RESEARCH PAPER | Medical Science | Volume : 3 | Issue : 5 | May 2013 | ISSN - 2249-555X

Challenges in management: Depression with multiple physical co-morbidities; a case report

KEYWORDS: Depression, co-morbidity, Mirtazapine, Escitalopram

Sujit Kumar Kar
Senior Resident, Department of Psychiatry, Institute of Human Behavior and Allied Sciences (IHBAS), Delhi

Amit Khanna
Assistant Professor, Department of Psychiatry, Institute of Human Behavior and Allied Sciences (IHBAS), Delhi

Om Prakash
Associate Professor, Department of Psychiatry, Institute of Human Behavior and Allied Sciences (IHBAS), Delhi

Abhilove Kamboj
Junior Resident, Department of Psychiatry, Institute of Human Behavior and Allied Sciences (IHBAS), Delhi

ABSTRACT *Depression is a leading cause of morbidity and mortality in psychiatry. Presentation of depression varies in different age groups. Clinical presentation of depression gets colored in the presence of physical co-morbidities making its diagnosis as well as management a big challenge. In this case report, an elderly male patient suffering from major depressive disorder presented along with physical co-morbidities like diabetes mellitus, hypertension and right bundle branch block. The patient had negligible response to conventional treatment approach and finally his depression got improved significantly with the combination of Mirtazapine and Escitalopram.*

Introduction

Depression is a common psychiatric disorder and its risk increases when there is physical illness [1]. Depression is highly disabling and the disability increases many folds with coexisting physical illness [1]. Presence of physical co-morbidities can lead to diagnostic dilemma and management difficulties. Physical co-morbidities may mask the underlying depressive symptoms and vise-versa may happen leading to under or over-diagnosis of underlying depression.

Case study

Mr.JBS, 62 years old retired school teacher had complaints of low mood, poor interaction, decreased appetite, disturbed sleep for 3 months. Detailed evaluation of the history revealed persistent sadness of mood accompanied with feeling tense and restless. He had disturbed sleep in the form of difficulty falling asleep and early morning awakening. His appetite was very poor. Most part of the day, he would spend lying alone in bed. He became increasingly slow in day to day activities like eating and bathing and walked in a very slow manner. He developed a pessimistic view about his future and after a couple of weeks started following his wife where ever she went and became suspicious towards her.

For these complaint he had consulted a psychiatrist approximately one month after onset of symptoms and was treated with antidepressants (Desvenlafaxine 100mg/ day, Duloxetine 60mg/day), antipsychotic (Amisulpride 50mg/day which was later increased upto 200mg/day) and benzodiazepines. He consulted different psychiatrists and received different combination of psychotropic medications for next two months. At the time of presentation to IHBAS, Delhi, he had all the above mentioned symptoms accompanied with feeling of lethargy, poor oral intake, slow & short stepped gait with decreased arm swing, resting tremors in both hands and slowness of speech.

Mr. JBS had 4 similar episodes in the past. The first episode approximately 40 years back and last episode 4 years back. His first episode resolved without treatment in 2-3 months. In his last episode, he had good response to Nortryptyline 300mg/ day after a failed trial of Fluoxetine. Treatment details of rest of the episodes were not available.

Mr. JBS was also suffering from diabetes mellitus and hypertension for which he was on oral hypoglycemic agent (Metformin 500mg/ day) and antihypertensive (Amlodipine 5mg/day) respectively.

There was history of a major depressive episode in the family. The elder bother committed suicide following a severe depressive episode and his youngest daughter of the 6 siblings had received treatment for a depressive episode in the past. Pre-morbidly he was well adjusted to life and there were no maladaptive personality traits.

On General Physical Examination, his blood pressure was raised (150/90 mm of Hg). Neurological examination revealed facial masking, reduced arm swing and motor slowing. On mental status examination, he had reduced psychomotor activity, poor eye to eye contact, impaired attention & concentration, depressed affect, paucity of speech and pessimistic view about future.

On the basis of history and mental status examination a diagnosis of recurrent depressive disorder, current episode severe depression with psychotic symptoms was kept as per ICD-10, DCR criteria.

His routine blood investigations, metabolic parameters were within normal limits. MRI of brain revealed no abnormality.

After hospitalization he was treated with Duloxetine and the dose was optimized to 80mg/day. Keeping in view of infidelity towards wife, antipsychotic Risperidone was started and the dose was titrated to 6mg/day. Anticholinergic Trihexyphenidyl was started for the parkinsonian side effects of antipsychotics which were already present at the time of admission but the patient had developed urinary retention (hesitancy) so it was stopped. Following non response to these medications and worsening of parkinsonian side effects, Risperidone was stopped, however the parkinsonian symptoms (tremor, slow short stepped gait, facial masking and reduced arm swing) persisted and the patient was empirically started on Levodopa and Carbidopa combination upto 163.5mg/day keeping the possibility of drug induced parkinsonism.

