

A GENERAL REVIEW OF: THE HERBS ASHWAGANDHA BY USING THE TREATMENT OF PARKINSON'S DISEASE

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ABSTRACT

Ashwagandha is also known as the *Withania somnifera* which is belong to a family of Solanaceae and the biological source is obtained by the root of *Withania somnifera*. *Withania somnifera* is an herb that is mainly found in Asia and Africa. It is mainly used in the treatment of neurodegenerative disorders such as Parkinson's disease. Parkinson's disease is a neurodegenerative disorder that decreases the level of dopamine in the brain (mid-brain) it is world worldwide spread disease at present more than 10 million people suffer to the disease. Parkinson's disease symptoms such as tremors, bradykinesia, stiffness, unstable posture this mainly happens in age of 50 years old persons. It is more in males compared to females so we use herbal drugs to treat this disease because herbal drugs have fewer symptoms and no side effects and patients can take easily. The ashwagandha, the traditional system of medical practice in India, can be traced back to 6000 BC. Ashwagandha has been used as Rasayana it is mainly used for Parkinson's disease, such as memory loss, and induced disease.

KEYWORDS: Herbal drug, ashwagandha, parkinson's disease, narcotic.

INTRODUCTION

Parkinson's disease is a neurological disorder that is the main cause of the decreased level of dopamine In the brain straitum or substantia nigra pars compacta In the ventral midbrain.

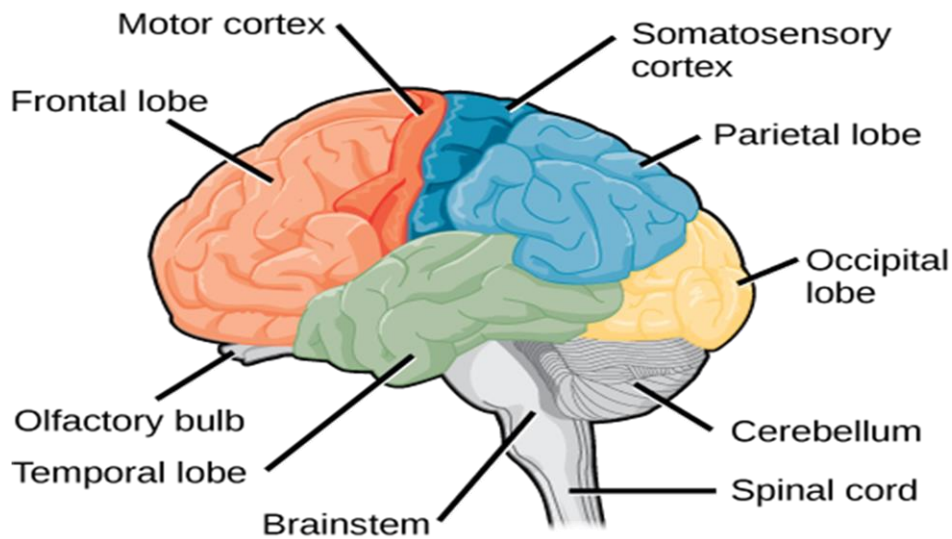
Parkinson's disease is a worldwide disease that affects more than 10 million people, this disease is mainly caused by tremors. Bradykinesia. Rigidity, so the difficulty in initiating movement.

Parkinson's was first discovered as a neurological syndrome by James Parkinson in 1817. Parkinson's disease is the loss of dopaminergic neurons, the reduction of dopamine being released in the brain straitum as paralysis agitans or shaking palsy. Parkinson's disease was coined later by Jean-Martin Charcot in the 19th century.

The neurological disorder is treated with synthetic drugs and herbal drugs but herbal drugs have fewer side effects compared to synthetic medicine, nowadays brain disorders diseases spread widely in the world more than 10 millions people are affected with Parkinson's. If this continues in future more than 15 millions, it's safe to use herbal medicine which is obtained from the herb's root of Ashwagandha (*Withania somnifera*).

Parkinson's disease results in a high rate of disability under the need for care many people with Parkinson's disease also develop dementia.

The etiology of Parkinson's disease is unknown but people With a family history of the disorder have a higher risk exposed to air position pesticides.



