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Research Article

Association of Depression with Chronic Illnesses: A Cross-Sectional Survey in Tertiary Care Centre

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Abstract

Background and Objective: It is generally found that patients suffering from chronic illnesses develop a depressive behavior because of the constant state of ill health. Our objective is to describe the risk factors of depression in chronic ill patients.

Materials and Methods: Study design admitted for the particular study was quantitative cross sectional. The study was conducted in 6 months in TB and Chest Medicine Ward of Mayo hospital Lahore. The sample size in this study was 32 which included 16 males and 16 females. Data was collected on the basis of a questionnaire which was filled after being explained to the patients by researchers. The data was analyzed by SPSS (version 23)

Results: The results were drawn from data analysis which showed that 50% of chronic ill patients expressed considerable depressed behavior. Female patients were more prone to the development of depression in comparison to male patients. The chronic illness related insomnia, agitation, inability to work, episodes of anxiety, loss of appetite and general somatic symptoms were proved to be the risk factors for the development of depression in the majority of patients.

Conclusion: Our study implies that a major proportion of chronic ill patients have undiagnosed depression. This problem is usually neglected in health setups. Multiple factors including guilt, retardation of speech and activities, fidgetiness, loss of appetite and weight loss increase the risk of development of depression.

Keywords: *Chronic illness; Depression; Anxiety*

Introduction

Depression is one of the most common mental disorders of this era. WHO described depression as a mental disorder which manifests itself by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness and poor concentration [1]. As for a chronic illness, this is defined slightly differently by different sources. These are the diseases which are not passed from person to person, are of long duration and generally show slow progression. The four main types are cardiovascular diseases, cancers, chronic respiratory diseases and diabetes [2]. They usually persist for more than three months. There is a high incidence that these diseases can affect the mental health of the patients and can cause depression. Risk factors for this type of depression are important to be considered. The concept of any risk factor can be understood by considering that it is any attribute, characteristic or exposure of an

individual that increases the likelihood of developing a disease or injury [3].

Chronic medical illnesses have adverse effects on the mental health of patients. The distress, symptom burden and functional impairment associated with chronic medical disorders push the patients in a state of depression. Patients with chronic medical illnesses have been found to have two to three fold higher rates of major depression compared with age- and gender-matched primary care patients [4-6]. Rates of depression in primary care patients are between 5% and 10% [7], whereas prevalence rates of depression in patients with common medical illnesses like diabetes and coronary heart disease (CHD) have been found to be 12% to 18% 4 and 15% to 23% respectively [5,6].

In a Canadian community-based study, Patten and colleagues found that there was an increased risk of development of depression in patients with chronic medical illnesses as compared to those without such illnesses [8]. Another study carried out by Wells and colleagues in the Epidemiologic Catchment Area found that patients suffering from one or more of eight chronic medical conditions had a 41% increase in the risk of having any recent psychiatric disorder (depression, anxiety or substance abuse) [9]. A study conducted in primary care facilities in Ethiopia concluded the relationship between depression and TB among people [10]. It endorsed that there is a significant impact of depression in determining the course and outcome of TB.

Another study described that emotional dimensions of a chronic illness are often overlooked when medical care is considered. It pointed out to the fact that usually doctors are well equipped for the biomedical aspects of treatment but not for the challenges of psychological, social, and cultural dimensions of illness and health [11]. Another article reviewed the bidirectional relationship between depression and chronic medical illness. It discussed the association of depression with problems in the physician patient relationship, medical symptom burden, functional impairment, medical complications, and mortality [12].

Our study will contribute in highlighting various risk factors of depression in patients with chronic diseases. With improved knowledge of risk factors regarding depression, it would be easier to prevent and manage depression associated with chronic diseases that otherwise may hamper the course of treatment of disease.

Materials and Methods

The study involved cross sectional methodology to determine the risk factors of depression in chronic ill patients. The sample size consisted of 32 patients including 16 females and 16 males. The sample size of 32 patients was estimated by using 95% confidence level, 10% absolute precision with expected percentage of depression in patients with one or more long term medical conditions as 9.2% [14].

