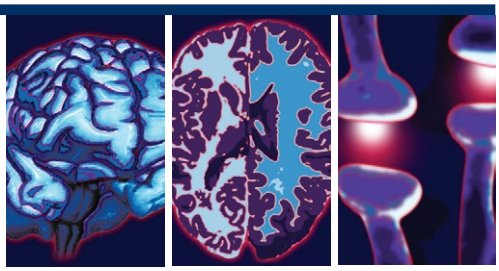

Grief Versus Depression in Multiple Sclerosis Patients

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Abstract

Objective:

Most patients who are severely ill experience grief when confronted with the losses and limitations imposed by their illness. Differentiating between grief and depression is very crucial to a patient who is severely ill because of different management strategies for each.

Aim:

To differentiate between grief and depression in patients with multiple sclerosis (MS) and to compare the two types of MS; Remitting Relapsing MS (RRMS) and progressive MS (PMS) as regards hopelessness, depression, and grief.

Methods: It is a cross-sectional study of 54 MS Patients subdivided into two groups RRMS group included 19 patients, and PMS group included 35 patients diagnosed according to McDonald's criteria. They were evaluated by mini-mental state examination (MMSE), Expanded disability status scale (EDSS), Beck Hopelessness Scale (BHS) and the Palliative Grief Depression Scale.

Results:

15% of RRMS patients were suffering from depression compared to 21.6% of PMS patients with no statistically significant difference. There was a statistically significant difference between the two groups as regards BHS with a high level of hopelessness in PMS than in RRMS patients. A statistically significant difference was found between the two groups as regards the EDSS scores with more disability in PMS. Statistically significant positive correlations were found between depression and hopelessness; between depression and loss oriented grief (LOG) in both groups; and between depression and duration of illness in RRMS patients. A statistically significant negative correlation was found between total grief and duration of illness in PMS patients. There were no statistically significant differences between both groups as regards total grief, restoration oriented grief (ROG) and LOG.

Conclusion:

Differentiation between depression and grief is very crucial in severely ill patients with MS to avoid overmedications and missing cases with depression. So we recommend doing a routine screening for depression and grief for seriously ill patients.

Keywords

Multiple Sclerosis, Depression, Grief, LOG, ROG

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Introduction

Most of the severely ill patients react to their illness consequences by grief [1]. Grief manifests as emotional, physical, social, cognitive, and behavioral changes by which a patient try to adjust to the loss imposed by his illness in his way [2,3]. The grief appears in two different types either loss-oriented grief or restoration-oriented grief [4].

Loss-oriented grief describes the patient's suffering from his illness and includes statements like, "I find it difficult to accept that I have this disease." Restoration-oriented grief describes how the patient copes with the losses caused by the illness and includes statements like, "I am trying to make the most of the time I have left" [2,3]. However, depression is neither secular nor normal in those patients [4].

It is very crucial to differentiate between grief and depression in those patients because of different treatment approaches for each condition. Sometimes it is hard to distinguish between depression and grief because of overlapping symptoms (i.e., sadness, loss of appetite and weight, sleep). Affective and somatic symptoms are not helpful in identifying depression. However, cognitive symptoms such as anhedonia, hopelessness, worthlessness, loss of self-esteem, dysphoria, and persistent desire for death are hallmarks of depression [5]. For the following reasons differentiation between depression and grief is important: (1) grief and depression have common symptoms and may coexist. (2) many of the somatic symptoms used to diagnose depression may be due to grief or the original disease. (3) the affective symptoms used to identify depression are also present in grief. (4) The misperception that depression is a secular and normal phenomenon in severely ill patients. So some clinicians find it difficult to screen those patients clinically for depression. Therefore there is a strong need for an instrument that can measure grief and differentiate it from depression in those patients [4,6].

Aim of the Study

1- Highlight the difference between grief and depression in MS patients.

2- Compare between RRMS & PMS as regards hopelessness, depression, and grief.

