

A Comprehensive Overview of Parkinson's Disease and Homoeopathic Remedies: A Rubric-Based Analysis Using Homoeopathic Medical Repertory

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Abstract: *Parkinson's Disease (PD) is a neurodegenerative disorder characterized by motor and non-motor symptoms, resulting from the progressive loss of dopaminergic neurons. Parkinson's is the second-most common neurodegenerative disease after Alzheimer's disease. It is characterized by a progressive loss of dopaminergic neurons in the substantia nigra pars compacta. The typical indications and manifestations of Parkinson's disease generally do not appear until there has been a substantial loss of around 70-80% of dopaminergic neurons. Homoeopathy, a holistic system of medicine, treats the person through the individualization. This article explores the potential of Homeopathy, particularly using the Murphy Repertory, to manage PD comprehensively.*

Keywords: Parkinson's disease, Homoeopathy, Murphy repertory

1. Introduction

Parkinson's Disease (PD) is a globally prevalent condition and ranks among the most frequently encountered extra-pyramidal disorders. Parkinson's Disease (PD) was first described by Dr. James Parkinson in 1817 as a "shaking palsy" which was previously known as "Paralysis agitans".⁽¹⁾ According to the International Classification of Disease (ICD-10) PD is classified under extra-pyramidal and movement disorder with code G20. Parkinsonism is a clinical syndrome characterized primarily by bradykinesia, with associated increased tone (rigidity), tremor and loss of postural reflexes. Motor symptoms are the most common presenting features; non-motor symptoms particularly cognitive impairment, depression and anxiety become increasingly prominent as the disease progresses, and significantly reduce quality of life.⁽²⁾ Though the prevalence of PD in India is less compared to other countries,⁽³⁾ the total burden of PD is much higher as a result of large population. Homoeopathy doesn't treat particular symptoms or disease, it treat the person as a whole through the process of individualization. Homoeopathic Medical Repertory is a modern alphabetical repertory which helps in evaluating symptoms in both clinical as well as classical ways.

Epidemiology

Parkinson's Disease (PD) impacts both men and women, with a 1.5 times greater occurrence in men.⁽⁴⁾ Although men have twice the prevalence of PD than women, but the difference become less prominent in older age groups.⁽⁵⁾ The incidence of Parkinson's disease (PD) undergoes a substantial increase, ranging from 5 to 10 times higher, as individuals progress from their sixth to the ninth decades of life.⁽⁴⁾ The frequency of PD increases with age, but cases can be seen in individuals in their twenties and even younger, particularly when associated with a gene mutation.⁽¹⁾ Genetic

factors account for 5- 10% of cases.⁽⁶⁾ First-degree relatives of individuals with Parkinson's disease (PD) not only confers a 2-3 times increased risk of developing PD but also the susceptibility factors leads to the development of depression and anxiety disorders.⁽⁷⁾ Given the aging global population, it is projected that the prevalence of PD will witness a significant surge, potentially doubling within the next two decades. In 2019, global estimates revealed a population of over 8.5 million individuals living with Parkinson's disease. According to the most recent estimates, Parkinson's disease accounted for 5.8 million disability-adjusted life years (DALYs) in total, reflecting an 81% increase, and led to 329,000 fatalities, marking a surge of over 100% since the year 2000.⁽⁸⁾ A 2022 Parkinson's Foundation-backed study revealed that nearly 90,000 people are diagnosed with Parkinson's disease in the U.S. each year. This number is expected to rise to 1.2 million by 2030.⁽⁹⁾ When PD manifests with an onset before the age of 40-50, it is referred to as "young-onset PD," and if it occurs before the age of 20, it is termed "juvenile-onset PD."⁽¹⁾ Six monogenic forms of PD have been identified with alpha synuclein, Parkin, PINK1, and DJ-1 being related to early-onset PD, and LRRK2 and VPS35 being related to late-onset PD.⁽⁶⁾ The prevalence of these conditions tends to rise with age and the duration of PD.