Sample Selection was based on inclusion criteria of chronic ill patients of tuberculosis who had a disease history of more than three months and was present in TB and Chest Medicine Ward of Mayo Hospital. Both male and female patients were included. The patients suffering from any psychological trauma, the patients taking anti-depressants or anxiolytic drugs and the patients who had any physical or psychological trauma were excluded. The place for study was TB and Chest Medicine Ward of Mayo hospital Lahore. The duration of study was 7 months from February 2018 to August 2018.

Sampling technique used was non-probability convenient sampling. The patients who met the inclusion criteria were included in the study. Hamilton Depression Rating Scale (HDRS) was used as the data collection tool for measuring depression. 13 All team members collected data after taking an informed consent. The questionnaire based on Hamilton Depression Rating Scale 17 (HDRS 17) was divided among the students of the batch. The students explained the questions to the patients and filled the forms according to the answers of the patients in TB and Chest Medicine Ward of Mayo hospital. Information was gathered by this procedure to make results wider and applicable.

For the HDRS 17, a score of 0-7 is generally accepted to be within the normal range (or in clinical remission), while a score of 20 or higher (indicating at least moderate severity) is usually required for entry into a clinical trial [13]. The data was analyzed by using SPSS (statistical package for social sciences) version 23. Qualitative variables are presented as percentages and frequencies.

The result of this study will help patients and their doctors to find relief from the depression related to chronic illnesses. Both psychotherapies and antidepressant medication can be employed as efficacious treatments for depression. This study will endorse the concept of collaborative depression care to be an effective way to deliver these treatments to large primary care populations with depression and chronic medical illness.

Results

The study was carried out among 32 patients in TB and Chest Medicine Ward of Mayo hospital Lahore and following data was obtained. The questionnaire implemented in this research was used to measure the risk factors of depression in chronic ill patients.

Gender participation: The questionnaire was distributed among the patients of TB and Chest Medicine Ward of Mayo hospital. Sample size of total 32 patients which included 50% (n = 16) male patients and 50% (n = 16) female patients.

Depression: When the patients were asked about depressed mood, 34.4% of the patients reported no depression. 28.1% of the patients spontaneously reported these feelings verbally while 21.9% communicated non-verbally, i.e. through facial expression, posture, voice and tendency to weep. Only 15.6% patients indicated their feelings only on questioning and none of them reported virtually these feeling states in his/her spontaneous verbal and non-verbal communication. 53.1% of the patients denied having any feeling of guilt. 31.3% of them felt that they had let people down and 12.5% considered present illness as a punishment. Only 3.1% ruminated over past errors or sinful deeds. None of them experienced any kind of auditory and visual hallucinations.

Percentage of presence of symptoms of depression in chronically ill patients and their severity

Symptoms of depression in chronically ill patients	No Symptoms	Mild	Severe
Sleep disturbance	31.4%	31.4%	34.6%
Agitation	21.9%	25%	43.8%
Sucidality	90.6%	6.3%	3.1%
Difficulty in speech	59.4%	21.9%	15.6%
Retardation	34.4%	40.6%	15.6%
Somatic symptoms	12.5%	81.3%	6.3%
Loss of appetite	15.6%	34.4%	50%
Weight loss	9.4%	31.4%	93.8%

Table

Almost 90.6% of the patients never had any inclination towards suicide. 6.3% expressed that they did not feel that life was worth living. Only 3.1% of them wished he/she were dead. None of them had any idea, gesture or attempt of suicide. Total 34.4% of the patients reported no difficulty in falling asleep early in the night. 34.4% of them complained of occasional difficulty in falling asleep and only 31.3% complained of nightly difficulty in falling asleep. Total 46.9% 9 of the patients complained of being restless and disturbed during middle of the night while 40.6% of them had no difficulty and 12.5% had complains of waking up during night (except for the purposes of voiding).

About 40.6% of the patients had no difficulty in sleeping in early hours of the morning. 31.3% reported waking in early hours of the morning but went back to sleep and 28.1% were unable to fall asleep again. Almost 37.5% of the patients stopped working because of present illness while 34.4% had thoughts and feelings of incapacity, fatigue or weakness related to activities, work or hobbies and 12.5% reported loss of interest in activity, hobbies or work. About 9.4% had decrease in actual time spent in activities or decrease in productivity while 6.3% patients had no difficulty in their work and activities.

