

# A CLINICOPATHOLOGIC CASE STUDY OF PARKINSON'S DISEASE IN HYDERABAD

Dr V Venugopal Rao , D.Divya and P. Brinda  
Department of Genetics and Zoology  
St. Ann's College for Women, Mehdiapatnam, Hyderabad

## Abstract:

*Parkinson's disease (PD) is a common neurodegenerative disorder affecting patients in large numbers throughout the world and describes as a syndrome that is characterized by both tremors and rigidity, and is usually asymmetric in that it affects one side of the body more than the other. Symptoms also include bradykinesia, which is slowed ability to start and continue movements and adjust the body's position. Although motor dysfunction defines the disorder, it also involves other symptoms such as cognitive or psychiatric changes and sleep disturbances. This research paper studies about a female individual who is diagnosed with Parkinson's disease and gives a brief emphasis on the disease.*

**Key words:** Disease, impairment, tremors, Genetic disorder.

## Introduction:

Parkinson's disease is a neurodegenerative disorder, which leads to progressive deterioration of motor function due to loss of dopamine producing brain cells. The cause of Parkinson's disease is unknown, but researchers speculate that both genetic and environmental factors are involved.

Primary symptoms include stiffness, slowness, impaired balance and later on a shuffling gait. Secondary symptoms include depression and anxiety.

Many of the individuals with Parkinson's disease are diagnosed when they are 60 years old or older, but early-onset of Parkinson's disease also occurs. Several staging systems for Parkinson's disease exist depending upon the organization that treats and investigates the disease. The Parkinson's Foundation supports five stages.

Stage 1. Symptoms are mild and do not interfere with the person's quality of life.

Stage 2 Symptoms worsen and daily activities become more difficult and take more time to complete.

Stage 3 is considered mid-stage Parkinson's disease. The individual loses balance, moves more slowly, and falls are common. Symptoms impair daily activities, for example, dressing, eating, and brushing.

Stage 4. Symptoms become severe and the individual needs assistance in performing daily activities.

Stage 5 is the most advanced stage of Parkinson's disease. The individual is unable to walk and will need full time assistance for living.

Parkinson's disease is the most common neurodegenerative disorder and the most common movement disorder. Characteristics of Parkinson's disease are progressive loss of muscle control, which leads to trembling of the limbs and head while at rest, stiffness, slowness, and impaired balance. As symptoms worsen, it may become difficult to walk, talk, and complete simple tasks.

The progression of Parkinson's disease and the degree of impairment vary from person to person because of incomplete penetrance and variable expressivity due to several environmental stress factors and life style. Many people with Parkinson's disease live long productive lives, whereas others become succumbed much more quickly. Complications of Parkinson's such as falling-related injuries can cause premature death. However, studies of populations with and without Parkinson's disease, when compared, suggest the life expectancy for people with the disease is about the same as the general population.

Most of the individuals who develop Parkinson's disease are 60 years of age or older. Since overall life expectancy is rising, under improved medical management and treatment, the number of individuals with Parkinson's disease will increase in the future. Adult-onset Parkinson's disease is most common, but early-onset Parkinson's disease (onset between 21-40 years), and juvenile-onset Parkinson's disease (onset before age 21) can occur in rare circumstances, which could be strongly genetic and familial.

Descriptions of Parkinson's disease date back as far as 5000 BC. Around that time, an ancient Indian civilization called the disorder *Kampavata* and treated it with the seeds of a plant containing therapeutic levels of what is today known as levodopa. Parkinson's disease was named after the British doctor James Parkinson, who in 1817 first described the disorder in detail as "shaking palsy."

