008 to January 2009. The Diagnostic and Statistical Manual IV of mental illness (DSM-IV) criteria were applied for the diagnosis.

RESULTS: Results revealed that 28 patients = 52.83 % had mood disorders, 25 patients = 47.16% without mood disorder, there is significant relation between mood disorders and patients who used Interferon B in treatment, 22.64% of the total number which is (53) patients presented with suicidal idea.

CONCLUSION: Both the disease process and treatment of multiple sclerosis may affect the mental status of patients, producing a variety of symptoms; depression is the most common mood disorders in multiple sclerosis.

Key words: multiple sclerosis, depression, anxiety.

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INTRODUCTION

Multiple sclerosis (MS) is the most common chronic inflammatory demyelinating disease of the central nervous system in young adults, affecting approximately 1 in 1000 people worldwide.¹ A diagnosis of MS requires the occurrence of at least two neurologic events consistent with demyelination in the brain, spinal cord or optic nerves that are separated in time and space. The average age of onset is between 20 and 40, although it may develop at any age. The disease chronicity imparts huge costs to patients and families with reduction in quality of life and work productivity.² The disease course is variable and unpredictable and the specific cause of MS is not fully understood. Symptoms of the disease vary, depending on where the damage occurs, and range from minor physical annoyances to major disabilities that can include

weakness, visual loss, bowel and bladder incontinence, fatigue, cognitive impairment, and mood symptoms. Persons who have MS seem to have a higher prevalence of a number of psychiatric symptoms and disorders. Emotional disturbances are common in MS and consist of disturbances of mood and disturbances of affect.³⁻⁷ Mood refers to a sustained and pervasive emotion that influences perception of self, others, and the world such as depression, elation, mania, and anxiety.⁸ The extent to which mood disorders are direct consequences of the disease process or psychological reactions to it remains unclear. MS patients present with mood disorders in the same way as non-MS patients do, and respond just as well to standard treatments. Mood and affective disturbances lead to huge suffering and result in disruption of work, and social life.⁹⁻¹¹ Psychiatric aspects of



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MS have become well known over the past 30 years.¹² Studies stated that 80% of the patients with MS may have at least one psychiatric symptom. Others reported that depressive symptoms are more common in MS patients than the controls.¹³⁻¹⁵ Moreover, in comparison to other chronic diseases and the general population, depression is observed more frequently in MS;^{14, 16-19} a factor that can negatively impact the quality of life.²⁰⁻²² Some studies reported that higher degree of disability^{12, 14, 23-25} shorter duration of illness^{23,24} and severity of fatigue²³ were associated with depression although others found no clear cut association between these factors and depression.^{18,26} From the above account of the disease, MS is a chronic disabling disease with many psychiatric complications. Identifying and treating these psychiatric conditions can help improving the quality of life in MS patients. We aim to identify these psychiatric complications and the settings with which they are associated.

METHODS

Setting and Study Design: a cross sectional observational study was conducted in the MS clinic of Baghdad Teaching Hospital at Medical City in Baghdad, during the time period between March 2008 to January 2009.

Ethical Consideration: The study was approved by the Iraqi Board for Medical Specializations. Written consent was obtained from each patient the study was conducted according to the regulations of research committee at Ministry

of Health in Iraq.

Definition of the cases, inclusion and exclusion criteria:

The sample was collected once weekly and consists of patients already diagnosed by neurologist as having multiple sclerosis according to McDonald criteria for the diagnosis of MS and registered in MS clinic. There were 28 female and 25 male patients. Age of the patients range between 18 years and 57 years. Inclusion criteria of patients includes: both gender are involved, no age group limited, willing to participate in the thesis with informal consent, patients diagnosed by neurologist with multiple sclerosis. Exclusion criteria of patients: (2 patient excluded from 55 patients) patients with other psychiatric illnesses, unwilling to participate in the study.

Sampling: The sample was selected conveniently from patients who are registered in the clinic and visiting the clinic on Mondays of every week during the studied period.

Outcomes: Before beginning interview with any patient, the purpose of the interview and the study was explained by the researcher to each patient, then verbal consent was obtained from each patient, the sociodemographic and clinical information were collected from each patient, the patients were assessed clinically by history and examination, The diagnostic and statistical manual revision IV (DSM-IV) criteria of mood disorders were used in the diagnosis.

Statistic: Whole data arranged and tabulated with numbers and percentages, associations be-

Table 1:- distribution of patients according to sociodemographic data

Sociodemographic data		Female	%	Male	%	Total	%
Age - years	10-20	1	1.88	1	1.88	2	3.77
	21-30	6	11.3	4	7.5	10	18.86
	31-40	10	18.65	11	20.46	21	39.18
	41-50	9	16.97	7	13.3	16	30.18
	51-60	2	3.77	2	3.77	4	7.54
	Total	28	52.9	25	47.1	53	100
Marital status	Married	10	18.86	16	30.18	26	49.05
	Unmarried	17	32.07	9	16.98	26	49.05
	Widow	1	1.8	0	0	1	1.88
Education	Postgraduate	0	0	2	3.77	2	3.77
	University	7	13.20	12	22.64	19	35.84
	Secondary	12	22.64	7	13.20	19	35.84
	Primary	7	13.20	3	5.66	10	18.86
	Illiterate	2	3.77	1	1.88	3	5.66

