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## Journal of

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**REVIEW ARTICLE** 

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# An evaluation of pharmacological actions of *Padmak Agada*: A Review

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### ABSTRACT

Agada means the medicaments which have antitoxic properties. They are used to combat Gada which means disease, discomforts, pain, or morbid conditions produced by any type of the poison. For the management of different poisons many formulations are mentioned in Ayurveda. Acharaya Vagbhatta has mentioned so many formulations in Keetlootadivishpratishedham Adhyay of Ashtanghrudayam Uttarsthana. One of those formulation is Padmakagada, which is indicated in the treatment of all types of insect bite (Keet Visha and Loota Visha). Padmakagada can be used in different forms like Nasya (Nasal instillation), Dhoom (medicated smoke), Abhyanga (massage), Paan (drink) etc. It contains 5 ingredients including Priyangu, Haridra, Daruharidra, ghee and honey. Easy availability of its ingredients and simplicity of the preparation and preservation of the formulation may encourage the physician to use this formulation. Here is an effort has been made to review Padmak Agada in order to its pharmacological properties for its medicinal use.

**Key words:** Keet Visha, insect bite, Pharmacological actions, Agada, Padmakagada.

#### **INTRODUCTION**

Ayurveda is oldest medical science known to mankind and mainly aims at healthy living and long life unlike other medical science which simply focus on the treatment of ailments and diseases. According to

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Ayurvedic science, there should be proper balance between the inner constituent elements of the body for a healthy existence.<sup>[1]</sup>

Agadtantra is one of the main branch of Ashtang Ayurveda which deals with toxicological conditions and their management. Acharya Susruta in Kalpa Sthana of Susruta Samhita, and Acharya Vagbhata in Uttaratantra of Ashtanga Hridaya, moreover in other classics and regional texts has recited concerning the origin of Visha.

The term *Visha* is derived from the word *Vishaad* (depression, sorrow). *Agada* means the medicaments which are used as an antidotes or substances having anti-poisonous properties. In *Agad Tantra* various *Agadas* are described for treatment of various types of *Jangam Visha* (Animal poisons) and *Sthavar Visha* (vegetable and mineral poisons). *Agadas* which are explained in the texts act against different types of

Visha (poisons) such as Sarpa Visha, Loota Visha, Keeta Visha, Dooshi Visha etc.

Acharya Sushrut has described about Keetas in 8th chapter of Kalpa Sthana. A detailed description regarding the symptoms and treatment of various Keeta Damsha is available in the 37 th Chapter of Uttar Sthana in Ashtana Hridya. According to Acharya Vagbhatta, heaviness in head and eyes, coma, dizziness, dyspnea, pain, swelling, fever, itching and anorexia are common symptoms of all Keeta Damsha.[2] According to Acharya Charak, insects belonging to Dooshi Visha category causes red, white, black or brownish black discoloration of the part of the body. In the bitten area, the area covered with rashes and inflammation. The patient suffers from itching and burning sensation, erysipelas, suppuration and sloughing.[3] The bite of the insects belonging to the Pranahara (fatal) category produces expanding edema. According to Acharya Sushrut the poisonous Keeta causes Shula, Daha, Visarpa, Jwara, Angamarda, Romanch, Chhardi, Atisara, Trishna, Murchha, Jrimbha, Kampanna, Swasa, Hikka, Atisheeta, Shopha, Mandala, Dadru, Karnika, Kitibha etc.<sup>[4]</sup> Padmak Agad is described in Ashtang Hridya Uttar Tantra chapter 37. It is indicated in all types of Luta and Keet Visha. [5] Padmak Agad is told as Sarvakamika as it can be used in any kind of Keet Visha for treating any kind of symptoms. It can be use both externally and internally. It has three main ingredients Priyangu, Haridra, and Daruharidra along with Madhu and Ghrit.

#### **OBJECTIVE OF THE STUDY**

To study the action of Padmakagada.

#### **MATERIALS AND METHODS**

Method of preparation of *Padamak Agad* - Fruits of *Priyangu*, tuber of *Haridra* and stem & root of *Daruharidra* were taken in equal quantity to make a mixture of powder. Here *Ghrit* and *Madhu* are used as *Anupaan*.<sup>[6]</sup>

फलिनीद्विनिशाक्षौद्र सर्पिभिः पद्यकाहृयः । अशेषल्ताकी

टानामगदः सर्वकामिकः। (अ.ह.उ.३७/७०)

Table 1: Raspanchak of ingredient of Padmakagad<sup>[7]</sup>

S N	Dravya	Rasa	Gun a	Veer ya	Vipa ka	Karma
1.	Priyangu	Tikta, Kasha ya	Guru , Ruks ha	Shee ta	Katu	Dahaprasha man, Vednasthap an, Durgandhna shak Raktaprasad ana, Balakrit.
2.	Haridra	Tikta, Katu	Lagh u, Ruks ha	Ushn a	Katu	Kaphapittah ar, Varnya, Twak Doshhar,
3.	Daruhari dra	Tikta, Katu	Lagh u, Ruks ha	Ushn a	Katu	Varnya, Twak Doshhar, Jwarghna, Kamalahar

#### 1. Priyangu

Latin Name - Callicarpa macrophylla Vahl.