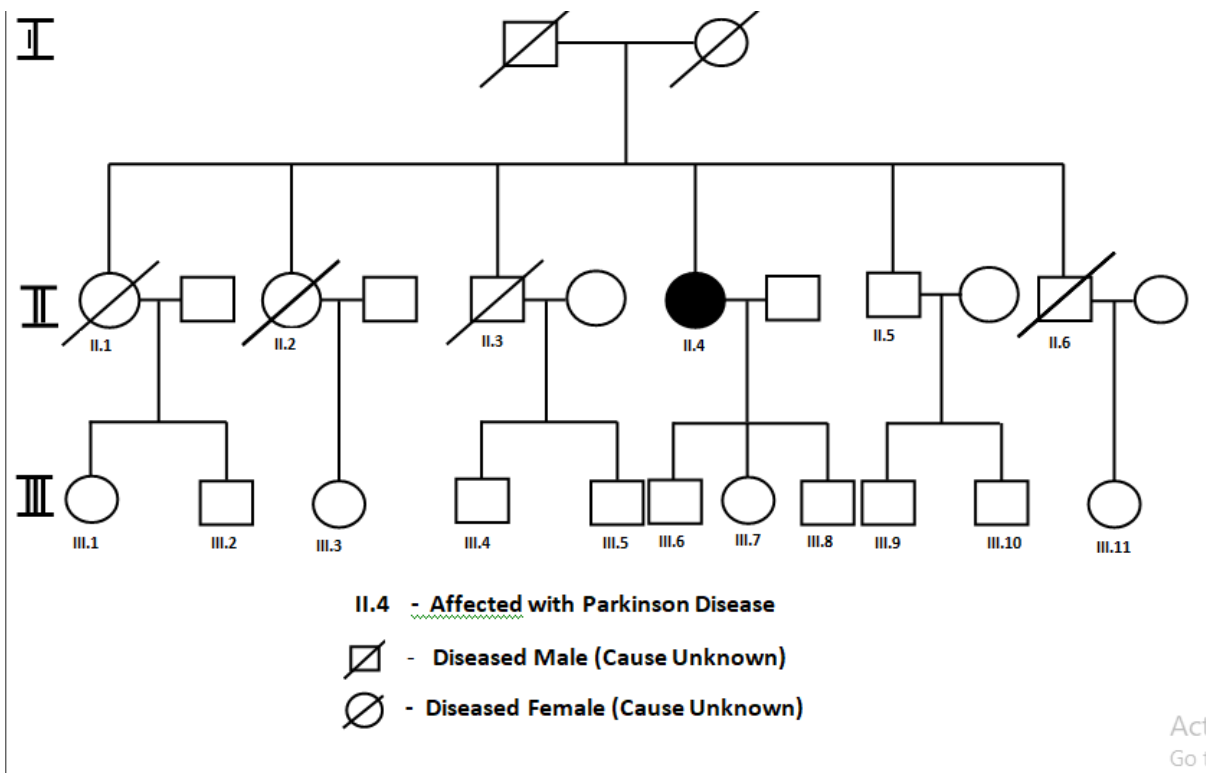
### **Case Report:**

A 73 year old female along with her husband resides in Hyderabad, Telangana. In 2015, she began experiencing severe pain in the joints of her limbs and also had a little difficulty in walking. So she was misdiagnosed to be arthritis patient and had a medication for it. But later, she showed slight tremors in the hands and an impaired walking. The difficulty in walking was seen in the initiation of walking and as soon she started walking, she stopped forward with imbalanced steps and fell forwards. Her movements became restricted and slow, on account of frequent falls.

Her family consulted a general physician who then referred her to a Neurologist. The family showed no history of this disease, when pedigree is analysed. She was examined based on her previous medical records

and advised brain scans (CT Scan &MRI). The evaluation also included the testing of muscle co-ordination for walking and other motor tasks involving both hands and legs.

In June 2017, she was diagnosed with Parkinson’s disease. Now, the rigidity of the muscles worsened and her movements ceased. She is completely confined to bed and an attendant is appointed to take care of all her daily needs. Since she has difficulty in swallowing, she is always on liquid diet; signs of dementia are also evident. No history of Hypertension and diabetes is recorded.



Act  
Go t

**Fig. showing Pedigree of three generations of the family**

**Discussion :**

Since the Pathophysiology of Parkinson's is very complex and multifactorial, the proven ways to prevent the disease also remain a mystery. Some research has shown that regular aerobic exercise might reduce the risk of Parkinson's disease. Some other research has shown that people who drink caffeine — which is found in coffee, tea and cola — get Parkinson's disease less often than those who don't drink it. However, it is still not clear whether caffeine actually protects us from the effects of Parkinson’s, directly or indirectly. is related in some other way. Currently there is not enough evidence to suggest drinking caffeinated beverages to protect us from the effects of s Parkinson's. Green tea is also related to a reduced risk of developing Parkinson's disease.

**Conclusion:**

With proper treatment, most of the individuals with Parkinson's disease can lead long, productive lives for many years after diagnosis. The life expectancy is about the same as people without the disease.

## **Acknowledgment**

We would like to thank the family of the patient for their valuable time and co-operation in willingly giving the complete information for the case study.

## **References:**

1. Adult Life after a Traumatic Brain Injury (TBI)
2. A review of Parkinson's disease C. A. Davie
3. British Medical Bulletin, Volume 86, Issue 1, 1 June 2008, Pages 109–127  
[credoreference.com/content/topic/parkinson\\_s\\_disease](http://credoreference.com/content/topic/parkinson_s_disease)
4. Buter TC et al. Dementia and survival in Parkinson disease: a 12-year population study. *Neurology*
5. [Mayoclinic.org/diseases-conditions/parkinsons-disease/symptoms-causes/syc-20376055](http://Mayoclinic.org/diseases-conditions/parkinsons-disease/symptoms-causes/syc-20376055)
6. [Medicinenet.com/parkinsons\\_disease/article.htm#is\\_there\\_a\\_test\\_to\\_diagnose\\_parkinsons\\_disease](http://Medicinenet.com/parkinsons_disease/article.htm#is_there_a_test_to_diagnose_parkinsons_disease)
7. [Papermasters.com/parkinsons\\_disease](http://Papermasters.com/parkinsons_disease)
8. [parkinson.org/understanding-parkinsons/what-is-parkinsons](http://parkinson.org/understanding-parkinsons/what-is-parkinsons)
9. National Institute for Health and Clinical Excellence. *Guideline development methods: information for national collaborating centres and guideline developers*. London: National Institute for Health and Clinical Excellence
10. National Institute for Health and Clinical Excellence and Social Care Institute for Excellence. *Dementia: management of dementia, including use of antipsychotic medication in older people*. London: National Institute for Health and Clinical Excellence.
11. *Genetics & Evolution* by P.K.Gupta
12. Gelb DJ, Oliver E, Gilman S. Diagnostic criteria for Parkinson disease. *Arch Neurol*. 1999 Jan
13. Guttman M et al. Current concepts in the diagnosis and management of Parkinson's disease