

# Psychiatric Symptoms Associated with Parkinson's Disease: Review Questions

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## QUESTIONS

Choose the single best answer for each question.

1. A 45-year-old woman presents to her primary care physician with her husband. She reports a 6-month history of feeling "slowed down," feeling like she has no energy, a diminished ability to think and concentrate, and excessive sleeping. Her husband reports that her facial expressions have changed; she rarely smiles and her face seems expressionless. The patient's posture has become stooped and she is slow at completing tasks. She denies feeling depressed but states that she has lost interest in activities she had previously enjoyed and seems unable to enjoy life. What is this patient's most likely diagnosis?  
(A) Dementia of the Alzheimer's type with early onset  
(B) Major depression  
(C) Parkinson's disease  
(D) Schizoaffective disorder
2. A 68-year-old woman with Parkinson's disease has developed drug-induced psychosis from treatment with dopamine agonists. Her neurologist attempts to lower the dose of the dopaminergic agent, but this increases parkinsonian symptoms of bradykinesia, rigidity, and resting tremor. Of the following, which agent would be appropriate to treat this patient's psychotic symptoms?  
(A) Haloperidol (C) Trifluoperazine  
(B) Quetiapine (D) Thiothixene
3. A 65-year-old man with well-controlled Parkinson's disease presents to his primary care physician reporting a 3-month history of symptoms of depression, including dysphoria, anhedonia, insomnia, anorexia, and fatigue. The patient is diagnosed with mild major depression and treatment with an antidepressant is recommended. However, the patient inquires about nonpharmacologic options to treat his depression. Which of the following is the most appropriate recommendation?  
(A) Encourage the patient to take the antidepressant  
(B) No treatment  
(C) Refer for cognitive behavioral therapy (CBT)  
(D) Refer for psychodynamic psychotherapy
4. A 61-year-old man is referred to a neurologist by his primary care physician for evaluation of possible Parkinson's disease. The patient denies any significant medical history other than ongoing mental health treatment. He states that he has been taking a "nerve medication" for many years but cannot remember the name of the medication or his psychiatric diagnosis. The patient has had problems with hearing voices in the past. Neurologic examination reveals a resting tremor, cogwheel rigidity, and bradykinesia. Which of the following must be completed as part of this patient's evaluation?  
(A) Determine what psychiatric medication the patient is taking  
(B) Referral to an endocrinologist  
(C) Referral to a psychiatrist  
(D) Referral for psychological testing
5. Which of the following must always be completed as part of the initial evaluation of a patient with Parkinson's disease?  
(A) Chest radiograph  
(B) Evaluation for depression  
(C) Measurement of prolactin level  
(D) Urine protein electrophoresis

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6. A 67-year-old man with poorly controlled Parkinson's disease is referred to a neurologist for management. During the initial evaluation, the neurologist determines that the patient also has comorbid depression. The depression is mild, and the patient denies suicidal ideation. He has no other significant medical history. Complete blood count, thyroid-stimulating hormone (TSH) level, and chemistry panel are normal. The neurologist initiates pramipexole to control the patient's parkinsonian symptoms. What is the most appropriate initial step in managing this patient's depression?

- (A) Initiate buspirone
- (B) Initiate a selective serotonin reuptake inhibitor (SSRI)
- (C) No treatment is required
- (D) Optimize treatment with pramipexole, then reevaluate depressive symptoms

7. A 62-year-old woman with Parkinson's disease tells her neurologist that she has been feeling depressed for approximately 6 months. She also reports constipation, cold skin, and weakness. The patient asks her neurologist for an antidepressant. Which of the following should be completed before a treatment decision is made?

- (A) Magnetic resonance imaging of the brain
- (B) Psychological testing
- (C) Referral for a psychiatric evaluation
- (D) TSH level

8. A 67-year-old man with a history of Parkinson's disease treated with selegiline is diagnosed with comorbid major depression by his primary care physician. The physician considers prescribing an SSRI. Of the following, which adverse event may occur as a result of adding an SSRI to this patient's treatment regimen?

- (A) Serotonin syndrome
- (B) Sleepwalking disorder
- (C) Tardive dyskinesia
- (D) Trichotillomania

9. A 65-year-old man presents to the emergency department complaining of a sore throat, fever, and weakness. He states that he has Parkinson's disease and says that he started hearing voices about 1 year ago and was given medication to treat this problem. He does not remember the name of his current medication, but reports that he has his blood drawn frequently. Which of the following would be most important to rule out?

- (A) Agranulocytosis
- (B) Dystonia
- (C) Lithium toxicity
- (D) Streptococcal pharyngitis

#### ANSWERS AND EXPLANATIONS

1. **(B) Major depression.** The patient's symptoms (psychomotor retardation, anhedonia, fatigue, hypersomnia, and diminished ability to think and concentrate) meet DSM-IV-TR criteria for a major depressive episode.<sup>1</sup> This case illustrates that major depression can present with symptoms similar to those of Parkinson's disease, such as loss of facial expression and decreased voluntary activity.<sup>2</sup> Thus, depression must always be considered in the differential diagnosis when evaluating a patient who may have mild Parkinson's disease. This patient's age (45 yr) makes a diagnosis of dementia or Parkinson's disease less likely, as both rarely present prior to age 50 years. The patient's symptoms are not suggestive of schizoaffective disorder.

