

Effect of Shadanganiya in Various Systems: A Review

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ABSTRACT

Ayurveda has mentioned many *kalpanas* one among them is *Paniya kalpana*. It comes under *Upakalpana* of *Kwatha*. It is regarded as the most beneficial and potent because it is very easy to digest and readily absorbed by bodies. *Agni* is most important component and govern its healthy and unhealthy status. In a healthy state, *Sharira* maintains regular physiological functioning; when it is impaired, *Sharira* results in various ailments. *Shadanganiya* is a special formulation that controls all the aforementioned aspects. Six herbs, including *Musta*, *Parpataka*, *Ushira*, *Chandana*, *Udichya*, and *Nagara*, make up the *Shadanganiya*, it acts on the various physiological systems like Nervous system, Respiratory system, Digestive system etc.,

KEYWORD: *Shadanganiya*, *Paniya kalpana*, Nervous system

INTRODUCTION

Plants have long been an essential source of natural products for human health, as well as the cheapest and safest forms of treatment for various disorders. Plant-based medications are high in health-promoting and therapeutic properties. Infectious diseases are the leading cause of death and morbidity, and they are a serious public health concern due to poor antibiotic use and bacterial resistance. *Ayurveda* is a medical healthcare system that is practiced around the world, particularly in South East Asian countries. *Shadanganiya* is a well-known *Ayurvedic* treatment for it. It alleviates excessive thirst, sweat, and a burning sensation. It is an aqueous decoction of a polyherbal preparation containing six herbs in equal parts. It is used in *Pittashamaka* therapy and is recommended in *Jwar Roga*. Each herb has its own scientific justification, but combining six herbs is give excellent results in various ailments.

SHADANGA PANIYA:

मुस्तपर्पटकोशीरचन्दनोदीच्यनागरैः

शृतशीतं जलं दद्यात् पिपासाज्वरशान्तये¹

Table no.1: Content of *Shadanga Paniya* with their *Rasapanchaka*, taxonomy and *Gana*

S. No	DRUG	BOTANICAL NAME	FAMILY	PART USED	GANA	RASA	GUNA	VEERYA	VIPAKA	DOSHA
1.	<i>Musta</i>	<i>Cyperus rotundus</i> ⁱⁱ	Cyperaceae	Root	<i>Lekhaniya, Trishna Nigrahana, Kandughna, Stanya Shodana</i>	<i>Tikta, Katu, kashaya</i>	<i>Laghu, Ruksha</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Kapaha Pitta hara</i>
2.	<i>Parpataka</i>	<i>Fumaria parviflora</i> ⁱⁱⁱ	Fumariaceae	Whole plant	<i>Trishna Nigrahana, Daha Prashamana</i>	<i>Tikta</i>	<i>Laghu, Ruksha</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Kapaha Pitta hara</i>
3.	<i>Ushira</i>	<i>Vetivera zizanioides</i> ^{iv}	Graminae	Root	<i>Varnya, Stanya Janana, Chardhi Nigrahana, Dahaprashamana, Angamardap rashamana, Suklashodana, Tiktha Skandha.</i>	<i>Tikta, Madhura</i>	<i>Laghu, Ruksha</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Kapaha Pitta hara</i>
4.	<i>Rakta Chandana</i>	<i>Pterocarpus santalinus</i> ^v	Santalaceae	Wood	<i>dahaprashamana, angamardap rashamana, trishna nigrahana, varya, kandughna.</i>	<i>Tikta, Madhura</i>	<i>Laghu, Ruksha</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Kapaha Pitta hara</i>
5.	<i>Udichya</i>	<i>Pavonia odorata</i> ^{vi}	Malvaceae	Root	<i>Daha Prashamana, Trishna Nigrahana.</i>	<i>Tikta</i>	<i>Laghu, Ruksha</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Kapaha Pitta hara</i>
6.	<i>Nagara</i>	<i>Zingiber officinale</i> ^{vii}	Zingiberaceae.	Rhizome	<i>Triptighna, arshoghna, deepaniya.</i>	<i>Katu</i>	<i>Ruksha, Guru, Tikshna</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Vata</i>

										<i>Kap hahr a</i>
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EFFECT OF SHADANGAPANIYA IN DIFFERENT SYSTEM