Subjects and Methods

■ Subjects

This study is a cross-sectional study of 54 MS Patients subdivided into two groups; Remitting Relapsing MS (RRMS) group and progressive MS (PMS) group (including both primary and secondary progressive patients).

■ Inclusion criteria

Clinically definite MS patients diagnosed according to 2010 Revised McDonald criteria [7]. They were recruited from outpatients and inpatient Neurology Department, Kasr-Alainy Hospital from August 2015 to July 2016 after taking written informed consents.

Age range from 20-50.

Patients were selected to be steroid free for at least one month from the study.

Patients not in relapse for at least one month from the study.

■ Exclusion criteria

Age less than 20 years or above 50.

Patients with cognitive impairment assessed by mini-mental state examination).

Concomitant therapy with an antidepressant, psychoactive drugs or steroids.

Family history or presence of concurrent psychiatric disorders.

Alcohol consumption.

Other medical or neurological diseases.

Methods

The followings were applied to all patients:

■ Neurological assessment

Thorough clinical assessment: neurological history taking and examination.

Clinical Rating Scales: The Kurtzke Expanded Disability Status Scale (EDSS) [8], and progression index (PI) were used to quantify disability and disease progression. The PI corresponds to the ratio between EDSS and disease duration in years.

■ Neuropsychological assessment

Mini-Mental State Examination (MMSE) [9]: A score of <24 is considered impairment of cognitive functions and was a criterion for exclusion

■ B-Psychometric tools:

Semi-structural interview: A specially designed semi-structural interview using Kasr-Alainy

psychiatric sheet to cover demographic data, personal data, past history and family history. We used criteria of major depressive episode (MDE) and criteria distinguish MDE from grief mentioned in Diagnostic and Statistical Manual of Mental Disorders 5th edn. (DSM-5).

■ Beck Hopelessness Scale (BHS) [10].

BHS provides a self -report measure of one's negative expectations toward the future. It consists of 20 true-false items covering three factors: Feelings about the future, loss of motivation, and future hopes. The total BHS score is the sum of item responses which ranges from 0 to 20. The higher scores reflect higher levels of hopelessness. Scores from: 0 to 3 are considered within, scores from 4 to 8 go with mild hopelessness; scores from 9 to 14 go with moderate hopelessness, and scores greater than 14 with severe hopelessness.

The palliative Grief Depression Scale (PGDS) [4]: It is a short scale used as a self-report measure or administered by the clinician or the patient's family member. It is comprised of 20 true-false items with each correct response giving one point and false response generating zero points. On completion, the PGDS will provide three raw subscale scores: PGDS-ROG (restoration oriented grief), PGDS-LOG (loss oriented grief), and PGDS-D. Then, compute the total grief scores (ROG+LOG) and the difference in grief scores (ROG-LOG). The psychometric properties of the test are preserved, and the results are valid only if the items are administered in the order below (Appendix).

Scoring and interpretation of PGDS scores:

LOG is scored positively with one point for a true answer and zero points for a false answer and its range=0 to 5.

ROG is also scored positively with one point for a true answer and zero points for a false answer and its range=0 to 5.

Depression is scored positively with one point for a true answer and zero points for a false answer and its range=0 to 10.

PGDS scores and implication on depression:

If (ROG–LOG) <0, the patient is likely depressed.

If (ROG–LOG) ≥ 0, and D score <3, the patient is likely not depressed.

If (ROG–LOG) ≥ 0 and D score ≥ 3, the patient may be depressed.

PGDS total grief scores and implication on grief:

If ROG+LOG is low, the total grief currently experienced by the patient is low. It is known that grief varies with time and so it would be important to continue to follow the patient's grief as he or she progresses through the illness. If ROG+LOG is high, this indicates increased grief and the patient needs to be supported appropriately.

