



CONCEPTUAL STUDY OF ANTIDOTAL EFFECT OF CHATURJATA CHURNA WITH GUDODAKA IN SCORPION POISONING

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Abstract –

Agadtantra is the trending branch of ayurveda for various diseases. It mainly deals with the detail knowledge of poisonous herbs and their treatment modalities. Various antitoxic and antidotes are used to cure the toxicity are learnt in agadtantra. Agadtantra includes all the fundamentals of *visha* and its treatments.. According to ayurveda a drug is potent to act only when the potency and efficacy (*Saviryata awadhi*) of Ayurvedic classical preparations, quality of each drug (having *Rasa panchak*), *desh* (region), *Kal* (time), *Ritu* (season), their preparation method and route of administration. Here, we describe the antidotal effect of *Chaturjatak churna with Gudodaka* in scorpion sting poisoning as mentioned in Ashtang Sangraha uttarsthana 43/68.

All contents of *Chaturjata churna* have been evaluated according to the various literatures and having *kaph - vataghna* action. It includes *Twak, Ela, Tamal* and *Nagkeshar*. Guda i.e. jaggery is *tridoshaghna* mentioned in samhitas. The efficacy has been reviewed according to the *Rasa, Guna, Virya, Vipaka* described in Ayurvedic text. The paper is about the conceptual effect of antidotal effect of *chaturjata churna with Gudodaka* in scorpion poisoning.

Keywords: Chaturjata churna, Gudodaka, Antitoxic, Antidotal, Scorpion poisoning

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INTRODUCTION

The holistic science, ayurveda has a vast treasure of treatise full of surplus treatment for various disorders mentioned by the acharyas *Visha* is having many definitions indicating its mythological origin and action such as speedy spreading and separation of prana from body. Drug is the most important part in treatment. The pinpoint of ayurvedic pharmacology based on the theory of *Rasa, Guna, Veerya, Vipaka and Prabhava*. Ayurveda gifted us the most precious drugs and formulations that are being use since ancient period. The thread line is most important for the action of these herbal and herbomineral formulations are capable to give a better scientific lead in mode of drug action. In which there is description of animate and inanimate poison. Knowledge of toxicology is very essential in this era, as we constantly get exposed to toxins in one or the other way. We being the representatives of ayurvedic fraternity it is the need of the hour to present with promising results either preventive or prophylactic treatment modalities.

The severe burning pain after scorpion sting poisoning leading to sympathetic and parasympathetic stimulation as well as CNS manifestation. Thus to treat the toxicity and relieve the patient from the symptoms *Chaturjaatak churna* with Gudodaka is choosen. It is very cheap and readily available ingredients and easy to prepare. Also the formulation is palatable.

पाने सर्पिमधुयुतं क्षीरं वा भुरिशर्करम सर्पिमधुयुतं ।
गुडोदकं वा सुहिमं चतुर्जातकवासितम ॥
(अ.सं ४३/६८)

Acharyas classified *Chaturjaat* in various groups (*Gana*) such as acharya Sushruta in *eladi gana*, acharya Vagbhatta in *trijatka, chaturjatak*, and *eladi gana*, and Bhavprakash nighantu in *karpuradi varga*. Some acharyas mentioned single drug as anti-toxic while acharya Vagbhata and Yogratanakar mentioned *chaturjaat* in scorpion sting poisoning⁶. The reference of *chaturjaata* is also found In Ashtang Sangraha, Raj Nighantu,⁷ Bhavprakash Nighantu, Sharangdhar Samhita⁸. In Charak Samhita *Chaturjaatak* is described as *Vat-Kaphaghna* ⁹

Gudodaka as single is not mentioned in the classics as it is formulation of Jaggery and water. Classics mentioned the jaggery is the byproduct of sugarcane. 4 types of byproducts of sugarcane are mentioned i.e. *Dhouta, Adhouta, Purana, Nava* (washed, unwashed, refined, unrefined).^[10] it singly guda has its major nutritional role and enough store of minerals *Gudodaka* is a preparation from guda and water (jaggery and water)

MATERIALS USED- This article is based on review of ayurved treaties, scientific books and journals and experiences.

Materials – Chaturjaat and Guda

Contents of Chaturjaat (Table No. 1)

Sr.No	Drug Name	Latin Name	Family	Use Part	Quantity
1.	<i>Twaka</i>	<i>Cinnamomum zeylanicum nees</i>	Lauraceae	<i>Twak</i>	1 Part
2.	<i>Ela</i>	<i>Elettaria cardamom maton</i>	Scitaminae	<i>Beeja</i>	1 Part
3.	<i>Tamal</i>	<i>Cinnamomum tamal nees</i>	Lauraceae	<i>Patra</i>	1 Part
4.	<i>Nagkeshar</i>	<i>Mesua ferrea linn</i>	Guttiferae	<i>Pukeshar</i>	1 Part

Contents of Gudodaka- *Guda* (Jaggery) And Water

Method of preparation of Gudodak -

Gudodaka is a formulation prepared with jaggery and water. It can be prepared according to the

general method of preparation of *Phanta*.¹¹ For 1 part of *Guda*, 4 part of water to be added and boiled properly till Jaggery get dissolved completely.

