

Parkinson's Disease-A Case Study

Vipin Vageriya

Manikaka Topawala Institute of Nursing, Constituent of CHARUSAT, Changa, Anand-Gujarat, India

ARTICLE INFORMATION

Received: October 28, 2018

Accepted: November 28, 2018

Published: February 15, 2019

Corresponding Author:

Vipin Vageriya,
Manikaka Topawala Institute of
Nursing, Constituent of CHARUSAT,
Changa, Anand-Gujarat, India

ABSTRACT

Parkinson Disease (PD) is a neurological disorder which interferes with the daily activity of life. It affects the movement and gait. This disease drops the level of dopamine in brain. Common symptoms of PD are slow movement, loss of balance, stiffness and tremor. The purpose of this case study is to highlight that proper medical intervention and psychological counseling can reduce the symptoms of disease. Normally, symptoms for the disease present in individuals who are aged between 50-60 years. In this study discussed a case: Mr. XYZ is suffering from PD since 5 year but he was exactly diagnosed 3 years before. Currently, he is using dopamine to relieve his symptoms. His quality of life is highly affected as he is completely dependent on his wife. During focus group interaction, it was shared that sometime XYZ falls down from bed. He used to go for physiotherapy but there was no improvement noticed at all. PD affects physical, social and psychological function of patient. It was concluded that some drugs like dopamine, Ropinirole hydrochloride and Amantadine is helpful to reduce symptoms.

Key words: Parkinson disease, tremors, dopamine, ropark, syndopa

INTRODUCTION

Parkinson's Disease (PD) is a degenerative condition named after a London Scientist Dr. James Parkinson, who described about the physical symptoms associated with PD. He published this in a book titled "An Essay on the Shaking Palsy" in 1817¹. PD is also known as shaking palsy or paralysis agitans.

PD is the progressive disease of the nervous system which observed by rigidity, unbalanced movement, tremor, muscular rigidity and slow speech. It is associated with degeneration of the basal ganglia of the brain and a deficiency of the neurotransmitter dopamine². The objective of study includes: 1) To share the learning among seniors and peers, 2) To find out any new symptom present in patient, 3) To create awareness among patient, family members and relatives and 4) To learn about treatment of parkinsonism

MATERIALS AND METHODS

Case study:

Rational for the selection of this case study:

- Parkinson disease is one of the common neurological diseases encountered in India

Table 1: Patient details

Name	Mr. XYZ
Age	59 year
Occupation	Businessman (Before 6 year)
Types of family	Joint family
Diet	Vegetarian
Date of interview	10/06/2018
Informants	Patient self and his son
Religion	Hindu
Education	Literate 10 th pass
Diagnosis	Parkinson disease diagnosed on 12.05.2011

- To gain knowledge about the specific disease, it's pathology, etiology, sign and symptoms and management process
- To provide holistic nursing care to the patient.

Details of patient: Patient details are shown in Table 1.

Personal history:

- Smoking-No
- Alcohol- No
- Bowel and bladder-Regular habit
- Sleeping pattern-Normal (6-8 h)
- Drug allergy- Not known
- Food allergy- Not known

Past history:

- No history of hypertension and diabetes
- No history of asthma, Tuberculosis, COPD
- No history of any surgical illness
- No history of cancer

History of present illness: Mr. XYZ has been experiencing shoulder pain, slow gait, eye discharge and stiffness since 3 years. He explains that his problem started 5 years ago. Firstly he was wrongly diagnosed as spine problem and he was referred for physiotherapy treatment. The patient now presents with stiffness in the right shoulder, short walk, frequently fall down and a resting tremor in the right and left hand. He was referred to a neurologist and he was diagnosed with early Parkinson disease.

Epidemiology: The incidence and prevalence of PD increases with advancing age was being present in 1% of people over the age of 65 years³. PD is twice as common in men as in women in most populations⁴.