Etiology⁽⁴⁾

Parkinsonism, a collection of motor symptoms resembling Parkinson's disease, can stem from various causes. The most common form is idiopathic Parkinson's disease, accounting for a 80% majority of cases. Other causes are from

- Cerebrovascular disease, which affects blood flow to the brain, can lead to parkinsonism.
- Drugs and toxins -includes older and 'atypical' antipsychotic medications, metoclopramide, prochlorperazine, tetrabenazine, sodium valproate,

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lithium, manganese exposure, and MPTP (methyl-phenyl-tetrahydropyridine)

- Other degenerative diseases- dementia with Lewy bodies, progressive supranuclear palsy, multiple system atrophy, corticobasal degeneration, and Alzheimer's disease, can also manifest similar motor symptoms.
- Genetic factors- including Huntington's disease, Fragile X tremor ataxia syndrome, dopa-responsive dystonia, spinocerebellar ataxias (especially SCA 3), and Wilson's disease.
- Anoxic brain injury, resulting from oxygen deprivation to the brain, is another potential cause of parkinsonian symptoms.

Pathology:

The distinctive pathological characteristics of Parkinson's Disease (PD) is loss of dopaminergic neurons in the substantia nigra pars compacta (SN) located in the midbrain and associated with Lewy bodies, which are cytoplasmic inclusions that include insoluble alpha-synuclein aggregation.⁽¹⁰⁾ Normal α -synuclein is a soluble small protein mostly located in axons and their presynaptic terminals, and usually binds to membranes of synaptic vesicles. Under certain conditions, α -synuclein loses membrane-attachment and begins to self-aggregate together with some additional proteins, forming spherical and thread-like Lewy bodies or Lewy neurites⁽¹¹⁾. This phenomenon is believed to be caused by either genetic or environmental factors, resulting in its toxic properties and the subsequent formation of Lewy bodies within the nigral cells. These Lewy bodies can also be observed in various brain regions such as the basal ganglia, brainstem, and cortex, and their prevalence increases as the disease advances. PD is categorized as a synucleinopathy, sharing this characteristic with conditions like multiple system atrophy and dementia with Lewy bodies. The decline in dopaminergic neurotransmission underlies many of the clinical manifestations associated with PD.⁽²⁾ These Lewy bodies disrupt the normal function and development of cells responsible for secreting dopamine. However, PD is characterized by more widespread pathology in other brain regions and involves non-dopaminergic neurons as well.⁽¹⁰⁾

Risk Factors

There are several risk factors and protective factors in the development of PD. Family history of PD and previous history of depression were the factors likely to predispose to PD. Environmental factors such as rural living, well water drinking, farming, and pesticide exposure also play a role in it. The attention to pesticide exposure as a potential risk factor for PD was raised in the 1980's, after the discovery that 1-methyl-4-phenyl-1,2,3,6- tetrahydropyridine (MPTP), a substance similar to the herbicide Paraquat, had caused irreversible parkinsonism in a number of patients.⁽¹²⁾ In India the only significant environmental risk factor seemed to be the well water drinking. Tobacco smoking and exposure to pets had a protective effect from PD.⁽¹³⁾ The most consistent association is a reduced risk of PD in cigarette smokers and also in tobacco users^(13, 14). Longer duration and greater frequency of tobacco use confer lower risk. Conversely, higher dietary intake of dairy products has been associated with a higher risk of PD, possibly due to the concentration of toxicants in milk⁽¹⁵⁾

Schizophrenia spectrum disorder elevates the likelihood of developing Parkinson's disease in later life. Consequently, despite their contrasting mechanisms related to dopamine, schizophrenia spectrum disorder actually raises the risk of Parkinson's disease instead of reducing it. This heightened risk might stem from the influence of dopamine receptor antagonists on risk factors or the increased susceptibility of the dopamine system, triggered by the phase-dependent dopamine dysregulation in schizophrenia or related spectrum disorders.⁽¹⁶⁾