Family - Verbineceae

#### Sanskrit Synonyms

Gandhaphali - The fruit has a strong odor.

Phalini - The plant bears many fruits.

Asthibandhan - Binds the bones together.

Gochandana, Shayama, Pitatandula, Karambha, Varnabhedini, Priya, Durjara, Kanta, Vanita, Lata, Shyama, Godantini, Kanguni, Kangu, Priyavalli, Shreyasi.

Hindi name - Phalini, Priyangu

English name - Beautyberry

#### References of Priyangu in Samhita Period

Samhita	Gana / Mahakashaya
Charak Samhita	Shonitasthapana, Sandhaniya, Purishsangrahniya, Mutraviranjaniya, Prajasthapana

Sushrut Samhita	Priyangvadi Gana Anjanadi Gana
Ashtang Sangara	Priyangvadi Gana
Ashtang Hridaya	Priyangvadi Gana

#### **Active principles**

Seeds & leaves contain Caliterpenone & its Monoacetate, Betasitosterol, in addition seed contains fatty acids. [8] The bark contains betulinic acid. The roots and aerial part contain essential oil, (diterpene) calliterpenone, calliterpenone monoacetate. [9]

#### **Therapeutic Indications**

Fruit is used for *Vaatpittashaman* and *Raktashodhan*.<sup>[10]</sup> It is *Daahprashman*, *Vednasthapan*, *Durgandhnaashak* in properties. It has *Twagdoshhar*, *Mutravirajniya*, *Jwaraghna* and *Vishaghna* properties.<sup>[11]</sup>

In Ashtanga Hrudaya, Priyangu is recommended for stopping excessive bleeding. It can be used in chronic diahorrea and Pittaja disorders, in healing fractures and wounds. [12] As per Bhavprakash Nighantu, it is suggested for treatment of dysentry (Raktatisara), fever (Jwara), excessive sweating, burning sensation of the body (Daha), body odour (Durgandha) and tumors. [13] In Dhanvantari Nighantu, it is advised to be used in delerium (Moha), burning sensation of the body (Daha), fever (Jwara), vomiting (Chardi) and bleeding disorders (Raktapitta). [14]

#### **Pharmacological Action**

Ethanolic extract of C. macrophylla leaves have anti-inflammatory effect and can be the choice to be used as anti-inflammatory drug. [15] Extract also possessed significant anti-arthritic activity as compared to standard drug diclofenac sodium. [16] Aqueous extract of leaves show analgesic and anti-pyretic effects also. [17] Ethanolic and aqueous extracts of the stems of C. macrophylla Vahl. show anti-fungal activity. [18] ethanolic extract of C. macrophylla flower showed anti-arthritic activity. [19] The alcohol extract of flowers, at the dose of 100 and 200 mg/kg, was found to exhibit significant dose dependent antidiabetic activity along

with reduction in hyperlipidemia in dexmethasone induced insulin resistance and streptozotocin induced diabetes in rats.<sup>[21]</sup>

#### 2. Haridra

Latin Name - Curcuma longa Linn.

Family - Zingiberaceae

#### **Sanskrit Synonyms**

Rajani, Nisa, Nisi, Ratri, Gauri, Krimighna, Yoshitpriya, Varvarnini

**English - Turmeric** 

Hindi - Haldi, Hardi

#### Refernces of Haridra in Samhita Period

The classification of *Haridra* according to different *Samhitas* has been completed in the table-

SN	Samhita	Gana
1.	Charak Samhita	Lekhaniya, Kusthaghna, Vishaghana,Tikta Skanda, Shirovirechana, Vatasanshaman, Sleshma-Sanshaman
2.	Sushrut Samhita	Sleshma-Sanshaman, Kusthaghna,Haridradi, Lakshadi, Mustadi, Tiktras Dravya
3.	Ashtang Sangrah	Mustadi, Arshoghna, Haridradi, Kandughana
4.	Ashtang Harideya	Mustadi, Arshoghna, Haridradi, Kandughana

#### **Active principles**

Essential oil and a colouring matter (curcumin). Curcumenone, curcone, eugenol, camphene, bornoel.

