A Critical Integrative Review of Ashwagandha (*Withania somnifera* (L.) Dunal) as an Ayurvedic Rasayana

Dr. Sangita, Dr. Omprakash Sharma, Dr. Sangeeta Kuri

Post Graduate Scholar, Professor and H.O.D., Assistant Professor

Department of Dravya Guna Vigyan

Sri Ganganagar College of Ayurvedic Science and Hospital, Tantia University, Sriganganagar

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ABSTRACT:-

Ashwagandha (Withania somnifera), one of the most revered *Rasayana* drugs in *Ayurveda,* has been traditionally used for enhancing longevity, vitality, and resistance to stress. Classical *Ayurveda* texts such as the *Charaka Samhita* and *Bhavaprakasha Nighantu* extensively describe its therapeutic applications in *Balya*, *Medhya*, and *Vajikarana* contexts. To provide an in-depth critical review of the *Ayurvedic* pharmacological attributes of *Ashwagandha* and correlate them with contemporary pharmacological and clinical evidence, a comprehensive review of classical *Ayurveda* texts and modern biomedical literature, including PubMed-indexed articles up to 2025, was conducted. *Ashwagandha* exhibits a wide range of pharmacological activities, including adaptogenic, anti-stress, neuroprotective, immunomodulatory, anti-inflammatory, endocrine-regulating, cardioprotective, and anticancer effects. These findings strongly support its traditional indications in chronic stress, neurodegenerative disorders, reproductive health, and metabolic dysfunction. *Ashwagandha* demonstrates a remarkable convergence between Ayurvedic principles and modern scientific evidence. Its multidimensional therapeutic potential makes it a cornerstone herb in integrative medicine.

Keywords:- *Ashwagandha, Withania somnifera, Rasayana, Ayurveda*, Adaptogen, Neurodegenerative

Introduction:-

Ashwagandha (Withania somnifera), often referred to as “Indian ginseng”, is one of the most extensively studied medicinal plants in *Ayurveda*. It is also known as Indian winter cherry.(1) Its leaves resemble the ear of pigs and the roots are characterized by a horse like odour. The raw material used in medicine is the roots. It is categorized as a *Rasayana*, which implies its role in promoting longevity, enhancing immunity and maintaining physiological equilibrium.(2) It belongs to Solanaceae family and *Kantakari Kula*. It is found through out the drier parts of India. Its roots are used as a diuretic, narcotic, tonic, aphrodisiac, anthelmintic and stimulant. (3) Ashwagandha root has the smell of horse and also improves aphrodisiac activity of the person who consumes it.(4)

According to *Ayurveda*, health is maintained through balance among *Dosha*, *Dhatu*, and *Agni*. It is an ancient medicinal shrub traditionally used in Ayurveda to relieve stress, boost energy and promote overall vitality. Ashwagandha primarily acts on *Vata dosha* and supports *Dhatu poshana* (tissue nourishment), making it especially useful in degenerative and stress related disorders.[5]

Materials and Methods:-

Classical *Ayurveda* literature like *Charaka Samhita, Sushruta Samhita, Ashtanga Samgraha, Bhavaprakash Nighantu, Raj Nighantu, Adarsha Nighantu, Kaiyadeva Nighantu* etc. was critically reviewed alongside modern biomedical data from PubMed-indexed studies up to 2025, focusing on pharmacological, clinical, and mechanistic insights.

Ayurveda Classification:-

Classification of Withania somnifera in Ayurveda Samhita:-

- ***Charak Samhita* :-** Balya, Brimhaniya, Madhuraskanda[6]
- ***Sushrut Samhita* :-** Not mentioned in Gana[7]
- ***Bhavaprakasha Nighantu* :-** Guduchyadi Varga[8]

Basonym of Drug :-

Ashwagandha root has the smell of horse and also improves Aphrodisiac activity of the person who consumes it.