■ Statistical Methods

Data were described regarding mean ± standard deviation (± SD), median and range, or frequencies (number of cases) and percentages when appropriate. Comparison of numerical variables between the study groups was made using Mann-Whitney *U* test for independent samples. For comparing categorical data, Chi-Square (C^2) test was performed. The exact test was used instead when the expected frequency is less than 5. Correlation between various variables was done using Spearman rank correlation. *P* values less than 0.05 was considered statistically significant. All statistical calculations were done using computer program SPSS (Statistical Package for the Social Science; SPSS Inc., Chicago, IL, USA) Release 15 for Microsoft Windows (2006).

Results

Sociodemographic data of both groups are shown in the **Table 1**.

Clinical data of both groups are shown in the **Table 2**.

EDSS is significantly higher in PMS patients than RRMS patients.

The relation between PGDS, and BHS to both groups:

Hopelessness is statistically significantly greater in PMS than in RRMS, while PGDS did not differ significantly between both groups **(Table 3)**.

4- The Mean values of depression and grief subtypes in both groups:

No differences in the mean of depression, and grief subtypes in both groups **(Table 4)**.

5- Correlations between the depression subscale and disease duration, total grief and duration of illness, the age of onset, EDSS scale, hopelessness scale, ROG subscale and LOG subscale in both groups:

Table 1: Sociodemographic data of both groups.

Variable		RRMS group (20)		PMS group (37)		P value
		No	%	No	%	
Sex	Male	5	25%	15	40.5%	0.241
	Female	15	75%	22	59.5%	
Marital status	Single	9	45%	8	21.6%	0.082
	Married	11	55%	21	56.8%	
	Widow	0	0%	2	5.4%	
	Divorced	0	0%	6	16.2%	
Education	Illiterate	0	0.0%	8	21.6%	0.180
	Read & write	0	0.0%	1	2.7%	
	Preparatory	3	15.0%	4	10.8%	
	Secondary	6	30%	11	29.7%	
	Higher	11	55%	13	35.1%	
Occupation	Not working	9	45.0%	22	59.5%	0.035*
	Employee	4	20.0%	9	24.3%	
	Skilled	1	5.0%	2	5.4%	
	Unskilled	1	5.0%	4	10.8%	
	Students	5	25.0%	0	0.0%	

RRMS (relapsing remitting multiple sclerosis), PMS (progressive multiple sclerosis), SD (standard deviation). * Statistically significant

Table 2: Clinical data of both groups.

Variable	RRMS group (20)		PMS group (37)		P value
	Mean	SD	Mean	SD	
Age	28.75	9.037	35.84	8.745	0.008*
Duration of illness	4.25	3.401	8.51	5.970	0.002*
Age of onset of MS	24.50	7.877	27.46	8.398	0.180
	Median	Range	Median	Range	
EDSS	2.25	1 - 7	6	0 - 8.5	
Progression Index	0.9	0.2-2.5	0.8	0 - 8	

RRMS (relapsing remitting multiple sclerosis), PMS (progressive multiple sclerosis), EDSS (expanded disability status scale), SD (standard deviation). * Statistically significant

Table 3: Palliative grief depression scale (PGDS) and Beck hopelessness scale (BHS) in both groups.

Variable		RRMS group (20)		PMS group (37)		P value
		No	%	No	%	
PGDS	Depressed		5.0%		21.6%	0.57
	Not depressed	9	45.0%	19	51.4%	
	May be depressed	8	40.0%	10	27.0%	
BHS	Mild	9	45.0%	7	18.9%	0.049*
	moderate	6	30.0%	23	62.2%	
	Severe	5	25.0%	7	18.9%	

RRMS (relapsing remitting multiple sclerosis), PMS (progressive multiple sclerosis), SD (standard deviation), PGDS (palliative grief depression scale), BHS (Beck Hopelessness scale). * Statistically significant

There were significantly positive correlations between depression subscale and duration of illness in RRMS, depression subscale and hopelessness scale in both groups, and between depression subscale and LOG subscale in both groups, A statistically significant negative correlation was found between total grief and duration of illness in PMS patients **(Table 5)**.

