



Physical illnesses among psychiatric inpatients in a tertiary care setup

Abstract

Background: Rates of undiagnosed and untreated medical illnesses are higher in individuals with severe mental illness, compared to the general population. These comorbid medical illnesses result in poorer outcomes, greater severity of symptoms, increased incidence of non-compliance, increased length of stay, increased mortality and healthcare costs. There is a paucity of literature concerning the prevalence of physical illnesses in psychiatric patients from India. **Objective:** To study the nature and prevalence of physical illnesses in psychiatry inpatients in a tertiary care psychiatry setup. **Materials and methods:** Consecutively admitted inpatients from the psychiatry ward of a tertiary care centre were recruited for study for six months duration. Detailed general physical examination, systemic examination, and various laboratory investigations were done. Referrals were sought from the respective medical or surgical departments for evaluation. Diagnosis of physical illnesses was validated by the consultant physician. The data were compiled on semi-structured proforma and analysed by using descriptive statistical methods. **Results:** Seventy per cent patients were found to have associated physical illnesses. Metabolic disorders were present among 28.9% patients followed by endocrinal (25.6%), haematological (18.3%), gastrointestinal (15%), cardiovascular (12.2%), neurological (9.4%), and stomatognathic disorders (8.3%). **Conclusion:** Index study reports a high prevalence of medical comorbidity in the psychiatric inpatients. There is an urgent need for further research and sensitisation of mental health professionals about recognising the medical comorbidities and their prompt treatment via liaison with physicians and other medical staff.

Keywords: Psychiatry. Comorbidity. Physicians.

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Received: 8 April 2018

Revised: 23 June 2018

Accepted: 24 June 2019

Epub: 9 July 2019

INTRODUCTION

Persons with the severe mental illnesses have an added risk of having comorbid medical illnesses that can further impair their already turbulent life.[1] About 60% of individuals with mental illness develop serious medical comorbidities that result in a lost lifespan of 15-20 years compared to general population, particularly due to coronary heart disease, stroke, and cancer.[2,3]

About half of psychiatric patients have physical diseases requiring medical treatment or medical surveillance and often these diseases cause or exacerbate a mental disorder.[4-6] These physical problems may be due to the mental illness itself as well as the adverse effects of the medications used in the treatments.[3]

Instances of physical, medical problems have been associated with an increased burden on psychiatric patients, resulting in poorer outcomes of their psychiatric conditions, greater severity of psychiatric symptoms, increased incidence of non-compliance with treatment as well as increased length of stay for psychiatric inpatients either directly by increasing psychiatric symptoms or indirectly by demanding the focus

of medical attention during hospitalisation.[7] Rates of undiagnosed and untreated medical illnesses are higher in individuals with severe mental illness, compared to the general population.[5]

There is a paucity of literature concerning the prevalence of physical illnesses in psychiatric patients from India. This study, thus, was undertaken with the aim to study the nature and prevalence of physical illnesses in psychiatry inpatients in a tertiary care psychiatry setup.

MATERIALS AND METHODS

This descriptive study was conducted in the Department of Psychiatry, Maulana Azad Medical College and associated G.B. Pant Hospital, New Delhi, India for six months duration from October 2013 to March 2014. The study sample consisted of consecutively admitted inpatients from the psychiatry ward during the study period. Ethical clearance was obtained from the institutional ethics committee of the hospital.

After obtaining informed consent from patients and/or relatives, cases were taken up for the study and were evaluated in terms of detailed psychiatric history and mental status

examination. A thorough medical history, detailed general physical examination and systemic examination were done for physical illnesses, if any present among the cases.

Routine investigations were done as per the unit's protocol, which included complete blood counts, serum lipid, kidney function test, liver function test, blood sugar (fasting and postprandial), serum electrolytes, cardiac profile, thyroid function test, serum vitamin B12 level, HBsAg, anti-HCV, ECG, and chest X-ray.

