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Review Articles

A CRITICAL REVIEW ON VISHTINDUKADI VATI

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ABSTRACT-

Vishtindukadi vati¹is Ayurvedic drug mentioned in *Ras tantra sara and sidha prayoga* samgraha¹. The main Content of vishtindukadi vati is the kuchla, along with maricha, chincha phala and phugphala, indicated in opium addiction. The main contents of vishatindukaadi vati are *Kupilu¹* which having properties like vata-shamak, chitta-avasadahar (antidepressant properties) and hridya daurbalyahar (cardiac tonic). Also *Kupilu* and *Pugphal* has pharmacological actions opposite to opium withdrawal symptoms Pharmacological preparation of *Kupilu* calm down the withdrawal effect of opium like anxiety and agitation by its *Chitavsadhar* property and Running nose, Diarrhea by it's *Grahi* property. Muscular pain and Joint Pain by its vatshamak property. All these drugs are having mainly katu-tikta rasa, ruksha, ushna, tikshna gunaas, ushna virya and vata kaphagnadoshaghnata.

Keywords-Vishtindukadi vati, kuchla, opium addiction.

Introduction-

In Ayurveda Aushadhi is considered one of the important out of four essential component component of chikitsa chatuspadas¹. Treatment is not possible in absence of any of the four components. Acharya charaka emphasized, the awareness of has therapeutic drug by considering it as one among *trisutra* i.e. *hetu*, *linga* and Aushadhi of Ayurveda .Acharya charaka say that the physician who knows the science of admistration of drugs with due reference to the place and time and who applies it only after examining each and every patient individually is excellent physician.

The term drug is derived from a French word —Drogue- a dry herb. It is

the single active chemical entity present in a medicine that is used for diagnosis, prevention, treatment / cure of a disease W.H.O. defines drug as "Any substance or product that is used or intended to be used to modify or explore physiological symptoms or pathological states for the benefit of the recipient." (WHO1966). This definition appears more incompliance with the terms of *Ayurveda*, which aims at the preservation of good health apart from mitigation of diseases.

The ultimate goal of *Ayurveda* i.e. *Prakriti-Sthapana*, can be achieved with the help of proper drug combination.*Acharya Charak*- Nothing in the world exists which does not have therapeutic utility; this shows the importance of drug in our classics.

S.No.	Ingredients	Latin name/English name Part used Question		Quantity
1	Shudh Kupilu	Strychnos nuxvomica	Seed	120 gm.
2	Marich	Pipper nigreum	Fruit	9 gm.
3	Pugphal	Areca catechu	Fruit	12 gm.
4	Chincha Phal	Tamarindus indica	Seed	8 seed = 5.5gm.

<u>Contents of Vishtindukadi vati²</u>

*Dose:*60-250mg

Anupan: koshana jal

Synonyms of Vishtindukadi vatiIngredient:³

S.no.	Drug content	Synonyms
1	Sudha kupilu	Kuchla, vishatindu,karaskara, kaktinduka, tinduka, kak

		piluka
2	Maricha	Kalimircha,usnha, kanga,krishna, suvruta,
3	Pugphala	Chikka, kramuka, kebuka, rajaphala, munihvaya
4	Chincha phala	Chincha, chinchika, beeta, amla, shukta, chukra, tintdi.

Ganas of Vishtindukadi vati:

S.No.	Drug Name	Ganas
1.	Sudha kupilu	Nighantu adarsh ⁴ –Vishtindukadi varga Acharya Sushrut–: Aamradi varga
2.	Maricha	AcharyaCharak:Deepniya,krimighna,sirovirechnouopga,AcharyaSushrut:Pippalyadi,Tri-ushnaAcharyaVagbhatta:Pippalyadi,Tri-ushna
3.	Pugphala	Madanpal nighntu - Phaladi varg. Nighantu Adarsh⁵- Taladi varga
4.	Chincha phala	Madanpal nighntu⁶- Phaladi varg. Bhavprakasha⁷- Amradi varga

Pharmacodynamic properties (Rasa Panchaka) of Vishtindukadi vati:⁸

S. n.	Drug	Rasa	Guna	Virya	Vipaka	Dosha karma
1	Sudha kupilu	Katu	Laghu,grahi,ushna	Ushna	Katu	Kaph-vat shamak
2	Maricha	Shushak- Katu Aadra-Katu	Shushaka- Ruksha,Tikshana	Ushna	Madhur	Kaphvatshamk, agnideepak,swashara,sho olhara
3	Pugphala	Kashya	Sheeta,Guru,	Sheeta	Madhur	Mohkara, Deepak, Kaph-

			ruksha			pitta shamaka
4	Chincha phala	Amla	Laghu.	Sheeta	Madhur a	Trishna, hara,rochaka,agnivrdhak
						a, dahshamak,Vatashamaka