Discussion

Most of the patients suffering from a severe illness experience grief when faced with illness consequences [6,11]. Their grief often manifests as physical symptoms (insomnia, loss of appetite), social, emotional, cognitive, or behavioral changes through which the patients try to adjust to their disease consequences. Depression also is common in severely ill patients, but it is neither a normal nor a secular phenomenon [4]. Depression is underdiagnosed in severely ill patients. Nevertheless, the prevalence is high.

It is crucial to differentiate between grief and depression in severely ill patients, because each has a different treatment plan. Normal grief is considered an adaptive process that often responds well to counseling and continuous support. However, depression is a pathological condition causing significant distress and needs to be treated with a combination of non-pharmacological and pharmacological strategies. If depression is diagnosed and treated properly, it can be managed effectively in those patients [12].

This study was conducted to differentiate between depression and grief in MS patients to avoid overmedication and to avoid missing cases of depression which affect the response to treatment and quality of life in these patients, and to compare this with distinct types of MS patients. The present study results showed that depression was present in 15% of RRMS patients and 21.6% of PMS but the difference was no statistically significant.

Depression was found to be the most common psychiatric disorder associated with MS, compared to other chronic diseases. In a study comparing the prevalence of depression in three neurological disorders, namely MS, epilepsy, and amyotrophic lateral sclerosis, patients with MS demonstrated a significantly higher rate of depressive affective disorder than patients with the other two diseases, and reported that 26% of the patients with MS experienced severe depression and 26% experienced moderate depression [13].

The present study detected a low percentage of depression in both types of MS; this is inconsistent with Cetin, *et al.*, who found a high percentage of depression [13]. Also, a study was done by Nada, *et al.*, using Hospital Anxiety and Depression Scale and found that 52.5% of MS patients had definite depressive symptoms

[14]. In spite, there was no significant difference between RR and PMS patients.

The low percentage of depression in the present study may be explained by the scale used; the present study used Palliative grief depression scale (PGDS) to differentiate between depression and grief. Not like other scales employed in the above studies which detect depression only and some cases of grief may be considered as depression due to overlap between the symptoms so give high positive results.

The present study did not find a significant difference between both groups of MS regarding depression. These results are consistent with the results of Hamel, *et al.* who applied their research on 60 RRMS and 41 PMS and did not find statistically significant differences between the two groups of patients using the "Echelled'Humeur Depressive" (EHD-PRO) [15].

Hopelessness was found to be the earliest symptom to appear and the last one to disappear in depression [16]. The thoughts of hopelessness may be the personal expressions of depression [17]. The results of this study showed a significant difference between the two groups in the Beck Hopelessness Scale with an elevated level of hopelessness in PMS than in RRMS. In the case of RRMS, most of the patients showed mild hopelessness (45%) while in PMS; the majority showed moderate hopelessness (62.2%). Although hopelessness, as a depression precursor, is frequently present in MS patients, their research on this subject is not sufficient. Only two studies were found in the literature studying hopelessness in MS. Patten, *et al.* found an elevated level of hopelessness in MS and emphasized its strong association with depression [18]. Also, Sinnakaruppan, *et al.* found an elevated level of hopelessness in MS patients; with 64.3% including one-quarter severely influenced [19]. This is in acceptance with the results of this study which detected a significant positive correlation between depression and hopelessness. Such results suggest that proper management of depression and hopelessness will help to improve the quality of life in MS patients.

On the other hand, Aşiret, *et al.* on his study on 62 MS patients, they applied Beck depression scale & Beck hopelessness scale and reported that depression was present in 43.1% and hopelessness was moderate. They failed to find any significant correlation between depression and hopelessness [20].

Table 4: Mean of depression and PGDS in both groups.