Table 2: distribution of patients according to the rate of mood disorders

Type of mood disorder	Male	%	Female	%	Total	%	P – value
Depression	8	15.09	11	20.75	19	35.84	0.8
Dysthymia	2	3.77	6	11.32	8	15.09	0.7
Bipolar	0	0	0	0	0	0	
Hypomania	0	0	1	1.88	1	1.88	
Cyclothymia	0	0	0	0	0	0	
Total patients with mood disorder	10	18.86	18	33.96	28	52.83	

Table 3: Effect of treatment by beta interferon on having mood disorders.*

	Used B- interferon	%	Not used B- interferon	%	Total (%)
Positive mood disorders	21	39.6	7	13.2	28 (52.84)
Negative mood disorders	11	20.7	14	26.4	25 (47.16)
Total number	32	60.3	21	39.6	53 (100)

*The difference has a statistical significance (P- value (0.02)

Table 4: Association between having mood disorders and possession of suicidal ideas.*

	Presented with suicidal ideation	%	Not Presented with suicidal ideation	%	Total (%)
Positive mood disorders	12	22.6	16	30.1	28 (52.84)
Negative mood disorders	0	0	25	47.16	25 (47.16)
Total number	12	22.6	41	77.3	53 (100)

* The difference reached statistical significance (P-value 0.04).

tween variables measured by using Chi-Square Test, P-value of equal to or less than 0.05 considered as a level of significance.

RESULTS

of the 53 patients included in the study, 25(47%) were males, 28(53%) were females and female to male ratio was 1.12:1 (table 1). 21(39.62%) patients age from 31-40 years, 2(3.77%) patients only were below 20 years old at time of study and 4(7.54%) age older than 50 (table 1). 26(49%) patients were married, 26(49%) were unmarried and only one (1.88%) patient was widowed (table 1). Postgraduate patients were 2 (3.77%), university students 19 (35.84%), secondary school graduates 19 (35.84%), primary school graduates 10(18.86%), and only 3(5.66%) were illiterate (table 1). Of the patients participated in the study 28(52.83%) patients satisfied the criteria for mood disorders. 19(35.84%) with depression, 8(15%) patients with dysthymia, one patient with hypomania (table 2). Patients with no mood disorder were 25(47.16%). Patients presented with mood disorders that used Interferon-B in treatment were 21(39.62%) versus 7(13.20%) that did not use Interferon-B. while 11

patients used Interferon-B in treatment did not meet the criteria for mood disorders (table 3). 12(22.64%) patients presented with mood disorders with suicidal ideations (table 4).

DISCUSSION

In this study the ratio of male to female patients is 1.2: 1 that represent 28 females: 25 males, which is different from 2:1 ratio that recorded by other authors.²⁷ This difference could be due to the size of sample collection or because of many female patients not attend the MS clinic in Baghdad Hospital of Medical City to receive her treatment and her relative did that instead of her. There is no significant relation between male and female gender that presented with depression and dysthymia in relation to multiple sclerosis because P Value for depression is 0.8 and for dysthymia is 0.9 and it's more than 0.05.

The mean age in my study is 37.84 which is higher than what found by Shiffer, Winemen 23.5.²⁸ This can be attributed to the differences in the size of the sample and the manner of the patient's collection that in some studies deal with some stages or types of the disease that

occur in the beginning of the disease course. Most studies found that mood disorder is the most common psychiatric morbidity in multiple sclerosis and depression is the commonest one of them that vary from 25% to 50%,²⁹ in this study the rate of depression was 35.84% (19 patients) which is within this range and higher than rate of depression in the general population in Iraq 7.82%³⁰ or in other country 5-17%.²⁹ There is previous study done in Iraq about mood disorder in multiple sclerosis found that 31% of patients presented with depression³⁰ this result is less than this study result may be due to difference in sample size. It's difficult to determine the cause of depression in patients presented with multiple sclerosis because many factors must be considered such as family history of depression, type of drugs that were used in the treatment, and activity of the disease and its physical and social consequences of this chronic disease. 32 patients participated in the study were using Interferon-B as treatment which represent 60.3 % from total sample, 21 (39.6%) of them presented with mood disorders which showed significant relation (p value 0.02) with multiple sclerosis. Suicidal ideation found in 12 (22.64%) patients from the total sample and 3 of them presented with dysthymia the others presented with depression, this percentage is less than the result of study done in 2002³¹ that found it 28.6%, the difference in result may be due to differences in society and religion of the patients. In this study, 15.09% presented with dysthymia and there is study mentioned that its prevalence in patient with multiple sclerosis is 4.8%³² But study done in Iraq³⁰ show that the prevalence rate of dysthymic patients was 35% and it's higher than of our result. This may be due to size of sample collected or due to differences in criteria of diagnosis and definition of dysthymia at this time. We found 1 patient with hypomania; but we not found study show its prevalence rate in multiple sclerosis. In this study we did not find bipolar or cyclothymia in patients with multiple sclerosis.

CONCLUSION

Both the disease process and treatment of multiple sclerosis can affect the mental state of patients, producing a variety of symptoms. The overall prevalence of mood disorder was higher in women than in men with MS. Depression and

dysthymia form the most prevalence mood disorder in patient with multiple sclerosis. There is significant relation between mood disorders and patient treated by Interferon-B. High percent of patients have suicidal ideations most of them suffer from depression.

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Abbreviation list: Diagnostic and statistical manual revision IV (DSM-IV), Multiple sclerosis (MS).

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