

### Benifits of Herbal Medicine in Spinal Cord Disorder- A Review

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#### Abstract

Medicinal plants have always been a part of mankind. Many herbs specifically support and nourish the nervous system and some of them beneficial in spinal cord. The most common cause of spinal cord injury is road traffic accident that causes injury to the spinal cord. Due to this several number of patient loss their daily routine work. The purpose of this systematic review is to collect the evidence based information of ayurvedic herbs useful in spinal cord disorder and represent in systematic manner.

#### Keywords

*Spinal, Cord, Herbal, Parijatak, Haridra, Ashwagandha*



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## INTRODUCTION

Mankind has used medicinal plant to cure diseases and relieve physical suffering since time immemorial. Medicinal plant knowledge has usually resulted from trial and error and was based on speculation and superstition. This primitive observation helped early physicians in their work. Medicinal plants possessing active chemical constituents give a definite cure or physiological response in treatments of various ailments in human. Ayurveda the the Science of life is based on the Tripartite (Triskandha)<sup>1</sup> that are Hetu (causes), Linga (symptom), Aushadh (Drug). Knowledge the eight branches of Ayurveda developed. In each specialty dravyaguna (Pharmacology) formed an integral part. Dravyaguna is comprehensive discipline, which embraces various aspects of knowledge about the identification, collection and classification of drugs; their physical and chemical properties; biotransformation and metabolic activities; their uses, dosage and therapeutic action.

Today Dravyaguna mainly deals with drugs specially the plant and animal origin and their actions. The dravya (drug) performs certain action (karma) in the body by virtue of its properties (Guna) which exist in it in a

state of coherence (Samavaya). The uniformity or other wise of the proto elements (mahabhutas) of the drug on one hand and the proto elemental constituents of the body on the other hand from the basis of the principles of similar and dissimilar (samanya and vishesh)<sup>2</sup>. While treating various diseases this concept is very important.

Despite amazing advances in treatment of many diseases, man has not yet managed to treat some medical problems. Spinal cord diseases are one of the problems of today's medicine. World health organization (WHO) has enumerated use of traditional medical treatments authorized for documented and substantiated cases. In ayurvedic traditional medicine there have been some different treatment methods which which have been used. Some of the medicinal plants have been presented in this paper. These plants (dravya) have as per ayurvedic traditional medicine been utilized for paralyzed patient, some research work performed on these plant, that have been proved that it gives significant result in spinal cord diseases.

## HARIDRA



Latin name - *Curcuma longa* Linn.

Family – zingiberaceae

English name – Turmeric

Sanskrit name – Haridra

Properties and Action-

Chemical composition- Curcumin

Rasa- Katu,Tikta

Vipak- Katu

Virya- Ushna

Guna- Ruksha

Dose - According to API =1-3 gm.of the drug in powder form.<sup>3</sup>

Haridra consist of dried and cured rhizome of *Curcuma long* Linn. A perennial herb extensively cultivated in india. The active principle present in Haridra (*Curcuma long* Linn.) is *Curcumin*.It protects spinal cord against the ischemic spinal cord injury. The research was conducted by Department of pharmacy and neurosurgery,Union hospital china<sup>4</sup>. Inducible nitric oxide synthase and N-methyl-d-asparate receptors have been shown to participate in nerve cell injury

during spinal cord ischemia.This study observed a protective effect of curcumin on ischemic spinal cord injury.Model of spinal cord ischemia were established by ligating the lumber artery. At 24 hours after model establishment, the Rats were intraperitoneally injected with Curcumin. Reverse transcription –polymerase chain reaction and immunohistochemical result demonstrated that curcumin significantly decreased Inducible nitric oxide synthase and N-methyl-d-asparate receptors level.

### ASHWAGANDHA



Latin name – Withania somnifera

Family – Solanaceae

English name –

Sanskrit name – Vajigandha

Properties and action –

Chemical composition - Withanolide

Rasa – Tikta, kashay

Vipak–Madhura

Virya-Ushna

Guna – Laghu<sup>5</sup>.

Ashwagandha consist of dried mature roots of *Withania somnifera Dunal*. A perennial shrub, found in waste land, cultivated field and open grounds throughout india, widely cultivated in certain areas of Madhya Pradesh and Rajsthan, roots collected in winter season. The active principle present in Aswagandha is Wiythnolide. Experimental study has been proved that oral treatment with withanolide improve locomotor function in mice with spinal cord injury. In mice treated treated with withanolide IV (10 miromol/kg/day for 21 days ), the axonal density and peripheral nervous system mylin level increased<sup>6</sup>.

## PARIJATAK



Latin name – *Nyctanthes arbortristis Linn.*

Family –Oleaceae

English name – Night jasmine

Sanskrit name – Parijatak

Properties and action –

Chemical composition – Leaves- methyl salicylate

Rasa – Tikta, Katu

Vipak – Katu

Virya – Ushna

Guna – Laghu<sup>7</sup>.

*Nyctanthes arbortristis* Linn. is a mythological plant having high medicinal usage for treating fever, arthritis and sciatica. Multicenter trial on sciatica manegment by *Nyctanthes arbortristis* by Chawardol seema, et al. was conducted in his institute. The tablet prepared from leaves powder of *Nyctanthes arbortristis* significantly relives pain threshold in sciatica patient and increase the degree of SLR<sup>8</sup>.

## CONCLUSION

The above work cited in article revealed importance of herbal medicine in spinal cord diseases. The further study on these plant required to prove its action *in vivo*.

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