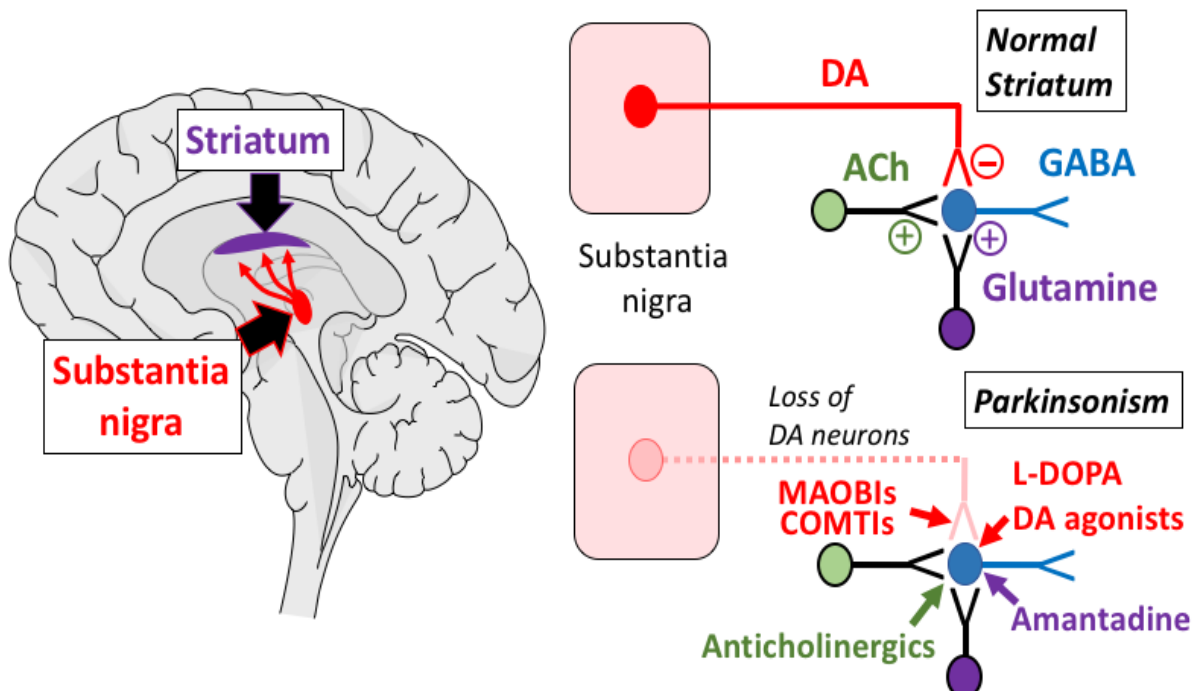
FUNCTIONS OF BRAIN

- Thinking or cognition
- Emotional feeling
- Behaviour
- Physical and somatic
- Signaling
- And control the entire body

PARKINSON'S DISEASE

Parkinson's disease is a Progressive neurodegenerative disorder that affects movement control it typically develops gradually with symptoms worsening over time the primary cause of Parkinson's disease is the loss of dopamine-producing neurons in the brain particularly in a region called substantia nigra.

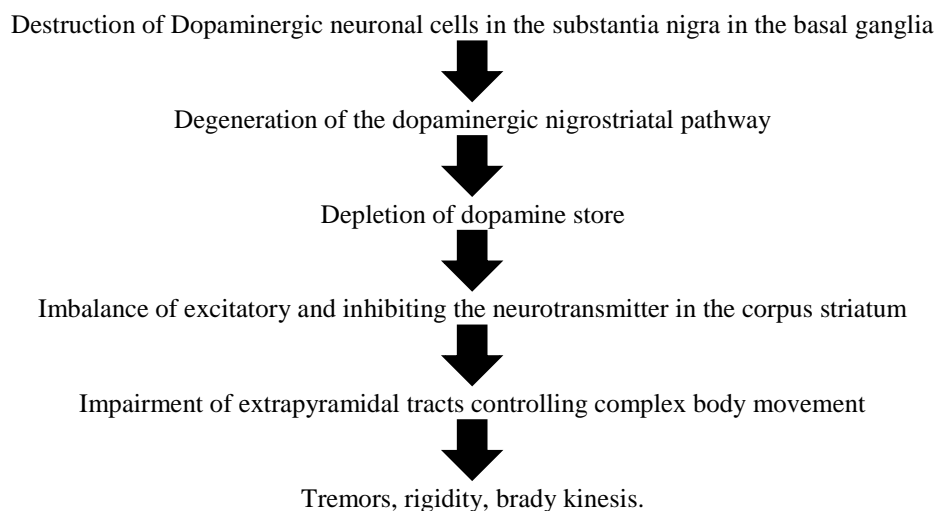
MECHANISM OF ACTION



Common symptoms of Parkinson's disease include.