Clinical Features⁽¹⁾

- 1) **Hypokinesia or bradykinesia:** Voluntary movements are slow to initiate, reduced, and they lack precision due to defective motor planning. The associated movements on walking such as swinging of the arms and movements of the body are considerably reduced. Though the voluntary movements are slow, the motor power is usually normal.
- 2) **Rigidity:** It is typically characterized by an increased muscular tone which results in stiffness in both the limbs and trunk. The rigidity is consistently present in the entire range of movement. When the rigidity is associated with increased tonicity at the beginning of the movement rigidity is called as "lead pipe" rigidity. When rigidity is associated with tremor, it is called as 'cogwheel' rigidity. Rigidity of the facial muscles gives rise to a 'mask-like facies' which means expressionless face and infrequent blinking.
- 3) **Tremor:** The characteristic tremor occurs at rest. Initially tremor is seen in the hands, but later this extends to the lower limbs. The thumb moves transversely across the tip of the flexed fingers rhythmically called as 'pill rolling tremor'.
- 4) **Alteration in posture:** There is alteration in the attitude of generalized flexion, which makes them stoop forward and also they walk with short steps and gain speed which tends to run forward. This type of gait is called as 'festinating gait'. Speech becomes slow and monotonous. There is lack of initiative and the patient tends to restrict his activity progressively.

The non-motor symptoms of Parkinson's disease include depression, anxiety, dementia, psychosis, insomnia, rapid eye movement, sleep-disorder, autonomic dysfunction, urological, constipation and sexual disturbances, sensory symptoms, dysphagia and gastric dysfunction.

The occurrence of depression in individuals with Parkinson's disease (PD) falls within the range of 20% to 35%. Suicidal thoughts are prevalent in approximately 17% to 30% of PD patients, a rate twice as high as that observed in the general population. Anxiety affects as many as 60% of PD patients. Visual hallucinations are reported in 22% to 38% of cases, while auditory hallucinations occur in a range of 0% to 22%. The overall prevalence of psychosis in PD spans from 26% to 82.7%. Apathy, which can manifest in the early stages of the disease, is found in PD patients at rates between 16.5% and 40%. Impulse control disorder (ICD) is reported in PD patients at varying rates, ranging from 35.9% to 60%. The prevalence of Parkinson's disease dementia (PDD) can be as high as 83%, and PD patients exhibit a 5-6 fold increased risk of dementia compared to healthy individuals. The

prevalence of these conditions tends to rise with age and the duration of PD.⁽¹⁷⁾ The most frequent causes of death among individuals with Parkinson's disease are related to factors such as disease severity, the presence of dementia, and pneumonia.⁽¹⁸⁾

Diagnosis

The clinical diagnosis of PD is made from history, clinical examination and through signs & symptoms. Presence of bradykinesia along with any of the 3 other cardinal signs of PD, i.e. rest tremor, rigidity and postural instability suggests PD.⁽¹⁾

Lab Investigation

The diagnosis is mainly through clinical evaluation. A positive response to medication, such as levodopa, can be a strong indicator of Parkinson's disease. Improvement in motor symptoms after taking medication is known as the "levodopa challenge." Imaging tests like Dopamine Transform Scan (DaTscan) or single-photon emission computed tomography (SPECT) can help visualize dopamine transporters in the brain. Reduced dopamine transporter activity in specific areas of the brain can support a diagnosis of Parkinson's disease. Other investigations such as CT, MRI, Positron Emission Test (PET) helps in ruling out the other illness.⁽²⁾

Management

Patients with Parkinson's disease, regardless of their stage, can experience significant advantages from physiotherapy, which aims to alleviate rigidity and address irregular posture. It has the potential to enhance the functioning and quality of life for individuals living with Parkinson's disease, which in turn can alleviate the burden on caregivers.⁽⁸⁾ Occupational therapists can offer assistance by providing equipment designed to surmount functional restrictions, such as stair and toilet handrails, as well as bathing aids. Speech therapy is beneficial in cases where dysarthria and dysphonia hinder communication, and individuals with dysphagia may also receive guidance.⁽²⁾