#### Therapeutic Indication

According to Acharya Charak, Haridra is used in Kushtha, Shotha, Udara, Hikka, Shvaasa, Arsha, Pandu, Kasa, Prameha, Visha, Dwivaraniya and in Yonivyapada Rogas. [22] While according to Sushrut Samhita, indications of Haridra are Arsha, Bhagandar, Kushtha, Prameha, Vidradhi, Visarpa, Pandu, Shvaasa, Kasa. [23] Haridra is indicated in Sannipataja Jwara, Kasa,

Shvaasa, Hikka, Trishna, Pandu, Kamala, Vatavyadhi, Mukharoga, Bhagandar, Kshudraroga, Gudaroga and Vish Chikitsa.<sup>[24]</sup>

#### **Pharmacological Action**

Haridra is widely used in cosmetology. [25]

Rhizome of *Haridra* is known to possess therapeutic activities and has been used by medical practitioners as an anti-diabetic,<sup>[26-28]</sup> hypolipidemic,<sup>[26-28]</sup> anti-inflammatory,<sup>[27-28]</sup> hepatoprotective<sup>[26,27]</sup>, anti-diarrheal,<sup>[27]</sup> anti-asthmatic<sup>[28]</sup> and anti-cancerous drug.

#### 3. Daruharidra

Latin Name - Berberis aristata DC.

Family - Berberidaceae

#### **Sanskrit Synonyms**

Darvi, Darunisa, Katamkateri, Panchpancha

Darunisha - Yellow wood like turmeric.

Panchpancha - It is cooked to make Rasanjana.

Eng. - Indian barberry

Guj. - Daaruhaldar, Daruharidra, Talimkhana

Hindi - Daaruhaldi, Darhald, Chitraa, Talmakhana

#### References of Daruharidra in Samhita Period

The classification of *Daruharidra* according to different *Samhitas* has been compiled in table.

SN	Samhita	Gana
1.	Charak Samhita	Lekhaniya, Arshoghna, Kandugnha, Shirovirechana
2.	Asthang Sangraha	Shirovirechan, Arshoghna, Kandughna, Haridradi, Mustadi
3.	Sushruta Samhita	Haridradi, Mustadi, Lakshadi, Tiktavarga
4	Asthang Haridra	Tiktagana, Haridradi, Mustadi, Arshoghna, Kandughana.

#### **Active principles**

Berberine, oxyberberine, berbamine, palmatine, jatrorhizine, tetrahydropalmitine etc.

#### **Therapeutic Indication**

Amatisara (Diarrhoea due to indigestion), Aruchi (Tastelessness), Hrillasa (Nausea), Jvara (Fever), Pittaja-Atisara (Diarrhoea due to Pitta Dosa), Raktavikara (Disorders of blood), Trisana (Thirst), Vamana, Visavikara (Disorders due to poison), Yakrtodara (Enlargement of liver). [29]

#### **Pharmacological Action**

Medicinal properties - Berberine has antimicrobial<sup>[30]</sup>, anticarcinogenic activity, antiparasitic action<sup>[31]</sup>. The antimicrobial activity of hydroalcoholic extracts of berberis aristate were tested against different bacterial like E.coli, klebsiella strains pneumoniae, pseudomonas aeruginosa, Staphylococcus pneumoniae, and also some fungal strains like candida albicans, aspergillus tereus, trichophyton rubrum etc. The major alkaloid berberine may be responsible for antimicrobial activity.[32]

#### **DISCUSSION**

Priyangu, Haridra and Daruharidra are the main ingredients of Padmak Agad. Here, Madhu and Ghrit are mixed in Padmak Agad as an Anupaan. Padmakagad is effective in Keeta Visha and Loota Visha. Padmakagad can be used as various preparations like Paan (Oral administration), Lepa (Local administration). The main manifestation of Keet-Loota Vish is on skin which includes symptoms like Raga (Redness), Ruja (Pain), Daha (Burning) and Shotha (inflammation). Most of these drugs have Tikta, Katu and Madhur Rasa, Katu Vipaka, Ushna Veerya and Vishqhna, Shothhar, Twakdoshhar, Raktashodhak Karma. Pharmacologically these drugs are Antiinflammatory, Anti-bacterial, Antioxidant, Anti-fungal activities. Padmak Agad is one of the main Agad described in Keetlootadivishapratishedh Adhyay in Ashtang Hridya.

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