



## Research Article

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### PHARMACOLOGICAL AND PHYTOCHEMICAL EVALUATION OF MASHABALADI KWATH

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#### ABSTRACT

Mashabaladi Kwath is a multi-herb decoction which contains seven important herbs in equal quantity and two drugs as Prakshep dravya. The present study provides updated information on its phytochemical analysis, pharmacological properties and probable mode of action of Mashabaladi Kwath. The phytochemical analysis of the decoction revealed the presence of Alkaloid, Tannin, Saponin, flavonoid and phenol. The decoction has Tridoshaghana action mainly Vata-Kaphashamaka along with Nadibalya (nervine), Dhaturvardhak-Pushtikar (nourishes and strengthening the body tissue, fluids etc.), Shophahar (anti-inflammatory), Shoolahar (subsides pain), Raktapittahara (haemostatic), Amapachan (digestive), Rasayan (rejuvenating), Vrushya (aphrodisiac) etc. All these properties of Mashabaladi Kwath are considered to combat vitiation of Vata in Pakshaghata (hemiplegia), Manyasthamba (cervical spondylitis), Karnanada (tinnitus) and Ardita (facial paralysis). The physiochemical properties of Kshaya showed Loss on Drying at 105°C – 11.16%, Total solid – 15.18%, Acid insoluble Ash – 0.01%, Water Soluble Extractive – 16.4%, Alcohol Soluble Extractives – 8.3%, pH – 6.67 and specific gravity – 1.20.

**Keywords:** Mashabaladi Kwath, Pakshaghata, Manyasthamba, Ardita.

#### INTRODUCTION

Plant based drugs have formed the basis of traditional medicine systems that have been used for centuries in many countries.<sup>1</sup> Today plant-based drugs continue to play an essential role in health care. It has been estimated by the World Health Organization that 80% of the population of the world rely mainly on traditional medicines for their primary healthcare.<sup>2</sup>

Mashabaladi Kwath is a unique preparation explained in Charadutta which contains Masha (*Phaseolus mungo*), Bala (*Sida cordifolia*), Shookshimbhi (*Mucuna pruriens*), Kritrina (*Cymbopogon schoenanthus*), Rasna (*Pluchea lanceolata*), Ashwagandha (*Withania somnifera*) and Urubuka (*Ricinus communis*) in equal quantity. Ramatha (*Ferula foetida*) and Saindhav Lavan (*Sodiaum chloride*) were added to it as Prakshep dravya.<sup>3-5</sup>

It is indicated in Pakshaghata (hemiplegia), Manyasthamba (cervical spondylitis), Karnanad (tinnitus), Karnaruja (earache), Ardita (facial paralysis) with Tridoshaghana action mainly Vata-Kaphashamaka along with Nadibalya (nervine), Dhaturvardhak-Pushtikar (nourishes and strengthening the body tissue, fluids etc.), Shophahar (anti-inflammatory), Rasayan (rejuvenating), Vrushya (aphrodisiac) actions etc.

Masha Bala Shookshimbhi Kritrina Rasna Ashwagandha  
Urubukanam

Kwatho Nasyanipeeto Ramath Lavananvita Koshna  
Aparhati Pakshaghata Manyasthambha Sakarnanad Rujam  
Durjay Arditavata Saptahajayati Chavashma II  
(Chakradutta 23-24, B. R. 26/71-72, Yogratnakar Vatarog Chi.  
1-2)

The study scientifically validates the use of herbal drugs in traditional medicine and it contributes to the development of standardized parameters of Kwath in Indian system of medicine. Thus, the present study deals with the pharmacological, phytochemical evaluation of Mashabaladi Kwath were undertaken.

#### MATERIAL AND METHODS

**Collection and authentication of drugs** -The raw drugs were collected from botanical garden and purchased from local market. The identity of the drugs was confirmed by Assistant Professor of Dravyaguna Department, Uttarakhand Ayurveda University, Gurukul Campus, Haridwar.<sup>6</sup> These drugs were compared with voucher specimen and available literature in the institute.<sup>7</sup>

**Method of Preparation of Kwath:** Kwath (Decoction) was prepared using one part of Mashabaladi Kwath course powder and sixteen parts of water was added and boiled on medium flame till it gets reduced to 1/4<sup>th</sup> as per the classical reference. Kwath was filtered and stored in a clean vessel.<sup>8</sup>

**Analytical Study:** Mashabaladi Kwath was subjected for analytical study as per the standards of Ayurvedic Pharmacopoeia of India at Pharmacological Department, Gurukul, Haridwar.

