A Hospital Based Assessment of the Challenges in Management of Major Depression in Patients with Co-Morbid Medical Conditions

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Abstract

Aim: The aim of the present study was to assess the challenges in management of Major Depression in patients with co-morbid medical conditions.

Methods: The present study was conducted in the Department of Psychiatry, Jawaharlal Nehru Medical College, Bhagalpur, Bihar, India for one year and 100 patients with depression were included in the study.

Results: The rates of fatigue, insomnia and nausea among patients with depression have been reported to be 86 %, 79 %, and 51 %, respectively. MDD is considered an important risk factor for physical diseases. Patients who were older, had lower incomes, were unemployed, were less educated and had had depression for a longer duration was at higher risk of developing various medical disease. Musculoskeletal diseases were found in 20% of patients with MDD.

Conclusion: Therefore, optimal treatment for MDD should include collaboration focussed on comorbid physical diseases, rehabilitation aimed at restoring social functioning, and pharmacotherapy designed to ensure complete remission including psychological and physical symptoms, as well as functional recovery.

Keywords: Depression, depressive disorder, co-morbidity.

Introduction

Depression is one of the top contributors of disability globally in terms of Disability Adjusted Life Years superseding physical illnesses like Diabetes Mellitus, Hypertension. [1] In a multination study conducted by World Health Organization (WHO), nearly 69% of patients suffering from depression presented with physical complaints in the primary care setting. [2] Healthcare costs incurred in patients with depression with physical illness were found to be significantly higher compared to those without depression. [3,4] Further, the co-morbidity of depression with medical ill-ness has been associated with significantly greater impairment in functioning, poor quality of life, poor adherence to treatment, worsening of physical illness as well as higher mortality. [5] Hence, depression and physical illness occurring together is not only a challenging clinical problem but also assumes a greater public health relevance.

Major depressive disorder (MDD) is so common a mental illness that almost all physicians, irrespective of specialty and location, will see patients with this condition. Indeed, unipolar major depression is currently the fourth leading contributor to the global disease burden. According to the Global Burden of Disease Study, unipolar major depression will be ranked as the second leading cause of disability adjusted life-years, after ischaemic heart disease, in 2020. In 2030, it is likely to be the leading cause of disability adjusted life-years. [6,7]

The prevalence of MDD in east Asian countries has long been underestimated. On the other hand, the suicide rate in east Asian countries, such as South Korea and Japan, has been higher than that in other countries. [8] These phenomena may be related to the cultural characteristics of this region. However, east Asian values have changed, and MDD must be treated appropriately to enable patients to live fulfilling lives. MDD treatment should not be limited to efforts to improve patients' symptoms but should also focus on patients' dignity and contribution to society. According to some research, 30–50 % of MDD patients have severe depression, and more than 60 % show severe role impairment. [9,10] In addition, sequenced treatment alternatives to relieve depression (STAR*D) trials demonstrated that approximately 30 % of patients with MDD do not achieve remission after four antidepressant treatments but continue to experience significant impairment. Therefore, approximately 30 % of MDD patients seem to have treatment-resistant depression. Risk factors for treatment-resistant depression include comorbid psychiatric and physical conditions, younger age at onset, severe depression at baseline, inadequate dose and duration of treatment, socioeconomic issues and suicidal ideation. [11]

The aim of the present study was to assess the challenges in management of Major Depression in patients with co-morbid medical conditions.

Materials and Methods

The present study was conducted in the Department of Psychiatry, Jawaharlal Nehru Medical College, Bhagalpur, Bihar, India for one year and 100 patients with depression were included in the study.

Subjects were eligible to participate if they had a diagnosis of MDD and were seeking treatment at the care sites. Subjects were excluded if they had a history of poor tolerance to the study medication, a substance use disorder requiring detoxification, or an eating disorder or obsessive compulsive disorder. We obtained a data use certificate from the NIMH to analyze the STAR*D Pub Ver3 dataset. Eligibility for data analyses required all subjects to have complete data values for every outcome measure used in analysis, both at entry and exit from the trial. Treatment was started with Citalopram for 12–14 weeks. Subjects were moved into the next level (switched to an antidepressant class or augmented with a different antidepressant), if they did not achieve remission at exit from their current level. Subjects who became symptom-free or achieved remission during the 12–14 weeks of Citalopram treatment moved to a 12-month follow-up period with continued Citalopram.

Statistical Methods

The variables were confirmed to have a normal distribution (Shapiro–Wilk test) and homogeneity of variance (Levene's test). Summary statistics are presented as means and standard deviations (SD) for continuous variables, and frequencies (%) for categorical variables.

Results

Table 1: Proportion of somatic symptoms in patients with depression

Symptoms	Depressed patients reporting symptom (%)
Fatigue	86
Insomnia	79
Nausea	51
Dyspnoea	38
Palpitations	38
Back pain	36
Diarrhoea	29
Headache	28
Chest pain	27
Sexual dysfunction	23
Pain in extremities	20
Dizziness	19
Abdominal pain	18
Tinnitus	18
Joint or limb pain	16

The rates of fatigue, insomnia and nausea among patients with depression have been reported to be 86 %, 79 %, and 51 %, respectively.