Properties of contents of Chaturjaat and Jaggery- (Table No. 2)

No.	Name of the drug	Rasa (taste)	Guna (property)	Virya (potency)	Vipaaka Karma	Doshaghna
1.	<i>Twak</i>	<i>Katu, Madhur, Tikta</i>	<i>Laghu, Ruksha, Tiksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Vaat Kaphanashak, pittavardhak</i>
2.	<i>Ela</i>	<i>Katu, Tikta, Madhur</i>	<i>Laghu, Ruksha</i>	<i>Sheet</i>	<i>Katu</i>	<i>Tridoshghna</i>
3.	<i>Nagkeshar</i>	<i>Katu, Tikta</i>	<i>Laghu</i>	<i>Ushna</i>	<i>Katu</i>	<i>Vaat Kaphagna,</i>
4.	<i>Tamal</i>	<i>Katu, Tikta Madhur</i>	<i>Laghu Tikshna Pichchila</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kapha, Vataghna</i>
5	<i>Purana guda</i>	<i>Svadutara</i>	<i>Snigdha, Laghu –</i>			<i>Tridoshaghna</i>

Composition of Guda -

Potassium-1056 mg, Calcium-40-100 mg, Magnesium-70-90 mg, Phosphorus-20-90 mg,

Sodium-19-30 mg, Iron-10-13 mg, Manganese-0.2-0.5 mg, Zinc-0.2- 0.4 mg, Copper-0.1-0.9 mg, and Chloride-5.3 mg per 100 g of jaggery),

vitamins (viz., Vitamin A-3.8 mg, Vitamin B1-0.01 mg, Vitamin B2- 0.06 mg, Vitamin B5-0.01 mg, Vitamin B6-0.01 mg, Vitamin C-7.00 mg, Vitamin D2- 6.50 mg, Vitamin E-111.30 mg, Vitamin PP-7.00 mg), and protein-280 mg per 100 g of jaggery*

Mode of Administration- *Gudodaka* as anupana (*sha sa p kh 2/6) with *Chaturjaatak churna*.

Dose – *Chaturjata churna* 2-4 gm* with *Gudodaka* quantity sufficient.

Pharmacological Action of *Chaturjaat*

Sr. No.	Name of Drugs	Pharmacological Action
1.	<i>Twak</i>	Anti-oxidant, anti-inflammatory, antidiabetic, antimicrobial, anti-cancer, cholesterol and lipid reducing ,cardio protective
2.	<i>Ela</i>	Anti-convulsant, anti-inflammatory, anti-ulcer, wound healing, antivenom, disinfectant, diuretics
3.	<i>Nagkeshar</i>	Antioxidant, anti-inflammatory, central nervous system depression, analgesic, antimicrobial, antispasmodic, antineoplastic, antivenom and immuno stimulant activity
4.	<i>Tamal</i>	Antioxidant antimicrobial and anti-inflammatory anxiolytic immunomodulatory "Antidiarrheal activity

Properties of Visha- The qualities of Visha are light, dry, quick acting, clear, spreading without digesting, sharp, muscle relaxant, minute, hot, undetectable taste. Visha has ruksha, suksham, ashukari guna, ushna veerya, katu vipaak and it also aggravates tridosha. [3]

The scorpion poison is sharp in nature and causes burning sensation in the beginning and there after it spreads upwards. In the end it localizes at the site of bite. The sting produces severe throbbing type of pain and blackish discoloration.*also the action of scorpion sting results in burning pain and cardiac flush, hypertension etc

Antivenin Action of *Chaturjatak Drugs* and *gudodaka* -

The ingredients of *chaturjatak churna* possess *katu rasa*, *ushna veerya*, *Snigdha guna* and *katu vipaka* and are *kapha- vataghna*. Due to the *katu rasa*, *katu vipaka* and *ushna Virya* they pacifies *kapha* and *vata*. Especially *nagkeshar* is having *Katu rasa* and *vipaak* are *vishaghna*, *kandughna* and *varnaprasadana*, *Ushna virya* does *Vata* and *Kapha shamana*, because of *Teekshna* and *Sukshmaguna*¹, the medicine will penetrate into minute channels does *Srothoshodhana*.¹²