1. Nervous System

- Cyprus extract possesses significant CNS depressive, neuroprotective, and nervine tonic effects. Excitotoxicity, oxidative stress, neurological development, and neurodegeneration prevention therapy all exhibited significant benefits.
- *Ushira* and *Musta* are nervine tonics. *Musta* is used to treat convulsions and brain injury in conjunction with milk paste. Pentylene-tetrazole and electroshock were utilized in a pre-clinical experiment to induce convulsions, and the *Mustaka* ethonolic extract produced positive results. The results showed that the flavonoids contained in the ethanol extract of *Cyprus rotundus* rhizomes are important for treating epilepsy and have anticonvulsant effect. The Cyprus extract has potent CNS depressive, neuroprotective, and nervine tonic properties. Excitotoxicity, oxidative stress, neurological development, and preventive therapy for neurodegeneration all saw considerable improvements.^{viii}
- *Ushira* and *Musta* are nervine tonics. *Musta* is used to treat convulsions and brain injury in conjunction with milk paste. Pentylene-tetrazole and electroshock were utilized in a pre-clinical experiment to induce convulsions, and the *Mustaka* ethonolic extract produced positive results. The results showed that the flavonoids contained in the ethanol extract of *Cyprus rotundus* rhizomes are important for treating epilepsy and have anticonvulsant effect.
- *Rakta Chandan* has been shown to help with epilepsy, hysteria, and even Parkinson's disease. It also aids in the reduction of accumulated tension and anxiety.^{ix}
- Effects of *Nagara* on memory loss. Additionally, it lessened the cognitive impairment brought on by focal cerebral ischemia. It can boost the number of neurons in the brain's hippocampus and enhance spatial memory. It has been noted to cause vasodilation in the past. Therefore, it may be able to increase cerebral blood flow, which would improve both attention and the capability of cognitive processing as well as spatial memory.

2. Digestive system:

Hydro-alcoholic *S. album* stem extract has been shown to have gastroprotective properties and to treat stomach aches and upset stomachs. Sandalwood's potent antiviral and antibacterial qualities fight helicobacter pylori, which results in ulcers and gastrointestinal problems. It also protects the liver.^x

- Dry ginger has been researched for its gastrointestinal system protection as an extension of its antiemetic activity. The impact of ginger on stomach function, particularly in reference to dysrhythmia and gastric emptying. According to a study, ginger therapy greatly decreased the tachygastric activity brought on by circularvection, a condition that causes one to feel as though they are rotating without actually moving. *Sunthi* is helpful in treating motion sickness, morning sickness, nausea, and vomiting.
- It resulted in significant symptom relief and simultaneous blood sugar level normalization. bowel habits regulation, overall health enhancement, including anaemia and body weight gain, and gastrointestinal function enhancement.
- *Sunthi*, which has a pungent flavor, is renowned for treating nausea and upset stomach. It is used for a variety of conditions that restrict gastric secretions and aid in preventing nausea and vomiting during

upset stomachs and pregnancy. It contains several substances that function as antipyretics, analgesics, and antitussives.

- The herb *Sunthi* is incredibly beneficial. In the long run, it can help treat conditions like arthritis in addition to reducing inflammation. The herb can be used to treat digestive disorders as well because it is so effective for abdominal issues. It aids in proper digestion by breaking down the proteins. Additionally, it treats infants' diarrhea by halting bacterial growth. It is referred to as "universal herb" due to its wide range of therapeutic benefits.
- Its curing properties also keep the intestinal muscles toned. *Sunthi* can be used to treat inflammatory diseases like arthritis since it reduces inflammation. It aids in the breakdown of proteins and the digestion of fats. Additionally, it helps to lessen belly gaseous distension. An anti-diarrheal According to reports, *Sunthi* slows down bacterial metabolism, which inhibits the creation of toxins and controls infectious diarrhea.
- The herb *Fumaria plaviflora* has been used to improve digestion and relieve symptoms like indigestion and gas.
- *Pavonia odorata* has been used to treat stomach discomfort in several traditional practices. It can be used to promote healthy digestion, reduce indigestion, and ease stomach aches.
- Antidiarrheal effects indicate that *C. rotundus* has only weak antibacterial and antirotavirus effects. The antidiarrheal effects of *Musta* are probably brought about by its impact on a bacterial virulence factor like colonization.