Referrals were then sought from the respective departments in order to further evaluate the physical illnesses of the patients, if any were present. Further investigations were done according to the patient's clinical condition and results of routine investigations and/or input from the consulted physicians were noted. Review referrals were sought after the specified investigations were done. Diagnosis of psychiatric illnesses in the cases were made as per ICD-10 diagnostic criteria and the diagnosis was validated by the treating consultant psychiatrist.[8] Diagnosis of physical illnesses, if any, was validated by the consultant physician. The data were compiled on semi-structured proforma and analysed by using descriptive statistical methods.

RESULTS

A total of 180 subjects were recruited in the study during the study period. Out of 180 individuals, 92 (51.1%) were male and 88 (48.9%) were female. Mean age of the patients was 32.2 years (SD 12.64), with a range of 14-65 years. Rest of the demographic variables are tabulated in Table 1.

Psychiatric diagnosis

One hundred and forty seven subjects (81.7%) had one psychiatric illness and 33 (18.3%) had more than one psychiatric illness. Table 2 shows distribution of various psychiatric diagnoses in the sample. As there were multiple diagnoses in the sample, the data is represented in terms of broad ICD-10 categories. Most common diagnostic category was F20-29 (schizophrenia, schizotypal and delusional disorders) diagnosed in 81 subjects (45%) out of which 18.9% had schizophrenia, 18.3% had unspecified nonorganic psychosis, and five per cent had acute and transient psychotic disorders followed by mood [affective] disorders in 60 (33.3%) subjects, F10-19 (disorders due to psychoactive substance use) in 35 subjects (19.4%), and 29 subjects (16.1%) had F40-48 (neurotic, stress-related and somatoform disorders).

Psychopharmacological medications

Table 3 shows distribution of types of psychopharmacological medications in study population. As more than one group of medications was prescribed to individuals in study group, total exceeded 180. Antipsychotics were prescribed to 107 (59.4%) individuals, mood stabilizers were prescribed to 32 (17.8%) individuals, antidepressants were prescribed to 56 (31.1%) individuals, and others which include benzodiazepines, anticholinergics, and other psychopharmacological agents were prescribed to 150 (83.3%) individuals. Only one group of medication was prescribed in 41 (22.8%) of individuals and more than

Table 1: Demographic variables of the sample

Variable	Frequency (n)	Percent
Gender		
Males	92	51.1
Females	88	48.9
Education		
Not formally educated	33	18.3
Formally educated	147	81.7
Marital status		
Unmarried	71	39.4
Married	106	58.9
Divorced	2	1.1
Other	1	0.6
Family type		
Nuclear	144	80
Joint	36	20
Background		
Urban	152	84.4
Rural	28	15.6

one group of medication was prescribed in 139 (77.2%) of individuals.

Clinical characteristics

Table 4 describes some clinical characteristics of the sample. The mean age of onset of psychiatric illness was 25.87±9.87 years. The mean duration of psychiatric illness was 7.37±7.88 years. The mean length of stay during admission in psychiatry ward was 21.42±14.94 days.

Physical Illnesses

Overall 126 (70.0%) individuals had some physical illness. Fifty seven (31.7%) individuals had one physical illness and 69 (38.3%) individuals had more than one physical illness. Table 5 shows distribution of physical illnesses in study population. Most common was metabolic disorder (28.9%), endocrinological disorders (25.6%), anaemia (18.3%), gastrointestinal disorders (15%), cardiovascular disorders (12.2%), neurological disorders (9.4%), and stomatognathic (8.3%).