With the worsening of the clinical condition of the patient medications of different classes were tried in adequate dosages for an adequate duration of time with Sertraline upto 200mg/day, Bupropion 300mg/day, Mirtazapine 30mg/day. However, there was no satisfactory response with either. To manage both depression and drug induced parkinsonism, Modified Electroconvulsive therapy (MECT) was started but after 4th MECT, the patient had ECG changes of right bundle

Volume : 3 | Issue : 5 | May 2013 | ISSN - 2249-555X

branch block pattern and so it was stopped. Cardiology opinion was sought and was advised Enalapril, Isosorbide mononitrate, Atorvastatin and Aspirin. At the same time patient developed hyperglycemia for which the dose of Metformin was increased to 1000mg/day. It was planned to augment the antidepressant treatment with thyroxine but again it was found to be ineffective despite an adequate trial. The patient finally responded to a combination of Mirtazapine 30 mg/day and Escitalopram 30mg/day. His general physical wellbeing and depressive symptoms improved and he was discharged with the final diagnosis of recurrent depressive disorder, current episode severe depression with psychotic symptoms with diabetes mellitus with hypertension with right bundle branch block.

Discussion

The diagnosis and treatment of depression in the elderly is often a difficult task. Life events such as retirement, death of spouse, isolation, co-morbid chronic physical illnesses like diabetes, hypertension, osteoarthritis, insomnia, and other chronic illnesses tend to color the depressive state making it arduous for the physician to manage.

Treating depression in the elderly is always a challenge due to age related pharmacokinetic and pharmaco-dynamic changes, associated co-mobidities, increased proneness to side effects and psychosocial issues. Wrong diagnosis, poor selection of medications & inappropriate dosing and associated co-morbidities are associated with unfortunate outcome. There exist high prevalence rates of (upto 40%) depression in Parkinson's disease [2], [3].

At the time of presentation, Mr JBS was diagnosed with a severe depressive episode with psychotic features and drug induced Parkinsonism which was ascribed to the antipsychotic medication he had been receiving prior to admission. Drug induced Parkinsonism is increasingly becoming common as a result of polypharmacy.

In our case, depression was diagnosed early due to associated physical co-morbidities; there were limited options of pharmacological trial. Initially the patient was not responding to treatment and there was motor retardation, tremor and bradykinesia, which directed the focus towards Parkinson's disease. As the patient was on neuroleptics, a possibility of drug (antipsychotic) induced Parkinsonism was kept. As the patient had already developed severe constipation and hesitancy of urinary stream, Syndopa was preferred over Trihexyphenidyl. Levodopa is also considered in the management of neuroleptic induced Parkinsonism [4], [5]. Antipsychotics, antidepressants and Calcium channel blockers are the common offending agents [6], [7], [8]. It is sometimes difficult to distinguish between Idiopathic Parkinson's because of the similarity in the phenotypic presentation. It is best treated by stopping the offending agent but if the symptoms persist treatment with anticholinergics and Dopamine agonists may be warranted.

In our patient, after stopping the antipsychotics he had been receiving, Trihexylphenidyl upto 6mg/d was administered for treatment of drug induced Parkinsonism but resulted in urinary hesitancy, a known side effect of the drug. With the continued worsening of tremors, rigidity and bradykinesia the patient was started on Leva-dopa/ Carbidopa combination which was discontinued after 3 weeks following non-response.

Literature suggests that persistent secondary Parkinsonism should alert one to the possibility of presymptomatic Parkinson's and the same was kept as a possibility. With non-response of depression to medications and persistent parkinsonian symptoms the patient was treated on the lines of severe depression with Parkinson's disease and administered Modified Electroconvulsive Therapy (MECT). MECT's are effective in the management of both depression and Parkinson's disease [9], [10]. However, the administration of MECT's was limited by the development of Bundle branch block. As the patient received only four MECT's, the therapy was too brief to bring about a change in the clinical presentation. Nortryptyline, to which patient had responded in the previous episode could not be tried due to risk of conduction abnormality.

There are no specific guidelines available for the management of depression in Parkinson's and more research is needed on this subject. However, the recent advances in Neuroimaging have shown that there is evidence of loss of both Dopamine and Serotonin in the Cortical and Subcortical regions of the Limbic system in Parkinson's disease with depression [11].This would theoretically weigh our balance toward the newer generation antidepressant drugs such as Bupropion and Selective Serotonin and Noradrenaline Reuptake inhibitors [12]. However, in our patient neither brought about clinical improvement. The patient finally responded to a combination of Mirtazepine and Escitalopram.

Treatment resistant cases of depression, where underlying multiple physical illnesses limit the alternative management options gives a big challenge. Combination of antidepressants holds some promise, where there is failure of response with dose optimization and augmentation. In our case, combination of Escitalopram and Mirtazapine was found to be the best effective combination.

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