**Table 1: Ingredients of Mashabaladi Kwath**

No.	Name	Scientific name	Family	Parts used
1	Masha	<i>Phaseolus mungo</i>	Fabaceae	Seeds
2	Bala	<i>Sida cordifolia</i>	Malvaceae	Whole plant
3	Shookashimbi	<i>Mucuna pruriens</i>	Fabaceae	Seeds
4	Kritrina	<i>Cymbopogon schoenanthus</i>	Poaceae	Whole plant
5	Rasna	<i>Pluchea lanceolata</i>	Asteraceae	Leaves
6	Ashwagandha	<i>Withania somnifera</i>	Solanaceae	Rhizome
7	Urubaka	<i>Ricinus communis</i>	Euphorbiaceae	Root
8	Ramatha	<i>Ferula foetida</i>	Apiaceae	Resin
9	Saindhav	<i>Sodium chloride</i>	-	Crystalline form

**RESULTS****Pharmacological study****Table 2: Pharmacological properties of ingredients of Mashabaladi Kwath**

Name	Rasa	Guna	Veerya	Vipaka
Masha	Madhura	Guru	Sheeta	Madhura
Bala	Madhura	Laghu, Snigdha P icchila	Sheeta	Madhura
Shookashimbi	Madhura, Tikta	Guru Snigdha	Ushna	Madhura
Kritrina	Madhura Kashaya	Laghu Snigdha	Sheeta	Madhura
Rasna	Tikta	Guru	Ushna	Katu
Ashwagandha	Madhura Tikta Katu	Laghu Snigdha	Ushna	Madhura
Urubaka	Madhura Katu Kashaya	Snigdha Teekshna sookshma	Ushna	Madhura
Ramatha	Katu	Snigdha, Laghu Teekshna	Ushna	Katu
Saindhav	Lavana	Laghu Snigdha	Ushna	Madhura

**Table 3: Karma and Doshagnata of ingredients of Mashabaladi Kwath**

Name	Doshagnata	Karma
Masha	Vata shamaka, Pitta Kapha vardhaka	Vedanasthapan, Vatashamak, Nadibalya, Madak, Rechan, Purishjanan, Shoolprashaman, Yakrituttejak, Stanya-Artav janana, Mutral, Balya, Brimhan, Jeevaniya and Medovardhak
Bala	Vata Pitta shamaka	Daha Prashamana, Vedanastapana, Balakarak, Vrushya, Kantikara, Vatahara, Dhatuwardhaka, Raktapittahar, Ojovardhaka, Sangrahi and Sukrala
Shookashimbi	Tridoshagna	Sukra vardhak, Uthejaka, Vata shamak, nervine tonic, Brimhana, Vijikarana, Artavajanana, Krimighna, Yonisankoschaka, Mootrala, Raktapitta Nashaka, Dushtavrana Nashaka
Kritrina	Vatakapha shamak	Rechan, Deepan, Pachan, Anuloman, Krimighna, Kaphahara, Stanyajanana, Raktatuklesha, Raktashodhak and mutrajana
Rasna	Kapha Vata shamak	Vatashamak, Aamapachana, Vishahar, Pachan, Kasahar, Shophahar, Kamphar, Udarroghar, Shvasahar
Aswagandha	Kapha Vata shamak	Shukrla, Vrishya, Rasayana, Balya, Vatahar, Brimhaniya
Eranda	Kapha Vata shamak	Vatahara, Vrushya, Deepan, Grahi, Bhedan, Rechan, Sara, Vayasthapan, Srotovishodhana
Ramada	Kapha Vata shamak, Pitta vardhak	Vedanasthapan, Shoolprashaman, Vatahar, Uttejak, Sangyasthapan, Akshephahar, Deepan, Pachan, Rechan, Anuloman, Krimighna, Kapha Nissaraka and Shwashar
Lavana	Tridosha shamak	Chekshushya, Hridya shrotoshodhak, Ruchikara and deepana

**Phytochemical study**

**Organoleptic Characters** – Kwath was having brownish colour, dark appearance, bitter taste and aromatic odor.

**Physio-chemical Properties** – Kwath showed Loss on Drying at 105°C – 11.16%, Total solid – 15.18%, Total Ash – 6.87%, Acid insoluble Ash – 0.01%, Water Soluble Extractive – 16.4%, Alcohol Soluble Extractives – 8.3% and pH – 6.67.

**Identification Tests** –The qualitative results were positive for Alkaloid, Tannin, Saponin, flavonoid and phenols.

**Probable mode of action of Kwath**

Mashabaladi Kwath mentioned in Charadutta 23/24 is indicated in Vataroga. The present drug formulation Mashabaladi Kwath contains drugs like Masha, Bala, Kaunch, Rasna, Erand, Rohisha, Ashwagandha, Hingu and Saindhav lavan.

