Consultation-liaison Approach for the Management of Psychiatric Manifestations in Parkinson’s Disease and Related Disorders: A Report from Neuropsychiatric Hospital, India

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ABSTRACT

Background: Non-motor psychiatric manifestations of Parkinson’s disease have been increasingly noted to contribute to morbidity and mortality. Materials and Methods: We studied the psychiatric manifestations among inpatients with Parkinson’s disease and other movement disorders by examining the referrals (N = 127) to consultation-liaison psychiatry services from neurology/neurosurgery between July 2009 and April 2010 using structured clinical proforma. Results: Parkinson’s disease and other movement disorders was the most common neurological diagnosis (19%). The most common reason for referral was depression (38%) followed by behavioral problems (33%). Post-assessment, depression rates were higher (54%) and behavioral manifestations were diagnosed as sleep problems (13%), organic psychiatric syndrome (13%), psychosis (8%), anxiety and obsessive compulsive disorder (8%), nil psychiatry (4%). Conclusion: Psychiatric comorbidity is high among in-patients with movement disorders and affective changes are common. Timely assessment using structured clinical proforma would help in enhanced detection of depression in patients with movement disorders.

Key words: Depression, liaison psychiatry, Parkinson’s disease

INTRODUCTION

Non-motor manifestations in movement disorders are now being increasingly recognized as important causes of morbidity and mortality. The presence of non-motor symptoms affects the quality-of-life of patients in a significant way.¹ The symptoms such as depression, anxiety, cognitive deterioration, neuropsychiatric disturbances are common in Parkinson’s disease and other movement disorders. Delusions, hallucinations, anxiety, depression and other mental manifestations have been reported to be present in 10-40% of patients.² Moreover, the presence of mental symptoms in Parkinson’s disease contributes to the distress of caregivers.³ Early detection and treatment of mental symptoms in Parkinson’s disease and other movement disorders is of paramount importance. To achieve this objective, it is necessary that the treating Neurologist recognizes the psychiatric symptoms at an early stage and makes a referral to the psychiatry services. It would be ideal to have a consultation-liaison team, which looks specifically into the psychiatry needs of patients with neurological conditions. In this report, we have examined the psychiatric manifestations in patients...
with Parkinson’s disease and other movement disorders in an inpatient setting.

MATERIALS AND METHODS

The National Institute of Mental Health and Neuroscience (NIMHANS), Bangalore, India, is a multidisciplinary institute for patient care and academic pursuit in mental health and neurosciences. NIMHANS has 700 inpatient beds with daily outpatient turnover of more than 800 patients. A dedicated consultation-liaison psychiatry (CLP) services for admitted patients of neurology and neurosurgery was a felt need of both clinicians and patients. The authors started the consultation-liaison services at the above hospital in the year 2009 to raise the level of comprehensive clinical care. The team composed of psychiatry consultants, senior residents and junior residents (by rotation). One junior resident was posted on consultation-liaison duty each day. All referrals were informed to the duty junior resident through mobile phone. Each patient referred to CLP service was evaluated in detail by the duty junior resident using the CLP work-up proforma and was assisted by a senior resident of the CLP team. All patients were seen within 24 h of receiving the call for a consultation. The residents are routinely trained to evaluate referred patients by senior consultants of the CLP service. The CLP work-up proforma includes sociodemographic data, neurological diagnosis, neurological treatment given, reasons for psychiatry referral, brief history of presenting illness, past history of psychiatric illness, family history of medical/psychiatric illness, personal history, pre-morbid personality, mental status examination, cognitive function tests (including mini mental status examination), investigations (blood and urine investigations, radiology, electroencephalogram, electrocardiogram, cerebrospinal fluid examination), provisional psychiatric diagnosis and management plan (pharmacological and psychosocial). The diagnosis of psychiatric condition was made according to the International Classification of Diseases, version-10 criteria. Sub-syndromal symptoms were also recorded. Diagnosis and associated features were confirmed by two clinicians, one of them a consultant psychiatrist experienced in evaluating CLP patients by reviewing all the available information. All consecutive inpatients who were referred to the specialty CLP services during the period from July 2009 to April 2010 at the NIMHANS, Bangalore, India formed the sample of this study. The referral case records of all patients with a diagnosis of Parkinson’s disease and other movement disorders were scrutinized in detail to extract the demographic and clinical details. For the purpose of the present report, we included Wilson’s disease, Huntington’s chorea, dystonias and dyskinesias, along with Parkinson’s disease under the broad heading of movement disorders. as disorders related to Parkinson’s disease. Statistical analyses were performed using the SPSS version 11 (SPSS, Chicago, IL, USA). Frequency statistics and measures of central tendency were used to describe the basic socio-demographic, clinical and treatment characteristics of the sample. The entire process was a part of routine clinical assessment and hence no separate consent was obtained. The data was accessed from the case records of patients and study does not reveal patient identity in any manner.