Synonyms :-

- ***Gandhapatri*:-** The leaves have a characteristic horse like smell.
- ***Varahakarnii*:-** It leaves resembles pig's ears.
- ***Ashwakanda*:-** The roots smells like horse or on consuming it imparts sexual power like a horse.
- ***Haya ahva:-*** Synonyms of horse may be attributed to *Ashwagandha.*
- ***Ashwawarohaka*:-** It promotes sexual power better than horse.
- ***Kushtha gandhini :-*** The roots have a specific odour.
- ***Kanchuka*:-** It increases and retains *shukra.*
- ***Kamarupini:-*** It gives good look to the person who consumes it.
- ***Putrada:-*** It increases the potency and quality of *Shukra* (Sperm) there by increases the chances of progeny.
- ***Balada:-*** It imparts strength.
- ***Marutaghni*:-** It is useful in *vata* disorders.
- ***Vrishya:-*** It increases sexual potency.[9]

Regional \ Vernacular Names :-

English Name :- Winter cherry
Hindi :- Asagandha
Kannada :- Hiremaddina gida
Malayalam :- Amukkuram
Marathi :- Askandha

Habitat:-

Withania somnifera Dunal is found throughout the dry regions of India, in West places, West Bengal, Bihar, Gujarat, Orissa, Konkan, Deccan and Karnataka. It grows in semi-tropical areas receiving 500-700 mm rainfall. Crop requires relatively dry season during its growing period.[9]

Morphology:-

- **Habit:-** A much branched wild perennial herb.
- **Root:**- Tap-root branched.
- **Stem:**- Aerial, erect, cylindrical, branched, herbaceous above, woody below, densely covered with fine stellate hairs.
- **Leaf:**- Cauline and ramal, alternate or in unequal pairs, ovate, ovate-oblong, or ovate lanceolate, entire, acute or obtuse, tapering to the base; petiolate, petiole thick and long; reticulate unicostate ventation, covered with glandular branched hair.
- **Inflorescence:**- Sub-sessile, axillary umbellate, 5-flowered cyme.
- **Flower:**- Greenish-yellow, subsessile, pedicellates, complete, bisexual, pentamerous, actinomorphic and hypogynous.
- **Calyx:**- 5-Sepals, gamosepalous, campanulate (bell shaped), tomentose.
- **Corolla:**- 5-Petals, short, campanulate, greenish yellow in colour.
- **Androecium:**- Stamens 5, free
- **Gynoecium:**- Bicarpellary, syncarpous, superior, bilocular and axile placentation.
- **Fruit:**- Small berry, globose, yellow or red when ripe.
- **Seed:**- Endospermic.
- **Root:**- Cylindrical, straight or slightly tortuous, mostly unbranched roots, 5 to 8 mm in diameter, occurring whole or in pieces of varying length; upper portion of the roots are more often topped with stem bases. Outer surface fawn coloured or light brown, finely wrinkled longitudinally: a transversely cut portion of the root shows a creamish starchy surface with a thin, closely adhering bark, followed by a narrow cortex and a large woody portion cortex and a large woody portion surrounded by a prominent cambium ring of brownish colour.[9]

Rasadi Panchaka[10]:-

• *Rasa*	• *Tikta, Kashaya*
• *Guna*	• *Laghu, Snigdha*
• *Vipaka*	• *Madhura*
• *Virya*	• *Ushna*
• *Dosha-Karma*	• *Vatahara, Kaphahara*

Parts Used:- *Mula* (Roots)[9]

Chemical Constituents:-

- ❖ Roots have Somniferine, Somniferinine, Withanine, Nicotine, Withaniol (Steroidal lactone),Withasomnine (Pyrazole alkaloid), Tropine, Withanolide (Steroidal lactones).
- ❖ Seeds have Withanolide, Withaferine A.[9]