Masha is indicated in the treatment of Ardita by Chakradutta, Yogratanakar, Bhavprakash and Bhaisjya Ratnavali. Masha is one of the best among various Vatahara drugs. In Charak sutrasthana it is mentioned as Paramvatahara having Guru, Brimhana, Tarpana, Balya and Snigdha properties which control vitiated Vata and Dhatukshaya. Generally it is recommended in degenerative nervine disorders. It is considered as nervine tonic.

In Dhanwantry Nighantu and Raj Nighantu, Bala is considered as Tridoshanut, a nervine stimulant, Balya, Ojovardhak, Shophanashini, Dhatuwardhak, Pushtikar and Vatanulomana. It is having Laghu, Snigdha, Picchila Guna, Madhura Rasa, Madhura Vipaka and Vatahara in properties. Hence it is useful in Dhatukshayajany Vatavyadhi. It is said to restore muscular function and body strength, and useful in Ardita. It also relieves inflammation and oedema.

Shookshimbi is having Guru, Snigdha Guna, Madhura, Tikta Rasa, Ushna Veerya, Madhur Vipaka and Vatahara properties. In Bhavprakash, it is said to be Vatapitta Shamak and Kaphapitta-asra Nashini, which helps to treat the Pittaj and

Kaphaj type of Ardita. It is said to be Balya and Vatashaman property specially attributed to its seeds. It is Pitta-asra-hanta, hence useful in the Arsik-kshayajanya and Pittaj types of Ardit. It helps to relieve the thrombotic or embolic occlusion and useful in atherothrombotic lesions. It also helps to restore haemorrhagic conditions. A specific property ascribed to it is Dushtavranavinashini, which shows that it may act on vascular lesions in brain. It is hypotensive, spasmodic, hypocholesterolemic, anti inflammatory and a good nervine tonic.

Kritrina is Katu, Tikta Rasa, Ruksha, Laghu, Tikshna Guna, Ushna Virya, Katu Vipaka and Vatakapha Shamak in nature. It has Rechan, Deepan, Pachan, Anuloman, Krimighna, Stanyajanana, Raktaklesha, Raktashodhak and Mutrajana properties. The Deepan, Pachan properties helps to metabolise the intermediate indigested food and Anuloman property helps in Vatanuloman. The oil is stimulant, nervine tonic and it is used for rheumatism, nerves and joint pains.

Rasna is best Vatashamak drug having Tikta Rasa, Ushna Virya and Katu Vipaka. In Dhanwantry Nighantu and Bhavprakash it is said to be Vata-arsikajeet, thus it acts on Vata as well as Rakta. The Amapachan property helps to metabolise the intermediate indigested substances, which may cause Dhatukshaya or Margavarana. It is also described as Shothahar and helps to treat the disease.

Ashwagandha is Tikta, Kashaya, Madhur Rasa, Ushna Virya and Madhur Vipaka and Balya, Vatahara in nature. It is a well known Rasayana drug. Vatahara, Balya, Vrana and Kaphahar, Kshayahar, Shophahar, etc. are some virtues of Ashwagandha. It is Balya, Vatahar and Rasayana which helps to cure Ardit by preventing degenerative changes, nervine tonic effect and Indriya-prasadanam also. This condition may be found in Dhatukshaya which is one of the causative factors for this disease. It also serves the function of enhancing the energy and nourishes the Mastishka.

Urubuka is Madhur, Katu, Kashaya Rasa, Ushna Virya and Madhur Vipaka in properties. Root is said to be Vrushya and Vataharanam. It specifically acts on Vata and Kapha both. Shothaghna property helps to relieve inflammation and edema. It is also said to be Shoolaghna, which reduce the painful conditions in Ardit. It also helps to treat Stambha, Sankocha and considered as anti-inflammatory drug.

Ramatha having Katu Rasa, Laghu, Snigdha Guna, Ushna Veerya, Katu Vipaka and Kaphavata Shamaka properties. It is said to be Vedanasthapana, Shoolprashaman, Vatahar, Uttejak, Sangyasthapan, Deepan, Pachan, Rechan, Anuloman and Kapha Nissaraka. It is used to improve appetite and digestion. It relieves colic, flatulence and abdominal distress.

Saindhav Lavan has the potent action of facilitating easy absorption through its effective Laghu, Snigdha, Sukshma Guna, Ushna Veerya, Madhur Vipaka and Chakshushya, Hridiya shrotoshodhak, Ruchikara and deepana properties.