RESULTS

During the above period, a total of 127 patients out of total 2619 admissions from neurology wards were referred for psychiatric consultation as the primary treating team suspected of a psychiatric comorbidity giving a rate of referral as 4.85% [Table 1].

The 2619 admissions included 102 patients with Parkinson’s disease and other movement disorders (as defined earlier). Out of the 127 patients who were referred, 24 (18.9%) had the diagnosis of Parkinson’s disease and other movement disorders and constituted the largest majority. The rest of patients had diverse neurological diagnosis [Table 2].

Psychiatric manifestations were prevalent in 24 patients (23.52%) out of 102 patients with Parkinson’s disease and other movement disorders. Among the movement disorder group who were referred for psychiatry consultation, the mean age was 45.1 ± 19.3 years.
18 (75%) were men, 6 (25%) were women. The most common reason for referral was for assessment of depression \( (n = 9, 37.5\%) \) followed by behavioral problems \( (n = 8, 33.3\%) \) [Table 3a].

Following the assessment by the CLP team, depression was present in 13 patients (54.2%). 3 (12.5%) patients whose mental symptoms did not amount to psychiatric diagnosis were diagnosed as organic brain syndrome (OBS). OBS, also known as organic brain disease or organic brain disorder is an older and nearly obsolete general term from psychiatry, referring to many physical disorders that cause impaired mental function. It usually does not include psychiatric disorders. Insomnia was diagnosed in 3 patients (12.5%). Drug induced psychosis in the form of hallucinations/delusions was present in 2 patients (8.4%); obsessive-compulsive disorder along with other anxiety symptoms was present in 2 patients (8.4%) and only one patient (1.4%) out of the 24 patients with a movement disorder was found to have no diagnosable psychiatric condition. Table 3b shows the reasons for CLP referral and the psychiatric diagnoses after CLP evaluation.

Among patients who had depressive features, 11 patients out of 13 (84.6%) were treated with antidepressants and the other two patients were given supportive counseling. Escitalopram, a selective serotonin reuptake inhibitor was prescribed for 8 out of 11 patients (72%). The mean dose of escitalopram was 10 mg/day (5-15 mg/day). No immediate worsening of motor symptoms was noticed by the treating team during the initial few days of escitalopram therapy. Quetiapine (50-150) was used in the other two patients were given supportive counseling. Among patients who had depressive features, 11 patients out of 13 (84.6%) were treated with antidepressants and the other two patients were given supportive counseling. Escitalopram, a selective serotonin reuptake inhibitor was prescribed for 8 out of 11 patients (72%). The mean dose of escitalopram was 10 mg/day (5-15 mg/day). No immediate worsening of motor symptoms was noticed by the treating team during the initial few days of escitalopram therapy. Quetiapine (50-150) was used in both patients who had drug induced psychosis.

**Table 3a: Psychiatric diagnoses before and after evaluation by the CLP team**

| Psychiatric disorders suspected by neurology team (before evaluation by CLP team) | n (%) |
|---|---|
| Depression | 9 (37.5) |
| Behavioral problems | 8 (33.3) |
| Psychosis | 2 (8.4) |
| Anxiety | 1 (4.2) |
| Dissociative symptoms | 1 (4.2) |
| Sleep problems | 1 (4.2) |
| Forgetfulness | 1 (4.2) |
| Diagnosis unclear | 1 (4.2) |

CLP – Consultation-liaison psychiatry

**Table 3b: Psychiatric diagnosis after evaluation by CLP team**

| Diagnosis | n (%) |
|---|---|
| Depression | 13 (54.2) |
| Organic psychiatric syndrome | 3 (12.5) |
| Insomnia | 3 (12.5) |
| Drug induced psychosis | 2 (8.4) |
| Obsessive compulsive symptoms with anxiety | 2 (8.4) |
| Nil psychiatry | 1 (4.2) |