Diagnosis of Parkinson disease:

- No specific test
- Physical examination can rule out PD
- Neurological examination
- Medical history
- Review of sign and symptoms

Out of four, two symptoms must present for PD confirmation, which are:

- Shaking or tremor
- Slowness of gait/movement, called bradykinesia
- Stiffness or rigidity of the legs, trunk and arms
- Trouble with balance and possible falls, also called postural instability

Current medications:

- Tablet Ropark (Ropinirole hydrochloride)-1 mg
- Tablet Syndopa (Levodopa and carbidopa)-110 mg
- Cap Amantrel (Amantadine)-100 mg

Parkinson's disease occurrence: Parkinson's disease occurs because of loss of dopamine; a chemical produced by the brain that helps in facilitating movement. Furthermore, dopamine also affects one's mood. Thus, medications for the Parkinson's disease entail prescription of pills that replace dopamine in the body. Drug dopamine is one of the catecholamine neurotransmitters in the brain.

Parkinson's disease presents with various signs and symptoms. However, symptoms are different among patients. Some patients show early stages symptoms, while others start showing symptoms during the later stages. Normally, symptoms for the disease present in individuals who are aged between 50-60 years. Symptoms develop gradually and the close family may not notice anything wrong with the patient. Parkinson's disease can cause motor or non-motor symptoms. Motor symptoms involve symptoms that affect movement, whereas non-motor symptoms do not affect movement.

Symptoms: Mr. XYZ who is suffering from Parkinson's disease has shared following signs and symptoms during his interview as shown in Fig. 1. He wants to relieve from all this symptoms, so that he can live healthy life.

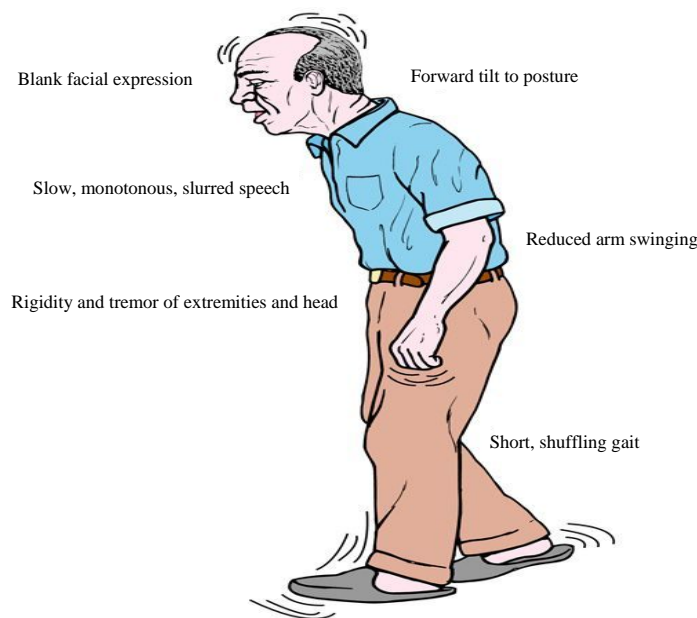


Fig. 1: Mr. XYZ suffering from Parkinson's disease

Table 2: Henderson independence theory in PD case

Sr. No.	Component of Henderson independence theory	Application for PD client
1	Breathe normally	Allow to take deep breathe along with yoga/meditation
2	Eat and drink adequately	Take green leafy vegetable and healthy food
3	Eliminate body waste	Allow patient to do routine activity
4	Move and maintain desirable postures	Frequently change the positions
5	Sleep and rest	Sleep at least 6-8 h/day
6	Select suitable clothes-dress and undress	Allow to use loose clothes
7	Maintain body temperature within normal range by adjusting clothing and modifying environment	Maintain room temperature
8	Keep the body clean and well groomed and protect the integument	Maintain personal hygiene
9	Avoid dangers in the environment and avoid injuring others	Do not keep anything in passage of PD client, he may fall down due to obstacles in between
10	Communicate with others in expressing emotions, needs, fears, or opinions	Provide psychological support
11	Worship according to one's faith	Spiritual ability
12	Work in such a way that there is a sense of accomplishment	Positive thinking and environment
13	Play or participate in various forms of recreation	Play light games and participate in outing
14	Learn, discover, or satisfy the curiosity that leads to normal development and health and use the available health facilities	Raise the query and resolve with physician

Parkinson's disease include sign and symptoms are:

- Tremor at rest
- Bradykinesia (slow movement)
- Rigidity
- Postural instability
- Decreased arm swing when walking
- Micrographia
- Hypophonia
- Masked face
- Slow, shuffling gait
- Stooped posture
- Speech changes

- Writing changes (unreadable)
- Increase frequency micturation
- Unable to walk more than 10-15 steps
- No balance of body
- Drooling of saliva
- Discharge from eye
- Head nodding

Application of the henderson independence theory in case of PD: The application of nursing theories into clinical practice and case studies is differ as per context to context. But the needs of patient can be easily addressed by Henderson theory (Table 2).