About 59.4% had normal speech and thought while 21.9% had slight retardation during interview.15.6% had obvious retardation during interview. 3.1% had a difficulty in interview. None of them had complete stupor. However, 40.6% patients had fidgetiness, 34.4% had no complain of agitation while 15.6% couldn't sit still. 6.3% were playing with hands and hair and only 3.1% had complains of hand wringing, nail biting, hair-pulling, and biting of lips.

Total 43.8% patients had subjective tension and irritability while 25% patients reported worrying about minor matters. About 21.9% had no anxiety while 6.3% had apprehensive attitude. Only 3.1% expressed fears without questioning. However, 46.9% had mild complains of physiological concomitants of anxiety such as: dry mouth, indigestion, diarrhea, cramps, belching, palpitations and headaches. However, 31.3% had moderate complains and 15.6% reported severity of the mentioned symptoms. Only 6.3% didn't complain of anything. None of them reported incapacitation.

Total 50% of the patients had loss of appetite but were eating without staff encouragement while 34.4% had difficulty eating without staff urging. However, 15.6% had no gastrointestinal complains. Almost 81.3% of the patients had complains of heaviness in limbs, back or head and loss of energy and fatigability while 12.5% reported none of them. Only 6.3% had clear -cut symptoms. Around 65.6% patients had no genital complains such as loss of libido and menstrual disturbances while 34.4% patients had mild symptoms. None of them reported severity of these symptoms.

Hypochondriasis was not present in 65.6% of patients while 15.6% were self-absorptive. About 9.4% of them were pre-occupation with their health and 6.3% were frequently complaining and requesting for health. Only 3.1% had hypochondriacal delusions. Total 93.8% of the patients reported definite weight loss while 31.3% had probable weightloss.9.4% had no weight loss while 6.3% patients did not assess their weight.

Loss of weight a) According to patient: measurements

Total 34.4% patients had weight loss of less than 1lb in a week while 31.3% had weight loss of greater than 2 lb per week. However, 18.8% had a weight loss of greater than 1 lb per week. 15.6% of patient did not assess their weight loss.

Loss of weight b) According to weekly

Total 71.9% of the patients admitted being depressed and ill while 21.9% of the patients attributed their illness towards bad food and climate. Only 6.3% of patients denied being ill at all.

As the total score of Hamilton Depression Rating Scale should be equal to or more than 20 to declare that the patient needs a clinical trial for depression 13. 50% of the patients were depressed enough to be categorized under the group who needed a clinical trial while the other 50% did not cross this threshold.

By analyzing data according to gender distribution, 56.3% of the female patients needed a clinical trial for depression unlike male patients who had a percentage of 43.8. Around 43.8% female patients did not need a trial unlike 56.3% male patients.

Discussion

Pakistan is among the developing countries where the mass knowledge about mental health is not broad. The people are usually ignorant about their mental health issues. In this scenario, the people suffering from chronic illnesses are especially prone to ignore their symptoms of depression. There is an evident association between the development of depression and chronic illness as proved by the collected data. The feelings of guilt associated with the illness act as a risk factor in the development of depression. The patients feel that they have let people down. Similarly, these chronic disorders affect the normal sleep cycles of the patient. The disturbance of these cycles lead to the irritability in the patient's behavior, thus serving as another factor leading to depressed behavior. These patients also feel crippled because of their inability to continue their normal chores. The loss of interests in their normal hobbies and the feeling of dependence upon others too have a significant role in disturbing their normal mental health. The diseases sometimes retard the patients' abilities of walking and proper speech pushing them in the black pit of loneliness.

The continuous agitated state of the patients and their ill behavior with their family members makes life suffocating for both the patients and their family. The long growing feelings of anxiety also lead the patients to the development of somatic symptoms such as indigestion, dry mouth, headaches, palpitations and frequent urination adding to misery of the patient's general health. The loss of appetite related to the diseases drain patients of their energy. A marked gender difference can also be seen in the presentation of depression. Females are more likely to develop these symptoms than their male counterparts.

