



THERAPEUTIC APPLICATIONS OF POISONOUS PLANTS IN PANCHAKARMA: A BRIEF REVIEW

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ABSTRACT

This report discusses the use of several toxic plants in the Panchakarma Ayurveda cleaning procedure, which removes toxins from the body to heal illnesses and rejuvenate the body. Panchakarma is the five therapeutic procedures of Bio-purification (Shodhana), cleansing all body channels and removing toxins through natural outlets. It is used for preventive, curative and rejuvenator purpose. In Agadtanta (toxicology), a branch of Ashtang Ayurveda the appropriate description, classification, clinical aspects, and management of all forms of Visha (Poisons) have been documented. These schedule E-1 herbs exhibit these biological roles owing to its richness in bioactive phytochemicals. Some names for poisonous plants are Ahiphen (Papaver somniferum Linn.), Bhallataka (Semecarpus anacardium Linn.F.), Danti (Baliospermum montanum), Erand (Ricinus communis Linn.), Snuhi (Euphorbia nerifolia), Dhatura (Datura metal Linn.), Arka (Calotropis procera), and Gunja (Abrus precatorious Linn.) among others. In ayurvedic science a unique Shodhana for purification of toxic substance. It claims to reduce the toxicity of many diseases. These toxic medicinal plants are used in traditional ayurvedic therapies to treat a wide range of disorders. The pharmaceutical industry might use this knowledge to manufacture drugs, hence it is very essential.

KEYWORDS : Shodhana, Visha, Aushadhi, Snehan, Vaman, Virechan, Basti, Nasya Karma

INTRODUCTION

Ayurvedic herbal formulations are used by a major population to seek the health, the first need of life. Panchakarma is essentially a cleaning process that not only treats diseases but also improves the overall health and helps to achieve longevity and holistic rejuvenation. Panchakarma is the five therapeutic procedures are Vaman Karma (therapeutic emesis), Virechan Karma (purgation), Anuvasan basti (enema using medicated oil), Asthapan Basti (enema using medicated decoction) and Nasya Karma (nasal administration of medicines). It is unlike any other detoxification programmed because it is fundamentally designed to remove a specific form of toxin. Ayurveda advocates, if poison (aka Visha in ayurveda) used in a therapeutic dose will provide results in a beneficial way to the patient.^[1] Visha Chikitsa or Agad Tantra include the treatment of diseases caused by poisons and toxins, such as animal, reptile, insect bites, spoilt food and poisonous minerals, metals and unsuitable food combinations.^[2] Thus Visha has been defined as a substance which is destructive to life and possesses properties like Ushna (hotness), Tikshna (sharpness), Ruksha (roughness), Sukshma (minuteness), Vyavayi (fast pervading), Vikasi (destruction), Ashukar (sudden action), vishada (clear) and Apaki (indigestible), etc. The drugs which possess these properties is in less virulence than Vishas are called Upavishas.^[3,4] The complete process of panchakarma consists of three steps. The first step is the Purva karma, which is the preparatory procedure required before the main procedure. Which is followed by Paschaat karma or the post-therapy dietary regimen to restore the body's digestive and absorptive capacity to its normal state. Paschaat karma consists of the Rasayana (rejuvenation) and Vajikarana (aphrodisiacs) processes.^[5,6] The present review provides insights on the therapeutic potential of schedule E-1 herbs (table no 1) as was the safety or toxicity profile in light of available classical as well as contemporary scientific evidence.

Table-1 Botanical name, Chemical constituents, Indications & Shodhana (Purification) methods of plant origin Ayurvedic drugs included in Schedule (E1)

Sanskrit name	Botanical Name ^[7]	Major chemical constituents	Indications ^[8,10]	Shodhana methods ^[12]
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(8,9,10,11)				
Ahiphen α	Papaver sommife rum Linn.	Opium alkalo ids are isoqui noline alkalo ids mor phine, code ine, heroin	Anidra, Atisara, Kasa, Soola	Triturate with juice in Ginger 21 times
Arka	Calotro pis procera (Ait) R. Br.ex	Glycosides – Calotropin, calotoxin	Kushta, Switr α, Gulma, Udara, Krim idanta, Khal itya, Arsas	
Bhallatak α	Semeca rpus anacar dium Linn.F.	Tarry oil containing anacardic acid, nonv olatile alcohol (cardol), bhila wanol, anac ardoside	Arsas, Anaha, Grahani, Gulma, Krimi, Kushta, Udara	Istika churna, Narikeloda ka, Usna Jala
Bhanga	Cannab is sativa Linn	Major active euphoric pri nciple is tetra hydrocannabi nol (THC), ca nnabinoids, volatile ter penes and s esquiterpenes	Agnimandya, Anidra, Atisara, Klaibya, Grahani	
Danti	Baliosp ermum montan um Mull.Ar g.	Triterpenoids, resinous glycosides, saponins, alkaloids, flavonoids	Arsas, Asm ari, Kushta, Udara, Udava rta Twakdos ha, Gulma, Kamala, Pliha a, Vrana	Powder of Pippali fruit, honey & Kusha leaves are used.
Dhattura	Datura metal Linn.	Tropane alkalo ids – Hyosc ine is the ma jor constitu ent, while atro pine and lhy oscyamine is	Swasa, Jwara, Visha, Indralupta	Soaking in cow's urine and decorticate seeds Boiling in cow's milk