2. **(B) Quetiapine.** Quetiapine, an atypical antipsychotic, is often used as a first-line agent for the treatment of drug-induced psychosis in Parkinson's disease;<sup>3,4</sup> however, there has been at least 1 negative study.<sup>5</sup> Clozapine, another atypical antipsychotic, is also effective<sup>6</sup> but carries the risk of serious adverse effects (eg, infection, agranulocytosis); thus, quetiapine may be a better first choice. Classic or "typical" antipsychotic agents, such as haloperidol, trifluoperazine, and thiothixene, worsen the motor symptoms of Parkinson's disease and are not recommended for the treatment of drug-induced psychosis.

3. **(C) Refer for CBT.** A recent study suggests that CBT may be effective for the treatment of depression in patients with Parkinson's disease.<sup>7</sup> Because the patient's depression is mild, CBT can be initiated first. An antidepressant should be reconsidered if CBT is ineffective. The effectiveness of psychodynamic psychotherapy has not been studied in depression occurring with Parkinson's disease.

4. **(A) Determine what psychiatric medication the patient is taking.** The patient's history of mental health treatment and hearing voices suggests a psychotic disorder, such as schizophrenia. Therefore, the medication he describes may be a typical antipsychotic (eg, haloperidol, fluphenazine), in which case the patient may have neuroleptic-induced parkinsonism.<sup>1</sup> It is necessary to find out whether the

patient is taking an antipsychotic agent before a diagnosis of idiopathic Parkinson's disease is made. Referral to a psychiatrist is not necessary because the patient is already receiving mental health treatment. Psychological testing would only be indicated if further evaluation suggests that the patient's psychiatric diagnosis is unclear. Referral to an endocrinologist is not indicated in this case.

5. **(B) Evaluation for depression.** Studies suggest that 18% to 40% of patients with Parkinson's disease may also experience major depression or dysthymic disorder.<sup>8</sup> Symptoms of depression and Parkinson's disease are similar,<sup>2</sup> which can make the diagnosis of depression more difficult. Therefore, patients with Parkinson's disease should be carefully evaluated for comorbid depression. The Hamilton Depression Inventory is a valid tool for evaluating depression in patients with Parkinson's disease<sup>9</sup> and could be used to assist clinicians with this process. Chest radiograph, prolactin level, and urine protein electrophoresis are not indicated for the routine evaluation of Parkinson's disease.
6. **(D) Optimize treatment with pramipexole, then reevaluate depressive symptoms.** Mild depression should be treated in this patient group. Pramipexole has been effective in the treatment of depression in patients with Parkinson's disease.<sup>10</sup> Although SSRIs are considered first-line therapy for depression in patients with Parkinson's disease, pramipexole alone initially can be used to treat this patient's parkinsonian symptoms and depression before adding an antidepressant.<sup>11</sup> Buspirone is used to treat anxiety and should not be used in this case. If the patient was more severely depressed or suicidal, more intensive interventions would be indicated.
7. **(D) TSH level.** The patient's symptoms of depression, constipation, cold skin, and weakness are suggestive of hypothyroidism. The incidence of hypothyroidism is increased in Parkinson's disease.<sup>12</sup> Hypothyroidism should always be considered in the differential diagnosis of depression occurring with Parkinson's disease and therefore TSH and free thyroxine should be obtained.<sup>11</sup> Magnetic resonance imaging of the brain and psychological testing are not indicated in this patient. Referral to a psychiatrist could be considered if TSH is normal and if the patient meets criteria for depression.

8. **(A) Serotonin syndrome.** Serotonin syndrome is characterized by autonomic instability, neuromuscular abnormalities, and altered level of consciousness. Selegiline is a type B monoamine oxidase inhibitor that inhibits the catabolism of dopamine and enhances dopamine activity. Development of serotonin syndrome is a rare but possible side effect of combining selegiline and SSRIs.<sup>13</sup> Although selegiline use is not an absolute contraindication to an SSRI trial,<sup>11</sup> the risk should be considered and discussed with the patient before initiating an SSRI.
9. **(A) Agranulocytosis.** This patient's Parkinson's disease and history of hearing voices suggest that he may have developed drug-induced psychosis from treatment with a dopamine agonist. The frequent blood testing suggests that he is likely receiving clozapine to treat the psychosis. Clozapine is associated with potentially fatal agranulocytosis in a small number of patients.<sup>14</sup> If agranulocytosis is severe, clozapine may need to be stopped immediately. Although streptococcal pharyngitis is possible regardless of whether the patient has agranulocytosis, it is not life-threatening. The patient exhibits no symptoms of dystonia and is unlikely to be taking lithium.

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