Miasmatic View

Dr. Hahnemann's explanation regarding the miasm known as "Psora" elucidates its characteristics as a chronic, ancient, and widespread ailment, often misunderstood. It has been afflicting mankind for thousands of years and has become the source of numerous acute and chronic non-venereal diseases that affect the entire civilized human population worldwide. Approximately 7/8 of all chronic illness are mostly Psora, while the remaining 1/8 can be attributed to syphilis, sycosis, a combination of any two of these three chronic miasmatic diseases, or exceptionally, a combination of all three.⁽¹⁹⁾

| Keywords | Psora | Sycosis | Syphilis |
|---------------------|----------------|-----------------------------|--|
| Paralysis | | Incoordination of movements | Degenerative changes with muscle wasting |
| Anxiety | Fear | | |
| Depression | | | Mental depression & melancholy |
| Dementia/forgetful | Recent, events | Words | Total forgetful |
| Memory | | Impaired | Destroyed, degeneration |
| Gut disturbance | Constipation | | |
| Bladder dysfunction | Enuresis | | |

From the miasmatic analysis Parkinson's disease is mostly of psoro-syphilitic nature.⁽²⁰⁾

Homoeopathic Medical Repertory

Homoeopathic Medical Repertory by Robin Murphy represents the clinical and experimental database for the practice of Homoeopathic medicine. Murphy's concept of totality embraces the principles of Kent's generals, Boenninghausen's complete symptoms, Boger's pathological generals & other stalwart's clinical principles of prescribing. The formatting for the Homoeopathic Medical Repertory is similar to Kent's Repertory with the strongest remedies designated in Bold Capitals (3 points), bold italics (2 points) & plain type (1 point).⁽²¹⁾ The purpose of using the Murphy's repertory is that this repertory is based on clinical and the classical approach and gives importance for clinical diagnosis.

RUBRICS ^(21, 22, 23, 24, 25, 26)

Clinical –Paralysis, Agitans, (See Parkinson's Disease):

Clinical- PARKINSON'S DISEASE (p-454): *Agar Ant-t Aran Aran-ix Arg-m Arg-n Ars Aur Aur-s Aven Bar-c Bufo Camph-br Cann-i Chlorpr Cimic Cocain Cocc Con Dubin Dubo-m Gels Halo Helo Hyos Hyosin Kali-br Kres Lath Levo Lil-t Lyc Mag-p Mang Merc Merc-s Nicot Nux-v Perh Phos Phys Plb Prun Psil Puls Rauw Reser Rhus-t scut Stram Syph Tab Tarent Thiop Thuj Zinc zinc-pic*

Clinical- PARKINSON'S DISEASE: Right, side (p-454):

Phos, Thuj

Muscles- Flabby, MUSCLES: Parkinson's disease, in (p-1744): Rhus-t

Pulse-SMALL, PULSE: Parkinson's disease, in (p-1870): Rhus-t

Pulse –SOFT, PULSE: Paralysis agitans, in (p-1871): Rhus-t

| MERCURIUS | RHUS TOXICODENDRON | ZINCUM METALLICUM |
|---|--|---|
| Trembling mainly of extremities. Trembling of hands and tongue. Constant trembling of hands can't hold them still for a moment. Weakness of hands; paralysis agitans. Great weakness of legs so that scarcely able to stand. Worse at night, during motion; better from rest. | Trembling of limbs after any exertion. Loss of power in forearm and fingers, crawling sensation in the tips of fingers; also tingling sensation in feet. Worse during sleep, cold, wet rainy weather, during rest. Better change of position, warmth, walking. | Trembling especially lower limbs. Violent trembling of the whole body especially after emotions, Chorea from suppressed eruptions, Trembling of hands while writing during menses, Lameness, weakness, trembling and twitching of various muscles, Feet in continued motion- cannot keep still, Aggravation form touch, between 5-7 pm., after dinner, fright, grief. |