Table 2: Prevalence of comorbid physical diseases in patients with depression

Disease/system	Prevalence (%)
Eyes, ears, nose, throat and larynx	45 (36)
Musculoskeletal	20
Respiratory	32
Upper gastrointestinal	26
Genitourinary	25
Endocrine	24 (32)
Chronic skin diseases N=25 (15)	
Psoriasis	8 (5)
Urticaria	9 (7)
DLE	8 (3)

MDD is considered an important risk factor for physical diseases. Patients who were <u>older</u>, had lower incomes, were unemployed, were less educated and had had depression for a longer duration was at higher risk of developing various medical diseases. Musculoskeletal diseases were found in 20% of patients with MDD. There were patients with musculoskeletal diseases was osteoarthritis, rheumatoid arthritis, osteoporosis.

Discussion

Depression is often found as co-morbidity in physical illnesses afflicting various organ systems of the body. Among the physical illnesses, relatively higher rates of depression have been noted in patients with neurological illness. The prevalence of depression in Parkinson Disease (PD) and epilepsy was found to range from 2.7% - 90%, 20%-55% and 14%-19% respectively.5 Prevalence of depression in Diabetes mellitus (DM) was found to range from 3.8% - 49.5%. [12] Interestingly, the prevalence of depression in diabetes was found to be higher in the lower and middle income countries as compared to the high income countries. [13] Neoplasms and cardiovascular diseases have also shown a significant depressive burden. Co-morbid depression was found among 8% - 50% of sufferers with cancer [14] while nearly a third of

survivors with Myocardial Infarction (MI) had clinically significant depression. [15] The latter is particularly relevant as depression has been found to be associated with a robust three-fold increased risk of cardiac mortality among MI survivors. [16] The varying prevalence could be due to several factors such as missing the diagnosis of depression due to overlap of symptoms between physical illness and depression, differences in tools of assessment or diagnostic criteria used, poor mental health literacy among patients as well as the physicians, stigma etc.

Although MDD is classified as a mood disorder, physical symptoms are common in patients with the DSM-IV [17] diagnosis of MDD. DSM-IV specifies nine criteria, including five psychological and four physical symptoms, for MDD. Insomnia, appetite and weight change, psychomotor retardation/agitation and lethargy/fatigue constitute the physical symptoms, and these can be very important indicators of depression. Physical symptoms may be either the cause or the consequence of depression. According to Nakao et al [18] the majority of depressed patients complain about some kind of physical symptoms, such as fatigue, nausea, pain, and so on. The rates of fatigue, insomnia and nausea among patients with depression have been reported to be 86 %, 79 %, and 51 %, respectively. The importance of physical symptoms in MDD was also replicated in a recent study that was conducted China, in which physical symptoms were highly associated with MDD and anxiety, regardless of the presence of underlying medical diseases. [19] A meta-analysis of 42 studies showed that the risk of comorbid MDD in patients with diabetes was twice as high as that for people without diabetes. MDD that is comorbid with diabetes tends to be more severe, chronic and prone to recurrence. Moreover, those with diabetes and comorbid depression are less likely to

follow treatment recommendations (e.g. dietary restrictions, medication regimens, and blood glucose monitoring), which leads to poor outcomes. Depression is associated with a 60 % increased risk of type 2 diabetes. [20]

The spectrum of emotional reactions in medical illness, therefore, can range from distressed states characterized by demoralization and hopelessness, to maladaptive state of negative adjustment and finally, a pathological „true" depression. In order to differentiate depression from non-pathological mood states, a clinician must consider the nature, intensity, duration and bur-den of symptoms. In a state of demoralization, a sense of powerlessness and futility dominate the picture whereas anhedonia and lassitude characterize the experience of depression.23. The distinction between normal and pathological is, often, a matter of clinical judgment aided by key informant"s descriptions about the habitual reactions of patient to stress as well as the cultural contextualization of the behaviour.

Several medical disorders can themselves, induce depressive symptoms, either through common pathophysiological pathways such as neuroinflammation, as a consequence of bodily perturbations induced by the physical illness as well as psychological pathways. [21,22] Furthermore, many established pharmacological agents, approved for treating medical conditions, can induce depression. For instance, treatment with antihypertensives such as calcium channel blockers and interferon alpha has been shown to induce depression. [23] A careful review of records will suggest a temporal link between initiation of medications and onset of depressive symptoms. The timeline approach can also be used to distinguish primary depression, arising from biological diathesis or from psychosocial factors, from a secondary depression due to the physiological effects of a medical illness. In the former,

depression is already present and the medical condition is added on while in the latter, medical illness precedes depression. Depression may, often, be camouflaged by medical complaints and go unnoticed in the absence of a careful assessment. A case in point is the depressive pseu-dodementias. [24] Here, it is the cognitive complaints that are most prominent and only a thorough enquiry may unmask the underlying mood symptoms and fatiguability that points to an underlying depression. [25]

Conclusion

The treatment of physical symptoms increases the overall treatment response in MDD and the rate at which remission from this condition is achieved. Although MDD causes severe impairment in various domains of living, it is often difficult to identify these functional impairments in clinical settings. Each new episode of MDD tends to be more severe, longer, less responsive to treatment, and more likely to be followed by relapse as a result of a stressor. In addition, the interval between recurrences tends to become shorter. Therefore, the optimal treatment for MDD should include collaboration focussed on comorbid physical diseases, rehabilitation aimed at restoring social functioning, and pharmacotherapy designed to ensure complete remission including psychological and physical symptoms as well as functional recovery.

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