Above all description shows that the drugs mentioned here are chiefly Vatahara, Brimhaniya and Balya in nature. Some of them are Vrishya, Pittasrahara, Amapachan, Raktapittahara, Shothahara and Shoolahar. All these properties of Mashabaladi Kwath are considered to combat vitiation of Vata in Pakshaghat, Manyasthamba, Karnanada and Ardita.

## DISCUSSION

Mashabaladi Kwath is a multi-herb decoction which contains seven important herbs in equal quantity and two were added as Prakshep dravya. Organoleptical, Physio-chemical properties, Identification test and probable mode of action of Kwath were evaluated as a primitive step to analyze the Mashabaladi Kwath.

As revealed by the results, Organoleptical characters showed bitterness in taste with aromatic odor and brownish in color, which may be due to the combination of herbal drugs. Alkaloid, Tannin, Saponin, flavonoid and phenols were found in Kwath.

Probable gross action of Mashabaladi Kwath on Doshas is Tridosha Shamaka, mainly Vata-Kapha Shamaka, Nadibalya, Dhatuvardhak, Pushtikar, Shophahar, Rasayan, Vrushya etc. Masha a potent Dhatu Vardhana Dravya, is supportive as a Vatahara with its dominant Madhura rasa and Ushnadi Gunas. Bala is considered as a nervine stimulant, Balya, Madhura Rasa, Madhura Vipaka and Vatahara in property. Kaunch Beej is Snigdha, Madhura and Ushna in property; it acts as a nervine tonic. Rasna is the one of the best Vatashamak drug having Tikta Rasa, Ushna Virya and Katu Rasa. Erand is Madhur, Katu, Kashaya Rasa, Ushna Virya and Madhur Vipaka in property. Rohisha is Katu, Tikta Rasa, Ushna Virya, Katu Vipaka and Vatakapha Shamak in nature. Ashwagandha is Tikta, Kashaya, Madhur Rasa, Ushna Virya and Madhur Vipaka and Balya, Vatahara in nature. It serves the function of enhancing the energy and nourishes the Mastishka. Saindhav Lavan and Hingu have the potent action of facilitating easy absorption through its effective properties. By observing the above mentioned drugs and their property, it gives the Balya, Vatahara and Brimhana effects.

## CONCLUSION

In present study, various standardized parameters such as pharmacological, phytochemical and probable mode of action of Mashabaladi Kwath were carried out, which could be helpful in standardization of Kwath and provide useful information and authentication of the drugs. The phytochemical investigation can further be isolated and undergo further pharmacological evaluation of the active principles present in the Kwath.

## REFERENCES

1. Balandrin NF, Kinghorn AD, Farnsworth NR.; Human Medicinal Agents from Plants; Kinghorn A.D.; Balandrin N.F. Edition, ACS Symposium Series, 1993; 534: 2-12.
2. Pradeep K, Saha Sudipta, 'An updated review on Taxonomy, phytochemistry, Pharmacology and Toxicology of Macuna pruriens' Journal of Pharmacognosy and Phytochemistry, Vol.2, Issue 1, 2013, 306-314.
3. Chakrapanidatta Chakradatta, Vaidyaprabha hindi Commentary by Acharya Ramanath Dwivedi, Vatavyadhi Chikitsa, Chaukhamba publication, Varanasi, 1998, 22/23-24:93-94.
4. Shastri Ambikadatta, Bhashajya Ratnavali, Vatarog Chikitsa, Chaukhamba Sanskrit Sansthan, Varanasi, 5th edition, 2005, Vatavyadhi chikitsa, 26/71-72, Page- 543.
5. Tripathi Indradev, Shastri Laxmipathi, Yogratanakar with Vaidyaprabha commentary, Vataroga chikitsa, First edtion, Krishnadas Academy, Varanasi, 1998, 1-2:518.
6. Pradhan Shailendra, MD, Assistant Professor, Department of Dravyaguna, Uttarakhand Ayurved University, Gurukul Campus, Gurukul Kangri, Haridwar, U.K.
7. The Ayurvedic Pharmacopoeia of India, Part I, Vol. I, III, V, Dept. of Ayush, Govt. of India, New Delhi, Sookashimbi23-

24, Kattrina86-88, Rasna163-164, Ashwagandha19-20, Urubaka45-46, Ramatha 64.

8. Sharangadharacharya, Sharangadhara Samhita with Adhamalla's 'Dipika' and Kasirama's Gudartha Dipika commentaries, Kwath Kalpana, Chaukhambha Orientalia, Varanasi, 3<sup>rd</sup> edition, 1983, 144.

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