1. Approximate Rasa Panchaka of Vishtindukadi vati:

		Amla	2	50 %
		Katu	1	25 %
1	Rasa	Kashaya	1	25 %
		Laghu	2	50%
		Grahi	1	25 %
2	Cuna	Ruksha	1	25 %
2	Guna	Ushna	1	25 %
		Tikshna	1	25 %
		Sheeta	1	25%
		Guru	1	25%
		Soshaka	1	25 %
		Ushna	2	50%
3	Virya	Sheeta	2	50 %
	Vipaka	Madhur	1	25%
4		Katu	3	75%
		Vatahara	3	75 %

_		Pittahara	1	25 %
5	Doshakarma	Kaphahara	3	75 %
		Tridoshhara	0	0 %

Chemical constituents & Karma of Vishtindukadi vati⁹

S.n ·	Drug	Chemical Constituents	Therapeutic Action
1.	Sudha kupilu	Alkaloids, Indole Alkaloids, Strychnine & Brucine, Monoterpenoid, Glycoside (Loganin), α , β -Colubrine, Vomicine	stomachic, digestive, nervine tonic, anti-rhematic, aphrodisiac, analgesic, anticolic, antipyretic, astringent, stimulant, antidermatosis, and anthelmintic. Uses in vatavyadhi, rheumatic and mervine disorders, cough, loss of appetite or digestive power, visucika, agnimandya, piles or haemorrhoids, worms affection, general debility, jvara, visamajvara, paralytic disorders, abdominal colic, gout, ulcer, insomnia, cramp, skin disease and senile disorders
2.	Maricha	Piperine, piperethine, piperolein A&B, feruperine ,cryptone, carotene, ascorbic acid, pipercide, citronellol, dihydrocarveol.	useful in diarrhea, abdominal pains, strangury, diseases of spleen and abdomen, ascites, tumours, piles, bronchitis, indigestion, constipation and vaginal discharges.
3.	Pugphala	<i>Tannin</i> , volatile oils, lignin 15%, Arecain, aricalin, colidine.	Appetizer, antihelminitic, carminative, anti- diarrhoeal property, Anti-leucrrhoea, soft chancer, anti dysentery
4.	Chincha phala	Vitamin C, Tartric acid 5%, citric acid 4%, malic acid, acetic acid tarterate 8%, sugar 25-40%, gum, pecin,	Effective in loss of appetite, vomotting. its acts like as diuresis, astringent, it drained biles. It has Anti- microbial, antioxidant, anti-inflammatory, antibacterial and immune modulatory effect.

potassium.

<u>Pharmacological action and related</u> <u>researches:</u>

<u>1. Kupilu-</u>

The seed are extremely bitter and poisonous since they contain strychnine which is highly bitter and most poisonous. Almost every part of this tree is more or less poisonous but especially the seeds, which yield the alkaloid known as strychnine and brucine. The seeds of kupilu is used therapeutically only after proper purification as per method given in classical texts. It is given internally for alleviating loss of digestive power and other disorder caused by the indigestion and low or abnormal digestive power.

It is a strong stomachic, digestive, nervine tonic, antirhematic, aphrodisiac, analgesic, anticolic, antipyretic, astringent, stimulant. antidermatosis, and anthelmintic. It is recommened in vatavyadhi, rheumatic and mervine disorders, cough, loss of appetite or digestive power, visucika, agnimandya, piles or haemorrhoids, worms affection, general debility, jvara, visamajvara, paralytic disorders, abdominal colic, gout, ulcer, insomnia, cramp, skin disease and senile disorders. In higher or overdose and excess or prolonged use, it is convulscent.

Related researches:¹⁰

Kuchla use in addiction disorders:

It is used by renowned Ayurvedic doctors such as Prof. Anoop Indoria for the treatment of 1.Opium dependance 2. Alcohol dependence and 3.Tobacco dependence. The medicines usually used are – Vishatinduk Vati or Shuddha Kuchila in 3 divided doses, along with Hingvastak churna.

Dr Anoop Indoria also uses the leftover milk after Kuchila Shodhana. It is processed to ranular form. This is sued in opium dependance as per Rasatantra sara and Siddhayoga Sangraha.