DISCUSSION

The study aimed to assess the prevalence and nature of physical illnesses among psychiatry inpatients. The sociodemographic variables of the sample were found to be similar to previous studies.[2,3,9]

In the current study, the major psychiatric diagnostic group was schizophrenia, schizotypal and delusional disorders (F20-29) (45%), followed by mood disorders (F30-39) (33.3%), substance use disorders (F10-19) (19.4%), and neurotic, stress-related and somatoform disorders (F40-48) (16.1%). 18.3% subjects were diagnosed with more than one psychiatric illness. Singh *et al.*[2] in their study, reported that

Table 2: Psychiatric diagnosis of subjects

Psychiatric diagnosis (ICD-10 category)	Frequency (n)	Percent
Organic mental disorders	4	2.2
Disorders due to psychoactive substance use	35	19.4
Schizophrenia, schizotypal and delusional disorders	81	45
Mood [affective] disorders	60	33.3
Neurotic, stress-related and somatoform disorders	29	16.1
Personality disorders	4	2.2
Mental retardation	3	1.7

Table 3: Distribution of types of psychopharmacological medications in sample

Psychopharmacological medications	Frequency (n)	Percent
Antipsychotics	107	59.4
Mood stabilizers	32	17.8
Antidepressants	56	31.1
Others	150	83.3

Table 4: Mean Length of stay, Age of onset and Duration of psychiatric illness of the sample

Variable	Minimum	Maximum	Mean	Std. Error	Std. deviation
Length of stay (days)	1.00	115.00	21.422	1.113	14.93560
Age of onset of psychiatric illness (years)	4.00	65.00	25.866	0.735	9.87189
Duration of psychiatric illness (years)	0.02	35.00	7.367	0.587	7.87876

Table 5: Distribution of physical illnesses in the sample

Physical illness	Frequency (n)	Percent	
Haematological disorder	Anaemia	33	18.3
Cardiovascular diseases	Hypertension and others	22	12.2
Respiratory diseases	TB/COPD/others	2	1.1
Gastrointestinal diseases	Liver disease/others	27	15
Neurological disorders	Seizure disorder/others	17	9.4
Endocrine disorders	Hypothyroidism	28	15.6
	Diabetes mellitus	18	10
Stomatognathic	Oral and dental disorders	15	8.3
Metabolic disorders	Dyslipidaemia	24	13.3
	Vitamin B12 and folic acid deficiency	14	7.8
	Obesity	12	6.7
	Others	2	1.1
Others	Female genital tract diseases	9	5.0
	Male genital tract diseases	5	2.8
	Ophthalmological	5	2.8
	Urological	3	1.7
	Dermatological	3	1.7
	Musculoskeletal	3	1.7
	ENT	1	0.6
	Neoplasm	1	0.6

the major diagnostic group was mood disorders (44.4%) and neurotic, stress-related and somatoform disorders (21.2%).

The high rates of psychosis group in the current study could be explained by the reason that the current study was performed

on psychiatric inpatients whereas the study by Singh *et al.* was performed on psychiatric outpatients in a tertiary care health institution. However, Meloni *et al.*[10] found most of their patients had schizophrenia disorder, which accounted for 41% of the total study group.

In the current study, 70% of the patients were found to have one or more associated physical illnesses. Out of which, 38.3% had more than one comorbid physical illness. This is similar to the findings of Berren *et al.*[11] who in their study concluded that 60% of individuals with mental illness develop serious medical comorbidities. Similarly, Mohamad Isa *et al.*[3] also found 63.4% of subjects in their study had comorbid physical illnesses.

However, compared to Singh *et al.*[2] who found 48% of psychiatric patients had physical illnesses, the rates are higher. This could be due to the reason that the current study was performed on inpatients and most of the inpatients were having a severe mental illness which is known to be associated with more comorbid physical illnesses.[12]

In the current study, major physical illnesses that were present among the psychiatric patients were metabolic (28.9%), endocrine (25.6%), haematological (18.3%), gastrointestinal (15%), cardiovascular (12.2%), neurological (9.4%), and stomatognathic (8.3%) disorders. Other disorders which included ophthalmological, male and female genital tract disorders, and others accounted for about 16.9%. Among metabolic disorders, dyslipidaemia, vitamin B12 deficiency, and obesity were more common; among endocrine disorders, hypothyroidism and diabetes mellitus were more prevalent. Anaemia accounted for the major cause of haematological disorders; in cardiovascular disorders, hypertension and coronary artery disease were the major diagnoses. Liver diseases like the alcoholic liver disease, hepatitis accounted for major diagnoses among gastrointestinal disorders whereas among the stomatognathic group, dental staining and carries were the commonest.