3. Respiratory system

- Dry ginger's expectorant and warming properties aid in the relief of cough and cold symptoms, as well as respiratory discomfort and congestion. It has an antiasthmatic nature.
- Following an allergic reaction, the anti-allergic impact produces degranulation, which releases histamine and -hexosaminidase. *Ushira* is a medication that is used to treat bronchial asthma, hiccups, and coughing. It is also beneficial in cases of tuberculosis-induced hemoptysis.
- *Musta* is useful for treating respiratory disorders caused by gastrointestinal disease.
- Sandalwood is beneficial in hemoptysis and purulent expectoration. Bad breath ultimately fades.
- *Pavonia odorata* has been used in several traditional medical practices to treat respiratory disorders. Because it is known to have expectorant properties, it may be used to relieve coughs and congestion.

4. Skin

- Sandalwood oil is incredibly effective at treating a variety of skin problems, including dryness, popping, chipping, and wrinkles. Enhancing skin tone, preserving skin radiance, and helping to regenerate damaged skin cells are all benefits of sandalwood oil. As an astringent, cleanser, antibacterial, anti-aging, and sanitizer, sandalwood oil defends the skin from damaging germs, infections, and parasite attacks. Cuts, bruises, scars, pimples, and other skin disorders can be treated topically by using sandalwood oil on the affected area.
- *Parpataka* has been used in conventional therapies for eczema, acne, and rashes. Its anti-inflammatory and detoxifying properties are thought to contribute to these outcomes.
- *Pavonia odorata* can be used to soothe skin irritations and treat wounds due to its potential anti-inflammatory and wound-healing properties.

5. Cardiovascular Health:

- Ginger may benefit cardiovascular health by contributing in blood pressure lowering and blood circulation improvement. Its antioxidant properties may also be advantageous for heart health.
- *Tikta Rasa* is a blood purifier because it is so common. It reduces the excessive water content of blood. It safeguards hemostasis and the heart. It alleviates epistaxis. It can help with diaphoresis, which is excessive sweating brought on by a secondary ailment.

6. Antiplatelet activity

By blocking platelet aggregation, *Musta* demonstrated antiplatelet activity. Additional validation of this came from in vivo studies revealing effects on the lengthening of bleeding time in rats. In vivo tests on various compounds revealed that Nootkatone in particular could prolong bleeding time and reduce platelet aggregation. Nootkatone and the extract in general, which inhibits platelet aggregation and may be useful for treating atherothrombotic diseases, have been the subject of studies.^{xi}

7. Wound healing activity

Analyzed the ability of the *Cyperus rotundus* tuber extract to cure wounds. Based on its historical use and literary connections, this plant was selected for study of its capacity to heal wounds. An alcoholic extract of tuber sections of *Cyperus rotundus* was investigated for its ability to promote wound healing in three distinct rat wound models, including excision, incision, and dead space wound models. The extract ointments have shown a notable difference in response in all of the aforementioned wound models, as comparable to those of a conventional pharmaceutical nitrofurazone ointment in terms of wound contracting ability, wound closure duration, and tensile strength.^{xii}

8. Antioxidant activity

The antioxidant activity of *Cyperus rotundus* rhizomes extract (CRRE) was assessed using a variety of in vitro tests including free radicals and reactive oxygen species, and IC₅₀ values were computed. CRRE proved its scavenging function in a concentration-dependent manner on superoxide anion radicals, hydroxyl radicals, nitric oxide radicals, hydrogen peroxide, and the property of metal chelating and reducing power. Thiobarbituric acid-reactive substances (TBARS) and young and aged rat brain mitochondria were used to further examine the extract for lipid peroxidation. Additionally, the extract showed concentration-dependent effectiveness in decreasing FeSO₄ ascorbate-induced mitochondrial lipid peroxidation. According to this study's findings, *C. rotundus* rhizome extract may include natural antioxidants.^{xiii}

9. Antimalarial

Patchoulone, caryophyllene oxide, 12-peroxycalamenene, and 4, 7-dimethyl-1-tetralone were identified from *Cyperus rotundus* tubers through activity-guided research. These substances have antimalarial activities in the EC₅₀ 10⁻⁴-10⁻⁶ M range, with the most strong effects being exhibited by the novel doperoxide sesquiterpene 10, 12-peroxycalamenene.^{xiv}

CONCLUSION:

Shadangapaniya is a distinctive and popular recipe that preserves state of equilibrium. Additionally, it clears *Ama Visha* and is the best remedy for detoxification of toxins. There is action of individual's herbs

but *Shadangapaniya* is amalgamated on heating with water. There are six medicinal component enhances the activity of various system towards homeostasis state.

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