<u>2.Maricha–</u>

Piper nigrum (family Piperaceae) is a valuable medicinal plant. It is one of the most commonly used spices and considered as "The King of spices" among various spices. Black pepper is grown in many tropical regions like Brazil, Indonesia and India. *Piper nigrum* is commonly known as Kali Mirch in Urdu and Hindi, Pippali in Sanskrit, Milagu in Tamil and Peppercorn, White pepper, Green pepper, Black pepper, Madagascar pepper in English. Hot and pungent peppercorns are obtained from Black pepper which is the most famous and one of the commonly used spices throughout the world. Black pepper is used as medicinal agent, a preservative, and in perfumery. Whole Peppercorn of Piper *nigrum* or its active components are being used in different types of foods and as medicine. Pepper is used worldwide in different types of sauces and dishes like meat dishes. It contains major pungent alkaloid Piperine (1-peperoyl piperidine, Figure 1) which is known to possess many interesting pharmacological actions. It is widely used in different traditional systems of medicine like Ayurvedic and Unani System of medicines. Piperine exhibits diverse pharmacological activities like antihypertensive and antiplatelets antioxidant, antitumor, antiasthmatics antipyretic, analgesic, anti-inflammatory, anti-diarrheal, antispasmodic, anxiolytic, antidepressants hepato-protective, immuno-modulatory, antibacterial, anti-thyroids, antiapoptotic, antifungal, anti-metastatic, antimutagenic, antispermatogenic, antiColon toxin. insecticidal and larvicidal activities etc. Piperine has been found to enhance the therapeutic efficacy of many drugs, vaccines and nutrients by increasing oral bioavailability by inhibiting various metabolising enzyme. It is also known to enhance cognitive action and Fertility. Piperine also found to stimulate the pancreatic and intestinal enzymes which aid to digestion. Many therapeutic activities of this spice are attributed to the presence of piperine apart from other chemical constituents. The fruits of Piper nigrum are used to produce white and green peppers. Piper nigrum is also used as a flavoring agent . In recent pasts, different therapeutic potentials of Piper nigrum, its extracts, or its important active chemical "piperine" constituent have been international published different in research journals. The current review is aimed to provide an updated literature

review on recent research advancement of pharmacognosy, chemistry and pharmacological activities of *Piper*

Black pepper home remedies¹¹

Ghee + *Trikatu* (Ginger, black pepper, long pepper)+ rock salt, black salt and bida salt – Useful in vomiting due to *Vata Dosha* increase.

- ✤ <u>Other activities well established</u> <u>based on research:¹²</u>
- Effect of Black pepper and sperm quantity and quality:

Effect of oral administration (25 and 100 mg/kg body wt/day, for 20 and 90 days) of fruit powder of Piper nigrum L. on male reproductive organs of mice was investigated. In mice treated with 100 mg dose for 90 days, degenerative changes were observed in all the tubules. Percentage of affected tubules in testes of Piper-treated mice was dose-and duration-related. Further, Piper nigrum treatment for 20 days did not cause appreciable alterations in histological appearance of the epididymis, while the treatment for 90 days caused detectable alterations in the duct.

✤ Effect of black pepper on hyperthyroidism and diabetes: Piperine alkaloid forms 5 - 10 % of chemicals of black pepper. It was evaluated for its thyroid hormone and glucose regulatory efficacy in adult male Swiss albino mice. Its daily oral administration (2.50 mg/kg) for 15 days lowered the serum levels of both the thyroid hormones, thyroxin (T (4))

and triiodothyronine (T (3)) as well as glucose concentrations.

***** Black pepper in post partum care

In every herbal remedies given to the new mother, black pepper is added. This is to control *Vata Dosha* aggravation that naturally occurs postdelivery.

It is anti toxic – prevents post partum sepsis, infections.

It prevents cold, cough and other Kapha related problems that may occur in the mother.

✤ Maricha to nullify toxicity:

Vatsanabha – Aconitum ferox is added with 1 part of *Shuddha Tankana* (borax) and 2 parts of *Maricha* (Black pepper) and triturated. This is the second method of *Visha*

Marana.

In most of toxicity due to usage of tubors, black pepper is used.

<u>3. Pughphala-</u>

Effective in loss of appetite, vomotting. its acts like as diuresis, astringent, it drained biles. It has Antimicrobial, antioxidant, anti-inflammatory, antibacterial and immune modulatory effect

Fine powder of *Phughphala* is used as dusting powder to heal wound and manegment of bleeding. The decoction of areca nut is given in a dose of 20 ml to treat intestinal worms and diarrhea. The decoction of Areca catechu is pushed through vaginal route as a type of Vasti to treat condition of leucorrhea. Sesame oil processed with areca nut is used for external application over joints pain and inflammation. Areca nut powder is mixed with lime juice is given to treat anorexia and nausea. The powder of Areca catechu is used as dental powder to whiten the teeth and remove dental plaque. Regular intake of areca nut can cause decrease of sperm count. Decoction of puga in a dose of 10 - 15 ml can treat inflammation of the uterus and decrease the urine output. Ayurveda explains the use of tambula (mixture of betel leaf, areca nut and some spices) after meal to aid in digestion of food. To treat syphilis, the paste of areca nut is applied over the affected area.