Nursing management:

- Assist the patient sit in an upright position during mealtime
- Help the patient walking, range of motion exercise
- Instruct the patient Postural exercises are important to counter the tendency of the head and neck to be drawn forward and down
- A physiotherapist may be helpful in developing an individualized exercise program
- Taught to the patient concentrate on walking erect, to watch the horizon and to use a wide-based gait
- Encouraging, teaching and supporting the patient during self activities

A proper nursing care in PD may help to improve the health status of patient. A positive family support help in recovery of Parkinson disease.

DISCUSSION

Mentioned case reveals that other than medication a strong family support is also required for the fast recovery of patient. Proper guideline for the treatment of PD is also missing. A document or association has to look after and count the number of PD patient available in the country. Research based on PD has to increase. A strong policy has to form for the investigation of PD client. As per the assessment finding of Mr. XYZ many nursing diagnosis can be developed. Few of it is mentioned below:

- Ineffective coping related to PD
- Altered body image related to disease symptoms.
- Impaired verbal communication
- Risk for injury
- Impaired physical mobility

This discussion is supported by a study whose result says that India's research performance in PD is better than other countries because India have very less cases of PD. Indian doctors should work hard to get success on PD. A mass level health awareness camp is required to sensitize the local people. Government should also sanction a good budget for research on PD⁵.

Previous studies show that PD affects cognitive function of a patient. It directly belongs to memory, visual, attention, concentration, judgments, decision making, language development and other impairments⁶.

As recommendation of this case study, more research to be encouraged to understand the disease in context to Indian patients. There is requirement of more studies on therapeutic aspects of the PD⁷.

CONCLUSION

It was concluded that client with Parkinson disease shows multiple problems. Basically it affects social, physical, emotional and cognitive ability of patient. Sometimes psychological support and positive family environment is helpful for improvement in health status. Some drugs like dopamine, Ropinirole hydrochloride and Amantadine is helpful to reduce symptoms.

REFERENCES

1. DeMaagd, G., and A. Philip, 2015. Parkinson's disease and its management: Part 1: Disease entity, risk factors, pathophysiology, clinical presentation and diagnosis. P and T: A peer-reviewed. J. Formulary Manage., 40: 504-532.
2. Francesca, M., A. Picelli and P. Tocco *et al.*, 2016. Pathophysiology of motor dysfunction in Parkinson's disease as the rationale for drug treatment and rehabilitation. J. Parkinson's Dis., 6: 1-18.
3. Goldman, S.M. and C. Tanner, 1998. Etiology of Parkinson's disease. In: Jankovic, J. and E. Tolosa (Eds.). Parkinson's Dis. Mov. Disord., 3: 133-158.
4. Van Den Eeden, S.K., C.M. Tanner, A.L. Bernstein, R.D. Fross and A. Leimpeter *et al.*, 2003. Incidence of Parkinson's disease: Variation by age, gender and race/ethnicity. Am. J. Epidemiol., 157: 1015-1022.
5. Gupta, B.M. and A. Bala, 2013. Parkinson's disease in India: An analysis of publications output during 2002-2011. Int. J. Nutr. Pharmacol. Neurol. Dis., 3: 254-262.
6. Leroi, H., K. Pantula, McDonald and V. Harbissettar, 2012. Neuropsychiatric symptoms in Parkinson's disease with mild cognitive impairment and dementia. Parkinson's Dis., 3: 1-10.
7. Surathi, P., K. Jhunjhunwala, R. Yadav and P.K. Pal, 2016. Research in Parkinson's disease in India: A review. Ann. Indian Acad. Neurol., 19: 9-20.