- 1) Tremors
- 2) Brady kinesia
- 3) Muscle rigidity
- 4) Nonmotor symptoms
- 5) Postural instability

The exact cause of Parkinson's disease remains unclear but a combination of genetic and environmental factors likely contributes to its development age is also a significant risk factor with most people being diagnosed after the age of 60.



ASHWAGANDHA

Ashwagandha is a traditional medicine of ayurvedic. Which is mainly found in Asia and Africa and is also known as the withania somnifera or winter cherry. It is mainly obtained in the root of the Withania somnifera. Which belongs to the family of Solanaceae. The

ashwagandha is mainly used in the treatment of brain disorders disease. such as Parkinson, 's disease, Alzheimer's disease, etc.

Family: Solanaceae.



MORPHOLOGY

Color: Greyish yellow

Odour: faintly pungent and characteristic

Taste: mucilaginous and bitter

Shape: conical, cylindrical shapes

Size: length 10-17mm

PHYTOCONSTITUENTS OF ASHWAGANDHA

Ashwagandha contains various phytochemicals that are secondary metabolites the therapeutic potential of ashwagandha is attributed to antioxidant properties ashwagandha also known as the Indian Ginseng among all with analysis present in Withania somnifera roots extraordinarily is the first member of the withanolides family which is isolated from Withania Somnifera.

Ashwagandha has nutritional chemical content and is responsible for medicinal properties.

Ashwagandha reported several assorted phytochemicals such as alkaloids phenolic and flavonoids with withanolides and withaferin flavonoids and also including various withanolides such as withanolides A with a withaferin A, withanolides D, withanolides E.

NEUROPROTECTIVE ACTIVITY OF ASHWAGANDHA

As known many processes have documented the properties of Ashwagandha supplementation as therapeutic for the treatment of many neurological disorders ashwagandha has shown symptoms and pharmacological action in 6- hydroxy dopamine Increase in Parkinson's disease by this antioxidant action as

evident exhaustion of liquid development and better thiol levels (such as GSH and GSSG) in the Parkinson's disease. *Withania somnifera* (ashwagandha) has been shown to reduce neuronal disease and oxidative stress in the Parkinson disease shown many sign and symptoms which is reduced by the *withania Somnifera* in the Parkinson disease.

ASHWAGANDHA MECHANISM OF ACTION

In Parkinson's disease, the main work of the *Withania Somnifera* binds with the D2- receptor and increases the activation of the D2- receptor then increases the dopamine level in the brain and increases the activity of the immune system and also improves psychological abnormalities seen in Parkinson's disease and sometimes the *Withania Somnifera* bind with the D2- receptors and increase brain antioxidant enzyme levels which is inhibition of oxidative stress-induced cell death and also *Withania Somanifera* induced lipid peroxidation provide nutrition in nerve cell and regenerate nucleus and reconstruct synapses in brain. *Withania somnifera* has been reported to improve neurotransmitter level antioxidant status and lower oxidative stress in animal models of Parkinson's disease.

ROLE OF WITHANIA SOMNIFERA IN PARKINSON DISEASE

Parkinson's disease is a neurogenerative disease that is characterized by muscle rapid rigidity bradykinesia and tremors in this disease the decreased dopamine level in the brain reason is involved in the control motor function responsible for the development of Parkinson's disease and the oxidative stress is the main factor of the Parkinson disease.

Withania somnifera is used in disease for the increased lipid peroxidation to reduce glutathione and activities of glutathione's transferase glutathione reductase and catalyzed catecholamine content and dopaminergic D2 receptor binding and hydroxylase expression in 6-hydroxyl dopamine Induced model of Parkinson's disease in a dose-dependent manner the main role of the *Aswagandsha* in Parkinson disease for treatment and increase the level of dopamine.

CONCLUSION

At the end of the article, we know that Parkinson's disease is a neurodegenerative disorder and is a common disease worldwide disease this disease is overcome by *ashwagandha* (*Withania somnifera*) stress-reducing properties and it helps to manage anxiety and depression helps cure Parkinson's disease as soon as possible and have no side effect compare to synthetic medicine.

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