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A RARE REPORT ON IDIOPATHIC PARKINSON'S DISEASE, OSTEOPOROSIS, AND BONE FRACTURES

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ABSTRACT

Hip fractures are very common in people who have idiopathic Parkinson's disease (IPD). Poor balance and other forms of neurological dysfunction could be among the causes a problem. Parkinson's disease is a movement illness that affects the nerve system. Symptoms appear gradually, and may begin with a barely detectable tremor in only one hand. Tremors are common, however they are often accompanied by stiffness or slowed mobility. Your face may display little or no expression in the early stages of Parkinson's disease. A 55-year-old Indian man with IPD had a 14-year history of deteriorating dyskinesias interspersed with bouts of immobility, postural instability, and the 'wearing off' phenomenon. When he got up from his computer one morning, stumbled, and fell, he was in this regular state of baseline neuronal health. Emergency medical services were called, and the patient was taken to our hospital's emergency department, where he was diagnosed with a right hip fracture. Osteopenia and hip fractures are common in patients with IPD. The reasons for this are numerous. Treatment is available, but prevention is the most important factor.

Key words Idiopathic Parkinson's Disease, Osteoporosis, Hip Fractures.

INTRODUCTION

Hip fractures are very common in people who have idiopathic Parkinson's disease (IPD). Poor balance and other forms of neurological dysfunction could be among the causes a problem [1, 2]. Parkinson's disease is a movement illness that affects the nerve system. Symptoms appear gradually, and may begin with a barely detectable tremor in only one hand [3, 4]. Tremors are common, however they are often accompanied by stiffness or slowed mobility [5, 6]. Your face may display little or no expression in the early stages of Parkinson's disease [7]. When you walk, your arms may not swing. It's possible that your voice will become hushed or slurred. The symptoms of Parkinson's disease grow as the disease advances. Although there is no cure for Parkinson's disease, drugs can help you feel better [8]. Occasionally, your doctor may recommend surgery to improve your symptoms by regulating certain areas of your brain. In addition, osteopenia and osteoporosis are common in people with IPD [9, 10]. As a result of the loss of bone mass, the risk of fracture is increased [11, 12]. This case study is brief explains various mechanisms and emphasizes the importance of prevention in these situations patients as well as their care.

Case presentation:

A 55-year-old Indian man with IPD had a 14-year history of deteriorating dyskinesias interspersed with bouts of immobility, postural instability, and the 'wearing off' phenomenon. When he got up from his computer one morning, stumbled, and fell, he was in this regular state of baseline neuronal health. Emergency medical services were called, and the patient was taken to our hospital's emergency department, where he was diagnosed with a right hip fracture.

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The patient was evaluated by an orthopedic surgeon and had a successful right hip replacement procedure without complications. His previous medical history was limited to despair and anxiety. There was no history of IPD or any other type of progressive neurologic condition in the family. The patient had worked as a warehouse manager for several years before being forced to retire due to the advancement of his sickness (approximately 5 years prior to his current presentation). He did not smoke but admitted to drinking one drink per month.

For years, the patient had been taking high doses of carbidopa-levodopa (25–250 mg, 1.5 tablets every 2 hours while awake) and a dopamine agonist (ropinirole 2 mg, 1 tablet every 2 hours while awake) for rigidity and amantadine (100 mg, 1 tablet every 5 hours) for dyskinesias. His right hip was encased in a brace. With hypophonic speaking, he displayed pronounced dyskinetic movements involving his arms, neck, and face. Tone was higher in his bilateral upper extremities, and the amplitude of his finger-tapping was lower. He was able to recollect objects and count backwards, indicating that his mental health was in good shape. There were no hallucinations or delusions recorded. There were no cranial nerve impairments found. In the bilateral upper extremities and the left knee jerk, reflexes were intact at 2/4. In the bilateral upper extremities and the left lower extremity, motor strength assessment was 5/5 (Medical Research Council Grade). Because of the post-operative hip immobilizer, testing of the right lower extremity and gait was limited. On finger-to-nose testing, there was no upper extremity dysmetria, and sensibility to light touch, discomfort, and temperature was intact throughout.

Discussion:

Parkinson's disease and osteoporosis are two diseases that affect a large number of people. Hip fractures are common in patients with Parkinson's disease. Poor balance and other forms of neurological dysfunction, such as bradykinesia and hypokinesia, which contribute to falls, could be among the causes. Osteopenia and osteoporosis, both of which result in a reduction in bone mass, are also common in these patients. IPD patients had a higher rate of osteoporosis than age-matched controls. Osteopenia or osteoporosis is observed in up to 91 percent of females with IPD. Reduced mobility, which leads to less weight-bearing activity, is one of the main causes of increased osteoporosis in these patients. Weight-bearing activity is essential for maintaining bone mass as people age. Due to the lack of weight bearing, bone reabsorption rises and bone deposition decreases. Furthermore, these patients are insecure and at a higher risk of falling. Autonomic instability, in addition to bradykinesia and postural instability, both of which lead to falls, increases the chance of falling. It's worth noting that autonomic instability can be a pharmaceutical side effect, and it's something to think about before starting new meds in IPD patients. According to one study, dementia along with IPD raises the risk of fracture even more, because these patients are less likely to be aware of their surroundings, and their physical limitations increase the risk of falling and fracture. Anti-IPD drugs, notably L-dopa, have also been observed to raise serum homocysteine levels. Regardless of the patient's IPD status, a high homocysteine level is an independent risk factor for fracture. Levodopa is linked to an increased fracture risk, according to a 2007 study, and the risk is dose dependent. When looking at hip fractures in particular, this association was strongest. Some researchers suggest that the increased fracture risk is due to levodopa's capacity to improve patient movement without increasing postural stability, resulting in. Because hip fractures are so debilitating, clinicians should do everything they can to avoid them in the first place. Vitamin D supplementation and bisphosphonate medication have both been found to reduce fracture risk. Hip fractures do occur in IPD patients, regardless of the reason, and they must be managed carefully. Many research has suggested that these individuals had a higher death rate than controls without IPD; nevertheless, the outcomes of these research have been mixed. Age, gender, mobility, and other initial clinical factors have an impact on a patient's clinical course. It's difficult to compare the outcomes of IPD patients with hip fractures to those of other patients with hip fractures from an orthopedic standpoint.

Conclusion:

Osteopenia and hip fractures are common in patients with IPD. The reasons for this are numerous. Treatment is available, but prevention is the most important factor.

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