Research articles related to Areca cathechu:¹³

<u> Anti – microbial study:</u>

Varying concentrations of Areca catechu L.nut ethanol extract were tested for antimicrobial 0.5 activity against McFarland of mixed – oral flora and eight gram - negative clinical isolates (E. coli, K. pneumonia, P. vulgaris, P. aeruginosa, S. non – typhi, S. typhi, S. flexneri and V. cholera) by agar well diffusion method. All concentrations were shown to inhibit growth in all mixed - oral flora models with zones of inhibition ranging from 7 mm to 18 mm. Susceptible patterns were also seen in all gram – negative clinical isolates with the smallest mean of zones of inhibition seen in Escherichia coli which is 8 mm at 30 % concentration and Klebsiella pneumoniae with no zone of inhibition in both 30% and 50% concentration.

<u>Anti – fungal activity:</u>

The purpose of this investigation was to study the antifungal activity of hot water extract of Areca Catechu nuts collected from coastal region of Kerala. The Arecanut extract did not inhibit the growth of mycelial fungal forms such as Mucor sp, Aspergillus niger and Cladosporium sp but the growth of unicellular fungus Candida albicans was inhibited.

<u>Anti – oxidant activity:</u>

The seed of Areca catechu contains higher proportions of polyphenolic compounds mainly tannins. Results shows that the methanol extract (ME) obtained from successive extraction has highest tannin content (TC), total phenolic content (TPC) and exhibited higher reducing power and hydrogen peroxide scavenging ability in comparison to petroleum ether, ethyl acetate and water extract (WE).

<u>Anti – ovulatory and abortifaciant</u> <u>activity:</u>

For antiovulatory effect, ethanolic extract of A. catechu at 100 and 300 mg/kg doses was administered orally for 15 days. The extract of A. catechu showed a significant decrease in the duration of estrus at 100 mg/kg (P = 0.015) and 300 mg/kg doses (P = 0.002) as compared with control. Metestrus phase was also significantly reduced at 100 mg/kg (P = 0.024) and 300 mg/kg doses (P = 0.002). There was a significant increase in proestrus (P < 0.001) phase. However, diestrus phase was unchanged.

4. Chincha phala-¹⁴

Effective in loss of appetite, vomotting. its acts like as diuresis, astringent, it drained biles. It has Anti-microbial, antioxidant, anti-inflammatory, antibacterial and immune modulatory effect.

External application of tamarind:

Shopha Pakakara – Causes swellings to secrete pus, initiates healing process.

Vranadosha Vinashana – Cleanses

wounds, removes slough and impurities.

One Mushti (fistful quantity) each tamarind leaves and nimba leaves should be taken and it should be tied inside the leaf of *kumari* and *putapaka* should be given. Later on, these leaves should be taken out and squeezed well. The obtained juice should be mixed with the powders of triphala, ayas and kataka beeja and made into a fine paste. By applying this paste frequently to the eyes, the symptoms like pain, redness, watering of the eyes along with the eye diseases will be cured. - Vaidya Sara Sangraha.

Tamarind leaf as antidote:

Arka over-dosage: In case of over-dosage of Arka – Calotropis procera / gigantea, leaves of tamarind are crushed and juice is extracted. 15 ml is mixed with 15 ml of water, administered twice a day.

Rat poisoning: One *pala* of tamarind and half *pala* of soot are taken and mixed with old ghee and given as linctus for 7 days. It will cure the rat poisoning. – Vaidya Sara Sangraha

In case of the poisoning caused due to <u>Heeng – Asafoetida</u>, tamarind which is dissolved in water is given. Vaidyasara Sangraha

Antimicrobial Activity¹⁵ – Antimicrobial activities of extracts of the stem bark and leaves were evaluated against some common gram negative and gram positive bacteria and fungi. The extracts were active against both gram positive and gram negative bacteria. Studies on the minimum inhibitory concentration (MIC) and bactericidal concentration minimum (MBC) of the extracts on the test organisms showed that the lowest MIC and the MBC were demonstrated against Salmonella paratyphi, Bacillus subtilis and Salmonella typhi and the highest MIC and MBC was exhibited against Staphylococcus aureus. The study concluded that *Tamarindus indica*has broad spectrum antibacterial activity and a potential source of new classes of antibiotics that could be useful for chemotherapy infectious disease and control.

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¹⁵Tropical Journal of Pharmaceutical Research Vol. 5 (2) 2006: pp. 597-603