| KALIUM BROMATUM | TARENTULA | ARGENTUM NITRICUM | AGARICUS MUSCARIUS |
|---|---|---|--|
| In coordination of muscles, nervous weakness or paralysis. Jerking and twitching of muscles. Spasms: from fright, anger or emotional causes in plethoric persons. Loss of sensibility in entire body; staggering, gait; feels as if legs were all over sidewalk. Restless; can't sit still, must move about or keep occupied; hands and fingers in constant motion; fidgety hand; twitching of fingers. | Restless feet. Extreme restless; must keep in constant motion even though walking aggravate. Weakness of legs; choreic movements. Numbness with trembling of legs. Twitching and jerking of muscles. Extraordinary contractions and movements. Worse motion, noise. Better music, rubbing affected parts. | In co-ordination, loss of control and want of balance everywhere, mentally and physically; trembling in affected parts. Cannot walk with eyes closed. Trembling, with general debility. Paralysis, with mental and abdominal symptoms. Walks and stands unsteadily, especially when unobserved. Numbness of arms. | Chorea, twitching or grimaces; from spinal affections. Uncertainty in walking, stumbles over everything in the way. Involuntary movements while awake, cease during sleep; chorea, from simple motions and jerks of single muscles to dancing of whole body; with trembling. Every motion, every turn of body, causes pain in spine. Paralysis of lower limbs, with spasmodic condition of arms. |

| GELSEMIUM | HYOSCYAMUS NIGER | PLUMBUM METALLICUM | PULSATILLA |
|---|--|---|--|
| The coordination of muscles is diminished and the muscles do not work according to the person's will. Nervous and sensitive person who get excited very easily from a sudden fear or emotions. Vigorous shaking of hands or the shaking of legs or tongue which is accompanied by excessive weakness, dullness & drowsy. Worse by sudden mental excitement. | Tremulous weakness and twitching of muscles, tendons. Substultus tendinum. Spasmodic affections with delirium. | Instability while walking, leading to tottering. The hands too start trembling. The hands remain cold with trembling and withering of hand muscles. Bradykinesia or slowness in movement. | Suffering worse from letting the affected limb hang down. Pain in limbs, shifting rapidly; tensive pain, letting up with a snap. Symptoms ever changing. |

Clinical- PARKINSON'S DISEASE: Right, side (p-454): Phos, Thuja

| PHOSPHORUS | THUJA |
|--|---|
| Degeneration and liquefaction of brain and spinal cord, producing complete paralysis of motion and sensation. Prostration, trembling, numbness, and complete paralysis. Wants to moves continually, can't sit or stand still a moment, fidgety all over affects every tissue. Paralytic weakness extending to both arms and legs, with trembling and numbness; paralysis of one or of both lower extremities or of the upper extremities. Limbs stiff like a foundered horse, especially in the morning. Paralysis with formication and tearing in the limbs. Trembling throughout the body from slight causes. Jerking and twitching of the muscles. Spasms of the paralyzed parts. Tearing, drawing, burning pains throughout the body. Staggering while walking as if intoxicated. Worse in cold weather. | Trembling of hands and feet. Limbs go to sleep. One-sided complaints ; paralysis Paresis and atrophy of right leg with considerable coldness. Involuntary jerking of arm during day. Rapid exhaustion and emaciation. When walking, limbs feel as if made of wood or glass, and would break easily. Muscular twitching, weakness and trembling. |

2. Conclusion

In modern medicine, Parkinson disease is usually controlled only by Anticholinergic drugs, but these can also produce other ill effects in the body such as decreased gut motility⁽²⁷⁾, bladder dysfunction and dryness mouth⁽²⁸⁾. The sole objective is to help the patient to diminish the dose of anti-cholinergic drugs or to reduce their intensity of tremors or to help in their rigidity or stiffness. From Homoeopathic point of view, combination of the L-dopa, a conventional medicine used by allopaths for PD and Homoeopathic remedy is exclusively compatible and often beneficial. In early stage Homoeopathy can be used to stabilize the disease and delay its deterioration and also lessen its complications. Counseling and rehabilitation also play a major role in management of this disease.

By this work I have given a brief introduction on Parkinson's disease, its etiology, clinical and diagnostic features and its miasmatic view and the utility of Homoeopathic Medical Repertory by exploring the rubrics and highlighting the differentiating points of the related remedies.

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