		very less in quantity		
Gunja	<i>Abrus precatorium</i> Linn.	Abrin, hypaphorine, precatorine, glycyrrhizin, choline	Kushta, Vrana, Vatavyadhi, Indralupta	Boiling in <i>kanji</i> Boiling in cow's milk Add 1/8 of Borax and boiling for 3 days in cow's milk Boiling in <i>kumara mula Kwatha</i>
Jaipala	<i>Croton tiglium</i> Linn.	Crotonoside Glyceryl crotonate, Phorbol esters	Jwara, Jalodara, Vibandha, Sopha, Krimi	
Karaveera	<i>Nerium indicum</i> Mill.	Glycosides Oleandrin	Vrana, Upadamsa, Kushta, Jalodara, Kandu, Jwara, Swasa, Krimi, Sopha	
Langali	<i>Gloriosa superba</i> Linn.	Amino alkaloids Colchicine	Kushta, Arsas, Vrana, Sula, Garbha salya, Sopha	
Parasika Yavani	<i>Hyoscyamus niger</i> Linn.	Tropane alkaloids- hyoscyamine is the major constituent, while atropine and hyoscyne is very less in quantity	Anaha, Asmari, Sula, Swasa, Anidra, Unmada, Gulma, Rajakrichra	
Vatsanabha	<i>Aconitum chasmanthum</i> Stapf ex Holmes	Alkaloids- Aconitine, Chasmanthine, bikhaconitine	Vata roga, Vatakaphaja Jwara, Jwaratisara	Boiling in goat's milk Soaking in cow's urine and dry in sunshine Triturate with Borax
Vishamushhti	<i>Strychnos nuxvomica</i> Linn.	Bitter indole alkaloids - Strychnine, Brucine Glycoside, Vomocine	Arsas, Kandu, Vrana, Kushta, Vata roga, Ardita	
Shringivisha	<i>Aconitum chasmanthum</i> Stapf ex Holmes	Alkaloids- Aconitine, Indaconitine, bikhaconitine		

Usage of Poisonous plant in Ayurvedic therapeutics

Shodhana refers to the process of detoxifying or purifying any hazardous material utilized in medicine. Shodhana has been used in Ayurveda since Charak Samhita time, but from the eighth century AD, its application has grown as Rasashastra developed. The Shodhana procedure is specifically made for medications derived from Plants and minerals, however it is advised for all medications to eliminate their dose (toxic or impurity-containing ingredients). Ayurvedic treatises mention that poison can be transformed into Amṛta (nectar) through the application of appropriate processing techniques, while benign materials can turn hazardous when improper processes are adopted.[13] The Ayurvedic notion of

Shodhana encompasses not only the elimination of physical and chemical impurities through purification, but also the reduction of side effects and enhancement of the potency and therapeutic efficiency of the remedies after purification.[14]

Table-2 Poisonous plant is used in various steps involved in Panchakarma procedure

Phases of Panchakarma procedures	Common name	Panchakarma therapy
Purva Karma (Preparatory procedure)	Ahiphena	Snehan karma ^[15] (Abhyanga)
	Arka	Svedan karma ^[16]
	Bhallataka	Snehan karma ^[17] (Abhyanga)
	Gunja	Snehan karma ^[18] (Abhyanga)
Pradhan Karma (Main procedure)	Arka	Vaman karma ^[19] Virechan Karma ^[20] Basti karma ^[21]
	Bhallataka	Nasya karam/ Basti Karma ^[18]
	Danti	Virechana Karma ^[22]
	Jaipala	Virechana Karma ^[23]
	Eranda	Virechana Karma ^[24] Basti Karma ^[25]
	Gunja	Basti Karma ^[26] Nasya/Basti Karma ^[27] Nasya Karma ^[28]

Safety And Toxicity Concerns

Where poisoning from medicinal plants has been reported, it usually has been due to misidentification of the plants in the form in which they are sold, or incorrectly preparation and administration by inadequately trained personnel. Therefore, preferably should be administered by trained personnel.^[28] There are a few plants that are drug like and their action approaches that of pharmaceuticals. The number of these plants is relatively few. Digitalis is one of these classic examples. Herbalists use these plants in allopathic treatment strategies and in some countries such as Britain their vast availability is restricted by law. The use of herbs does not generally involve drug actions or adverse effects. Practically speaking, three categories of plants can be distinguished based on their safety. First of all, several herbs have toxic ingredients in amounts that are almost pharmaceutically high, which unqualified people shouldn't take within. Secondly, the herbs that have strong acts. *Atropa belladonna*, *Arnica* spp., and *Aconitum* spp. are among examples. and *Digitalis* species Under the right circumstances, these herbs are safe. All things considered, even while medicinal plants are commonly used and thought to be safe, they may also be poisonous. In cases when reports of medicinal plant poisoning have been made, the cause is typically misidentification of the plants as they are sold, or improper preparation and administration by staff members who lack the necessary training.^[29]

CONCLUSION

Acharyas use many noxious natural drugs either in their crude form or after *Sodhana* processes for treating human diseases. As we know that even a strong poison can be converted to an excellent medicine if processed and administered properly but if handled incorrectly, it may become hazardous. Poisonous plants have numerous medicinal values. Certain precautions about those plants are enough to use these poisonous plants for medication purposes. This paper has shown that the toxic natural drugs have more efficacy as compare to other herbal medicine because they have more potential of medicinal properties after *Sodhana* process.

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