Variable	RRMS group (20)		PMS group (37)		P value
	Mean	SD	Mean	SD	
ROG	4.35	0.988	4.41	1.066	0.575
LOG	3.20	1.542	3.24	1.739	0.864
Total grief	7.55	1.820	7.65	1.767	0.865
Depression	4.15	3.083	4.76	3.050	0.359

RRMS (relapsing remitting multiple sclerosis), PMS (progressive multiple sclerosis), SD (standard deviation), ROG (restoration oriented grief), LOG (loss oriented grief).
* Statistically significant

Table 5: Correlative studies in both groups.

Variable	RRMS group (20)		PMS group (37)	
	Correlation coefficient	P value	Correlation coefficient	P value
Depression subscale and duration of illness	0.534	0.015*	-0.134	0.429
Total grief and duration of illness	0.160	0.500	-0.329	0.047*
Depression subscale and age of onset of illness	-0.052	0.828	-0.031	0.853
Depression subscale and hopelessness scale	0.543	0.013*	0.323	0.051*
Depression subscale and ROG subscale	-0.162	0.495	-0.057	0.739
Depression subscale and LOG subscale	0.801	0.000**	0.605	0.000**
Depression subscale and EDSS scale	0.146	0.539	-0.122	0.472

RRMS (relapsing remitting multiple sclerosis), PMS (progressive multiple sclerosis), SD (standard deviation), EDSS (expanded disability status scale), ROG (restoration oriented grief), LOG (loss oriented grief).
*Statistically significant

About the age of patients, there was a statistically significant difference between two types with older age in PMS. Characteristically, PMS manifests around ten years later than RRMS with a mean age of 39 years Interestingly, the median time of onset of SPMS and PPMS is almost identical, so the age of PMS is higher than RRMS [21]. Also, this agrees with the study of Nada, *et al.* who detected older age in PMS compared to RRMS [14].

Multiple Sclerosis (MS) is one of the most common neurological disorders frequently leading to permanent disability in young adults [22]. The clinical course is unpredictable and highly variable. In this study when we applied EDSS to MS patients, we found that there was a significant difference between the two groups as regards EDSS with more disability in PMS. This was supported by the literature which reported that patients with RRMS take 15 years from onset to reach an EDSS of 6 (using a cane to walk 100 meters), based on longitudinal studies in Ontario, Canada [23]. Those with primary progressive multiple sclerosis takes eight years, and early progression and multi-system symptoms hasten the rate of progression. Also

with the study reported that PMS were more disabled than RRMS subjects (mean EDSS 5.9 ± 1.2 versus 4.3 ± 0.8). The study was applied on 22 RRMS compared to 18 PMS [14].

The present study showed a significant positive correlation between depression and loss oriented grief (LOG) in both groups of MS patients. However, there is no significant correlation between depression and restoration oriented grief (ROG). The Grief domain of the PGDS presented as a dual-process model. Severely ill patients experience both loss and restoration oriented grief which waxes and wanes over time. The dual process model (DPM) postulates that the oscillation between Loss-Oriented-Grief and Restoration-Oriented-Grief is necessary for adaptive coping.

Loss orientation means to concentrate on the loss experience itself, and restoration orientation means to focus on secondary stressors that result from the loss. Accordingly, when the restoration domain of grief increases which helps in coping and adaptation with the consequences of the illness, the development of depression will decrease. Moreover, when loss domain of grief increases, the patients experience a broad range of emotions including numbness, separation anxiety, anger, sadness, shock, and despair as a direct response to the loss so depression can be easily developed in these patients [5].

However, the DSM-5 recognized that while grief and major depressive disorder are distinct, they can also coexist and, Moreover, grief can precipitate a major depressive episode [24].

So in the present study, we hope that clinicians can differentiate clinically between grief and depression and by using the appropriate instruments to adequately manage each condition without over diagnosing and treating depression or missing it and subsequently improving the quality of seriously ill patients and their families.

Study Limitations

Follow up the patient's grief as the disease progress is important as grief varies with time. So, the longitudinal study may detect more significant results.

A small number of patients and application of the test on only one type of patients with severe illness (MS patients).

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