It is usually difficult to diagnose depression in the chronically ill patients. Physical symptoms such as abnormal sleep, loss of appetite, and lack of energy may already exist as a result of the illness. Sometimes treatment for a medical condition can affect the patient's mood. The functional limitations imposed by the disease on the patients are considered "understandable" distress by the surrounding persons, and even some clinicians find it difficult to conceptualize such distress as a depressive disorder [15]. Indeed, the distinction between an adjustment reaction and a depressive illness is often not clear.

Other risk factors include adverse social circumstances, such as financial burden and a lack of people who provide emotional support [16]. Elderly people, in particular, are more prone to disability, and depression [17].

Despite these hurdles, it is necessary to diagnose and treat depression in patients with chronic diseases. Even mild depression can affect a patient's motivation to gain access to medical care. Although the patient with an incurable medical illness who commits suicide may seem to some people to have acted rationally, most of the patients who commit suicide are also suffering from a depressive illness [18].

Some diseases also affect the sexual abilities of the patients, creating problems in their life. The drastic weight loss accompanying these conditions becomes a point of concern to the patients. This problem is also recognized internationally. A research carried out by Patten and his team proved that associations between medical disorders and depression were not limited to those conditions known to be associated to depression through physiological mechanisms. They also presented young age as risk factor for the development of depression. 8 Another study carried out in Netherlands highlighted that depression can be caused or aggravated by drugs prescribed for other diseases. Extensive research is required regarding this topic [19].

Keeping in mind the above discussion, it becomes evident that any symptoms of changed or depressed behavior in chronic ill patients should raise the concern of development of depression. Even if the patients don't notice these symptoms, the close relatives and the concerned doctors should be able to identify them in the earliest stages. This timely identification is very important as it can affect the patients' attitude towards the treatment which can have adverse effects on the prognosis of that chronic illness. The family members and the close relatives should be necessarily advised not to reject or mock the behavior of these patients.

A few limiting factors are present regarding this research; the small sample size being one of them. Another limiting factor is the absence of long term monitoring of development of depression in association with the presenting chronic illness. The study is unable to grasp all the previously underlying etiological factors for the development of depression other than the mentioned chronic illness. A limitation of the HDRS is that atypical symptoms of depression (e.g. hypersomnia, hyperphagia) are not assessed.

Our research will contribute in recognizing this problem in developing countries like Pakistan which is usually a point of negligence in these states. This research aims at providing knowledge to the local masses about the basic symptoms of depressed behavior. Moreover, this will also help the doctors to keep this problem in their mind while treating the patients of chronic diseases. All of these initiatives will eventually be helpful in the early recovery of the patients.

Conclusion

It is concluded from the above detailed discussion that the development of depression in the chronic ill patients is a prevalent problem in Pakistan. The negligence and ignorance of both the patients and the doctors is only aggravating the situation. The disease related insomnia, inability to perform work and feelings of guilt towards the people act as significant risk factors for depression. Physiological concomitants of anxiety, genital disturbances and continuous fidgetiness are the other contributors to abnormality of the behavior. Even the miniscule factors like weight loss can take a heavy toll on patients' mental health. The insight of the patients regarding their own mental health is also important. It is very essential for the patient to have a clear idea about his changed mood and feelings. Denial of the situation only damages the patient himself.

It is the need of the hour that radical steps must be taken to minimize the incidence of this problem. Attempts should be made to make the environment of the hospitals convenient for the patients' mental stability. All such endeavors, which can prove to be a blessing for the patients by an increase in the number of preventive measures and the availability of proper counseling, should be made as soon as possible. The lesser the hopelessness in the patients, the better will be the progress of health which in turn will lead to a better, prosperous and a healthy community.

Recommendations

Following important steps should be taken by the doctors and public health institutes to remove the problems faced by chronic disease patients admitted in the hospitals or even living in their houses so that there is a better chance for improving mental health facilities for this population. Following recommendations are presented in this regard:

- Medical institutions should arrange special seminars and workshops for the students regarding the importance of mental health care.
- Government should announce special packages and allowances for the doctors who are willing to study the psychological aspects of diseased patients.
- Hospital administration should take radical steps to improve the conditions of living in the hospitals so that patients find a better living environment and can have a comfort zone.
- The regional health officials must provide young doctors with the information about advancements in psychological sciences.
- Circulars must be distributed among the people for awareness about mental health and importance of encouraging behavior and due respect towards the patients.

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