However, Singh *et al.*[2] in their study found hypertension (29.1%) as the major physical illness followed by respiratory diseases (15%), anaemia (12.5%), diabetes mellitus (ten per cent), liver diseases (5.8%), eye diseases (five per cent), and skin diseases (five per cent). Mohamad Isa *et al.*[3] also reported that hyperlipidaemia (24.6%), hypertension (16.4%), and diabetes (12.7%) were more common among the study population. Direct comparison of our data could not be done with Singh *et al.*[2] and Mohamad Isa *et al.*[3] as in their studies only major physical illnesses were included like hypertension, diabetes, anaemia, hyperlipidaemia, etc., whereas in the current study, all the major group of physical illnesses were tried to be included.

The higher rates of metabolic disorders in the current study could be due to following reason. The majority of psychiatric diagnosis was of schizophrenia group and mood disorders group. Moreover, most of these patients were prescribed more than one group of psychopharmacological medications, most commonly combinations of atypical antipsychotics, antidepressants, and mood stabilizers. And it is found in various studies that psychotropic agents including antipsychotics, antidepressants, and mood stabilizers are

known to induce weight gain and elevated levels of total cholesterol, low-density lipoproteins, and triglycerides.[1] Another possible reason could be the lifestyle factors and illness-related factors associated with psychiatric patients. Lack of exercise, decreased activity level, negative, disorganised, and depressive symptoms could also contribute to higher rates of metabolic disorders.[13]

Among endocrine disorders, the rates of diabetes mellitus in the current study (ten per cent) were found to be similar to those of Singh *et al.*[2] (ten per cent) and Mohamad Isa *et al.*[3] (12.7%). In the current study, rates of hypothyroidism were 15.6%. This could be due to the reason that the current study had about 48.9% female patients and it was found that hypothyroidism is ten times more common in women as compared to men.[14] Also, the number of patients with mood disorders, especially depressive disorders were more in the current study. Hence, this is consistent with several previous clinical studies providing evidence for an association between mood disorders and hypothyroidism.[15]

Anaemia was present in 18.3% of patients in the current study which is consistent with findings of Singh *et al.*[2] who reported 12.5% study population had anaemia. In case of gastrointestinal disorders, liver diseases were more common in current study accounting for 15%. The probable reason for more number of liver diseases could be due to associated alcohol use disorders among the study population as well as higher prescription of antidepressants, mood stabilizing agents, and neuroleptic drugs, as these drugs have been implicated in biological or/and clinical hepatotoxicity.[16] Stomatognathic diseases accounted for about 8.3% in the current study which could be explained due to associated tobacco use disorders among the study population.

However, our study had limitation that only patients with need of inpatient management were taken in the study. So, the findings of this study cannot be generalised to entire population as a significant number of patients were excluded from the study and thus, further community-based studies are needed to confirm the findings.

Conclusion

Despite the importance of discovering the existence of medical problems in psychiatric patients, a thorough evaluation of each patient is not always standard in either psychiatric or medical settings. Persons with mental illness suffer from various medical comorbidities, which may go undiagnosed. They often find it difficult to communicate their physical needs and problems and seek help at a relatively late stage. Index study also reported a high prevalence of a variety of medical comorbidity in the psychiatric inpatients. Thus, there is an urgent need of sensitising mental health professionals about recognising the medical comorbidities and their prompt treatment via liaison with physicians and other medical staff. Also, more structured research needs to be done in this field which would aid to have better screening and evaluation of physical illnesses in psychiatric patients and would provide a better understanding of the association of mental illness and medical disorders.

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Uday B, Niranjana V. Physical illnesses among psychiatric inpatients in a tertiary care setup. *Open J Psychiatry Allied Sci*. 2019 Jul 9. [Epub ahead of print]

Source of support: Nil. **Declaration of interest:** None.