Also the *gudodaka* contains *guda* having is *madhur rasa*, *madhur vipaka* is *Sakshara*, *Naatisheeta*, *Naatipittajit*, *Snigdha*, *Mutrashodhaka*, *Vataghna*, *balya*, *tridoshnashak*, *brihaniya*, *raktashodhak*, *raktavardhak*, *vruyshya*, *Pathya*, *Hrudya*, and minerals, rich in iron.it acts as *Vatahara*, due to *Sakshara guna* it acts as *strotoshodaka* i.e. removal of *sheshdosha* from the body. *It is* rasayana hence nourishes *dhatu* and enhances immunity., *Raktashodhaka*,

The contents of *chaturjaata* acts as anti inflammatory, antioxidant, antiulcer, wound healing, antispasmodic, analgesic, anxiolytic that is helpful to relieves the symptoms in scorpion poisoning. *Gudodaka* also have *Na-*

atishleshmakar, *Mala-Mutra shuddhikar*, *Majjashyonit-Meda-Mamsavardhaka* qualities it acts efficiently in scorpion poisoning. The *shwasahara*, *kasahara*, *hrudya*, *rochna*, the burning pain and as the scorpion sting poisoning shows signs of poisoning such as burning pain, palpitation, hypertension, salivation, giddiness, dyspnoea, tremors, convulsion etc. the *vata* and *doshaghna* relieves the symptoms.

Conducted studies states that *nagkeshar* as antivenin activity towards scorpion poisoning and also it has Cardio- protective activity. Uawonggul et al, studied about the anti-venom activity of *nagkeshar* plant extract against the viability of fibroblast cell lysis after heterometrus laoticus scorpion bite. Also it has Cardio- protective activity where scorpion poisoning shows severe cardiopathy. Dhanvantari Nighantu, Bhavprakash Nighantu stated *Nagkeshar* as Antivenin.

Naveen and Puran Guda was separately mentioned by Sushruta. Navin Guda is *kaphakarak* and create *agnimandya* while Puran Guda is *Hridya*, *Pathya*. Charak stated that *guda* is *Krimi-Majjashyonit-Meda-Mamsavardhak* *shudha guda* is *alpa doshkar*. Modern parameter for jaggery states that, it is much complex than sugar hence get digested slowly than sugar and releases energy accordingly slow thus provides energy for a longer time which becomes beneficial to the body. The preparation of jaggery is done in iron vessel hence it is rich in ferrous salts (iron).

DISCUSSION –

In Charak Samhita Charka described *chaturjaatak* as *vata-kaphaghna*!. The ingredients of *chaturjatak churna* major drugs possess *Katurasa*, *Ushnaveerya*, *Snigdha* and *vipaka madhur* and especially *nagkeshar* is having *Ushna* does *Vata* and *Kapha shamana*, because of *Teekshna* and *Sukshmaguna*¹, the medicine will penetrate into minute channels does *Srothoshodhana*. It will

also acts as Balya, brimhana, rasayana by nourishing *dhatu*s and enhances immunity.. It acts as a diuretic agent therefore helpful in dysuria and urinary retention. *arshahara, shwasahara, kasahara, hrudya, rochna, deepana, vatahara, pittahara, mutrakrichrahara*. The plant is loaded with anti-convulsant, anti-inflammatory, anti-ulcer, wound healing, antivenom, disinfectant, as well as diuretic benefits.

Guda has *Madhura Rasa, Snigdha*guna acts as *Vatahara*, due to its *Ksharaguna*, acts as *Raktashodhaka* and it helps in removing the *Sheshadoshas* from the body. Jaggery is a source of carbohydrate and also has calcium, iron, magnesium, potassium and sodium. it is useful in asthma, cough & cold, congestion in chest etc.

CONCLUSION

The study of the contents of chaturjatak churna and guda shows the antidotal action against scorpion venom poisoning. The *rasa, Virya, vipaka, guna, doshagnata* and pharmacological action shows antitoxic action of Chaturjata churna with gudodaka in treating scorpion sting poisoning combination as per the reference studied. shows antidotal effect in. Chaturjatak churna is given orally with gudodak as *anupana* and also can be given in the form of *hima*.

Contents of chaturjatak and gudodak is easily available and palatable and feasible to prepare. It is indicated in scorpion sting poisoning. The review states that the *rasa guna Virya viapaka* shows effect in scorpion sting poisoning. Majority of the drugs are *tikta* (bitter), *katu* (pungent) *rasa pradhan* which acts as *kapha-vatahara* (pacifies *kapha & vata*). All drugs are *ushna veerya* (hot potency), majority are *katu vipaka* hence can act as quickly as *visha*. mentioned *Nagkeshar* as *vishagna* (poison). *Ela, twak* and *Tamala* also have potent action to counteract scorpion sting poisoning such as *immuno-stimulant, gastro-protective, anti-hypertensive, anti-oxidant* and *anti-inflammatory*.

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