Pharmacological Activities:-

Neuroprotective and Anti-Neurodegenerative Effects:-
Ashwagandha is used in Alzheimer`s Disease, Parkinson`s Disease, Huntington`s Disease.[11]
Ashwagandha is used in treatment of Obsessive-Compulsive Disorder, Alcohol Withdrawl Syndrome.[12]
Anti-inflammatory effects:-
Ashwagandha is used in many diseases associated with inflammation in the body, such as cardiovascular, Pulmonary disease, autoimmune diseases and diabetes, cancers and neurodegenerative diseases.[13]
Antibacterial Properties:-
Withania somnifera root extract effectively inhibit the growth of the Gram negative bacteria Escherichia coli, Proteus mirabilis, Pseudomonas aeruginosa,Salmonella typhi, Citrobacter freundi and Klebsiella pneumoniae.[14]
In treatment of Male Infertility:-
Withania somnifera increases sperm count, semen volume and sperm motility in men.[15]
Anticancer Effects:-
Withaferin A derived from Ashwagandha shows the effects in the treatment of melanoma, glioblastoma multiforme and breast cancer.[16]
Antidiabetic activity:-
Ashwagandha possess the anti diabetic properties due to Withaferin A present in seeds.[17]

Cardioprotective Properties :-
Withania somnifera possess the cardioprotective property due to Withaferin A present in seeds.[18]

Anxiolytic and Anti-stress Properties:-
Ashwagandha shows anxiolytic effects by decreasing the activity of the Hypothalamic -Pituitary -Adrenal axis. Withania somnifera extract shows effects in the treatment of patients with anxiety disorders, depression and schizophrenia.[19]

Treatment of Hypothyroidism:-
Withaferin A present in seeds of Ashwagandha stimulates thyroid activity and shows effects in patients with subclinical Hypothyroidism.[20]

Dose:-

Churna (Powder) -3 to 5 gm.[9]

Therapeutic Indications:-[9]

S.NO.	Name	Indications
1.	*Ashwagandhadaya Ghrita*	*Vata Vyadhi, For Vrishya Karma*
2.	*Ashwagandhadi Kwatha*	*Rajayakshama*
3.	*Ashwagandhadyarishta*	*Murcha , Apasmara*
4.	*Ashwagandha Rasayana*	*In Karshya , as a Rasayana*
5.	*Ashwagandha Taila*	*Vata Vyadhi , Karshya, Raktapitta*
6.	*Ashwagandhadi Lepa*	*Vrana Shotha*
7.	*Ashwagandhadi Churna*	*Pandu, Kshaya, Arshas*
8.	*Ashwagandhadi Lehya*	*Karshya , Daurbalya*
9.	*Balashwagandhadi Taila*	*Vata Roga, Anga Daha*
10.	*Vajikarana Ghrita*	*As a Vrishya*

Toxicology:-

Ashwagandha is generally safe and well tolerated. Mild adverse effects such as gastrointestinal discomfort may occur at higher doses. Long-term safety has been supported by clinical trials. [21]

Conclusion:-

Ashwagandha is an *Ayurveda* herb that has been used for centuries in traditional medicine systems. Unlike single target drugs, *Ashwagandha* acts on multiple pathways, making it particularly suitable for chronic, multifactorial diseases such as stress disorders, metabolic syndrome and neurodegeneration. Current scientific and clinical evidence concludes that *Ashwagandha* is a generally safe and effective adaptogenic herb for short term use, offering well supporting benefits for reducing stress, lowering cortisol levels and improving sleep quality.

