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## What makes a Parkinson patient fall?

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**Introduction:** Falls are a recurrent phenomenon in Parkinson disease. 40%–70% of patients fall, which occurs during daily activities and when patients are optimally medicated, lead to fractures and restriction of mobility and activities, loss of independence, increased risk of nursing home admission and reduced survival. The fall is many times a life changing event for the patient and affecting quality of life. This is to be considered in treatment planning and ideally, intervention should occur before the first fall has occurred. We carried out a cross sectional study of an unselected group of idiopathic Parkinson disease patients of various ages and disease duration, taking into account most of the clinical variables potentially associated with falls. Detailed analysis of history, clinical features and disease severity of patients with idiopathic Parkinson disease were done.

**Aim:** To study various risk factors associated with fall and analyze them to see which are predictors of falls.

**Materials & Methods:** Study was conducted in Institute of Neurology, Madras Medical College, Chennai. 112 consecutive patients with idiopathic Parkinson disease who attended both outpatient department and inpatient ward were studied between: August 2013 to December 2015 and detailed analysis of falls was documented. The diagnosis of Parkinson disease was confirmed according to the United Kingdom Parkinson Disease Brain Bank criteria. Clinical data were obtained from the patients and checked with patient's relatives, caregivers and case records for accuracy. All patients' baseline laboratory investigations and brain imaging studies were recorded to identify associated illnesses. All patients underwent a multidisciplinary baseline assessment comprising demographic and historical data, disease specific rating scales, including Tinetti gait and balance test and freezing of gait questionnaire.

**Results:** In this study, fall occurred in 49.1% of the subjects. Tinetti Balance score and Hoehn and Yahr staging were the best independent variables associated with falls. Previous falls, disease duration and severity, freezing of gait, high dose levodopa, dyskinesia and loss of arm swing were independent predictors of falling in our study.

**Conclusion:** Falls are a common problem in Parkinson disease and some of the risk factors are modifiable. In this study previous falls, disease duration, disease severity, worse Tinetti score and loss of arm swing are independent predictors of the risk of falling. Freezing of gait, dyskinesia and higher dose of levodopa also associated with increased risk fall in our study. There is a need for future studies to look at interventions to prevent falls in Parkinson disease.

## Biography

K Bhanu is Senior Neurologist with 30 years of experience and wants to teach basic bedside neurology and how the findings improve patient care. She has awarded the commonwealth fellowship in Neurology at University of Newcastle, Newcastle upon Tyne, UK, from October 1997 to Sep 1998 & also trained at Walton Centre for Neurology & Neurosurgery at Liverpool, UK under Dr David Chadwick, and is also a holder of many prestigious awards. She is currently serving as the Director of Neurology and neurosurgery at Mehtas Hospitals, India.

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