CLP – Consultation-liaison psychiatry

**DISCUSSION**

We noted higher psychiatric comorbidity rates of 4.84% in admitted patients with neurological disorders. The comorbidity rates were higher in patients with Parkinson’s disease and other movement disorders with a prevalence rate of 23.52%. Thus, it is evident that referrals are made more often for patients with Parkinson’s disease than those with other neurological disorders. A wide range of psychiatric disorders (affective symptoms, psychosis, insomnia, obsessive-compulsive disorder and organic psychiatric syndrome) were comorbid with movement disorders in this population. However, depression was by far the most common comorbid psychiatric disorder and was noted in 54.2% patients in our study. This is higher than a study, which reported of prevalence around 41%.[5] In our study, the rates of depression rose from 37.5% during pre-assessment to 54.2% post-assessment using a structured referral proforma. This difference in the rates indicates that on one hand, neurologists are able to identify depression in their patients and refer, on the other hand had missed about 25% of cases who had depression. Relationship between the Neurologists and other specialists also affect the pattern of referral.[6] This calls for a close coordination between the treating teams of neurology and psychiatry. In view of the high comorbidity, it would be useful to routinely apply a screening tool such as Hospital Anxiety Depression Scale to ensure higher detection rates.[7] The higher rates of detection of depression after careful clinical assessment have been reported earlier.[8] Detection of depression in patients with medical/neurological disorder is difficult as many times the symptoms are identical. Assessment involves a careful scrutiny of patient records and meticulous history involving a considerable amount of time and expertise. It is very important to recognize and treat depression in patients with movement disorders. The presence and severity of depression in Parkinson’s disease has been shown to correlate significantly with health related quality-of-life scores.[9] Hence, an earlier detection and intervention is necessary. It is important to note that a dedicated consultation-psychiatry team can provide this kind service. Majority of our patients with depression were treated with escitalopram. Selective serotonin reuptake inhibitors (SSRIs) are the preferred antidepressants in patients with medical disorders and comorbid depressive symptoms. Escitalopram has better safety profile amongst other SSRIs and is preferred in patients with medical disorders.[10] In a survey conducted earlier SSRIs were used as first-line therapy in 51% of patients, tricyclic anti-depressants in 41% and other agents in 8%.[11] Though there are reports that SSRIs worsen motor symptoms in movement disorders,[12,13] no immediate worsening of motor symptoms by escitalopram was
noticed in our study. This may be explained by the fact that lower doses of escitalopram were used in the study. Insomnia was present in 3 (12.5%) patients in our current sample and these patients were managed with low doses of benzodiazepines clonazepam 0.25 mg. Sleep fragmentation and spontaneous daytime dozing occurred much more frequently in Parkinson's disease patients than controls. Sleep disturbances are very common in patient’s with Parkinson’s disease and are present in up to 88% patients. The encephalitis lethargica that was described by von Economo in 1917 frequently presents parkinsonian and obsessive compulsive symptoms as part of its clinical manifestations. Obsessive symptoms are known to occur in patients with a movement disorder, but with no increased frequency when compared for controls. In our study, only 2 patients (8.2%) qualified for diagnosis of obsessive compulsive disorder, which may be because of the heterogeneity of the sample. Drug induced psychosis was present in 2 patients (8.4%). Earlier literature has reported that drug-induced psychosis may occur up to 6% in Parkinson’s disease. In our study, both patients were treated with quetiapine and showed amelioration in psychotic symptoms without any immediate worsening of motor symptoms. Management of drug induced psychosis in patients with Parkinson’s disease is a major therapeutic challenge and information on the motor effects of quetiapine is contradictory.

CONCLUSIONS

Our study showed that among admitted patients with neurological illness, the category of patients with movement disorders had greater need of psychiatric evaluation. Psychiatric comorbidity was high in admitted patients with movement disorders and depression was the most common comorbidity. Severity of neurological problems may have a relationship with the development of psychiatric symptoms as only the severely ill-patients are admitted. Consultation-liaison services help in increasing the quality of patient care in movement disorder patients.

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