References:-

1. Singh N., Bhalla M., de Jager P., Glica M. An overview on Ashwagandha: A Rasayana (Rejuvenator) of Ayurveda. Afr. J. Tradit. Complement. Altern. Med.2011;8: 208-213. Doi :10.4314/ ajtcam. v8i5S.9.
2. Prof. P.V. Sharma, "Dravyaguna Vigyan" Vol-II Chaukhambha Bharati Academy Varanasi, 16th Edition 1994.
3. Langade D., Kanchi S., Salve J., Debnath K., Ambegaokar D, Efficacy and Safety of Ashwagandha (Withania somnifera) Root Extract in Insomnia and Anxiety: A Double blind, Randomised, Placebo- controlled Study.Cureus.2019;11 : e5797. Doi:10.7759/cureus.5797.
4. Polumackanycz M., Forencewicz A., Wesolowski M., Viapiana A. Ashwagandha (Withania somnifera L.) -The plant with proven health -promoting properties. Farm.Pol.2020;76:442-447. Doi:10.32383/farmpol/127824.
5. Acharya P.V. Sharma & Dr. Guru Prasad Sharma, Kaiyayadev Nighantu, Chaukhambha Orientalia, Aushadhi Varga; Edition 2006.
6. Charaka Samhita of Agnivesha, Hindi Commentary by Pandit Kashinath Shastri & Dr. Gorakha Nath Chaturvedi; Part-1 Chaukhambha Bharti Academy; reprint, 2015.
7. Sushruta Samhita of Maharishi Sushruta; by Kaviraj Ambika Dutta Shastri; foreword by Dr. Pranajivana Manekchanda Mehta; Part-1 Chaukhambha Sanskrit Sansthan ; reprint, 2017.
8. Bhavaprakasha Nighantu of Shri Bhavmishra; Commentary by Prof. K. C. Chunekar; Edited by Dr. G.S. Pandey; Chaukhambha Bharati Academy; reprint 2020.
9. A Textbook of Dravyaguna Vigyana Part-2 NCISM2023 Dr. Prakash L.Hegde, MD (Ayu.) Ph.D. (Ayu.) Dr. Harini A., M.D.(Ayu) P.72-78.
10. Prof. P.V.Sharma , Priya Nighantu, Chaukhambha Orientalia, Varanasi.
11. Tiwari S., AtluriV., Kaushik A., Yndart A., Nair M. Alzheimer's disease: Pathogenesis, Diagnostics and Therapeutics. Int.J.Nanomed 2019; 14 : 5541-5554.doi:10.2147/IJN.S200490.
12. Borkowska A. Dysfunkcje Poznawcze w zaburzeniu obsesyjno - kompulsyjnym. Psychiatr. Psychol. Klin. 2005; 5:66-78.
13. Dar N.J., Hamid A., Ahmad M. Pharmacologic overview of Withania somnifera, the Indian Ginseng. Cell Mol. Life Sci. 2015; 72: 4445-4460. Doi: 10.1007/s00018-015-2012-1.
14. Kumari M., Gupta R.P. In vitro antibacterial effect of withania somnifera root extract on Escherichia coli. Vet. World. 2015 ;8:57. Doi: 10.14202/vet world . 2015.57-60.
15. Mahdi A.A., Shukla K.K., Ahmad M. K., Rajender S., Shankhawar S.N., Singh V., Dalela D. Withania somnifera improves semen quality in Stress -Related Male Infertility. Evid. Based. Complement. Alternat. Med. 2011; 2011: 576962. Doi : 10. 1093/ecam/nep138.
16. Singh N., Yadav S.S., Rao A.S., Nandal A., Kumar S., Ganaie S.A., Narasihman B. Review on anticancerous therapeutic potential of Withania somnifera (L.) Dunal. J. Ethnopharmacol. 2021; 270: 113704. Doi: 10.1016/J.Jep. 2020. 113704.

17. Jain S., Pandhi P., Singh A.P., Malhotra S. Efficacy of standardized herbal extracts in type -I Diabetes – An Experimental Study. Afr. J. Tradit. Complement. Altern. Med. 2006; 3: 23-33. doi: 10.4314/ajtcam.v3i4.31174.
18. Mohanty I.R., Arya D.S., Gupta S.K., Withania somnifera provides cardioprotection and attenuates ischemia- reperfusion induced apoptosis. Clin. Nutr. 2008; 27: 635-642. Doi: 10.1016/j.clnu. 2008.05.006.
19. Pratte M.A., Nanavati K.B., Young V., Morley C.P. An alternative treatment for anxiety: A systematic review of human trial results reported for the Ayurvedic herb Ashwagandha (Withania somnifera) J. Altern. Complement. Med. 2014; 20: 901-908. Doi: 10.1089/acm. 2014. 0177.
20. Sharma A.K., Basu I., Singh S. Efficacy and safety of Ashwagandha Root Extract in Subclinical Hypothyroid Patients : A Double Blind, Randomised Placebo -Controlled Trial. J. Altern. Complement. Med. 2018; 24: 243-248. Doi:10.1089/acm. 2017.0183.
21. Lopresti AL, et al, Medicine (Baltimore). 2019; 98: e17186. doi: 10.1097/ MD. 00000017186.