



**ANTIDIARRHEAL PROPERTIES OF POLYHERBAL FORMULATION
MUSTAKARANJADI KWATHA CHURNA- A REVIEW**

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ABSTRACT

In developing countries, diarrhea becomes a major health problem leading to morbidity and mortality. Ayurveda described diarrhea as Atisaar which means ati (excess) & saranam (flow); condition where watery stools passed in excess with high speed. The general symptoms involve; dryness of mouth, discoloration of body, uneasiness, disturbed functioning of Vayu and dehydration. Microorganism has developed resistance to many antibiotics and this have created immense clinical problem in the treatment of infectious disease. After screening lot of treatment modalities mentioned in the text for the diarrhea the *mustakaranjadi kwatha churna* is taken for review to establish its antidiarrheal properties as a polyherbal combination. The easy availability, low cost and negligible side effects, natural products are popular in the nowadays in the world.

KEYWORDS: *musta, karanja*, antidiarrheal, polyherbal, *atisaar*.

INTRODUCTION

Diarrhea has long been recognized as an important health problem in all age groups and is a major cause of morbidity and mortality in rural communities of socio-economically backward and developing, third-world countries.^[1] It may be infectious or non-infectious with increase in frequency of passage of liquid faeces and alteration in stool character (amount and consistency). Infectious causative organism (virus, parasite or bacterium) spreads through contaminated food or drinking-water or from person to person as a result of poor hygiene^[2] while different toxins, chronic diseases or antibiotics are contributed in non infectious diarrhea.^[3] Globally, diarrhoea accounts for more than 5-8 million deaths annually, majority of whom are infants and children below 5years old especially in developing

countries.^[4,5,6] 88% of diarrhoea-related deaths are caused by inadequate sanitation along with poor hygiene and clinically due to dehydration, which results from the loss of electrolytes in diarrhoeal stools.^[7] Economically, diarrhoea is one of the major health challenges to humans as it causes loss of productive life due to premature mortality, disability and increased health-care costs.^[8] According to World Health Organization (WHO) about 80% of the World's population depends mainly on traditional medicine and the use of plant extracts are involved in these traditional treatments,^[9] mainly due to the economic viability, accessibility and ancestral experience.^[10] After screening lot of treatment modalities mentioned in the text for the diarrhea the *mustakaranjadi kwatha churna*^[11] is taken for review to establish its antidiarrheal properties as a polyherbal combination.

Method of preparation of *Mustakaranjadi kwatha churna*^[12]

Following ingredients are used for the preparation of *mustakaranjadi kwatha churna*

S.No	Ingredients	Latin name	Family	Part used	Quantity
1	<i>Musta</i>	<i>Cyperus rotundus</i>	Cyperaceae	Rhizome	1 part
2	<i>Karanj</i>	<i>Pongamia pinnata</i>	Leguminosae	Stem bark	1 part
3	<i>Ativisha</i>	<i>Aconitum heterophyllum</i>	Ranunculaceae	Roots	1 part
4	<i>Chitraka</i>	<i>Plumbago zeylanica</i>	Plumbaginaceae	Roots	1 part
5	<i>Bilva</i>	<i>Aegle marmelos</i>	Rutaceae	Roots/ stembark	1 part

6	<i>Shunthi</i>	Zingiber officinale	Zingiberaceae	Rhizome	1 part
7	<i>Pippali</i>	Piper longum	Piperaceae	Roots	1 part
8	<i>Vatsaka</i>	Holarrhena antidysentrica	Apocynaceae	Seeds	1 part

The coarse powder of all the ingredients are prepared separately and mixed together in the prescribed quantity.

It is administered in the form of decoction as prescribed in the Ayurveda classics.^[13]

Ingredients and their pharmacological and therapeutic properties.

S.No.	Name of the Drug	Rasadi panchak & Ayurvedic properties	Pharmacological properties
1	<i>Musta</i>	<i>Rasa – katu, tikta, kashaya</i> <i>Virya-sheeta</i> <i>Rogaghanta- jwara, aruchi, trisha, kapha</i> <i>pitta nashakrimihar</i> <i>Karma- agnideepka,</i> <i>pachaka, grahi, swedajanaka</i> ^[14]	Antidiarrheal ^[15] Antispasmodic ^[16]
2.	<i>Karanj</i>	<i>Rasa – katu</i> <i>Guna- laghu</i> <i>Virya – teekshna</i> <i>Rogaghanta- kushtha, udavarta, gulma, arsha</i> <i>Krimi, Prameha, vranaropana, kasahara</i> <i>Doshaghanta- pitajanaka,</i> <i>kaphavata nashak</i> ^[17]	Antidiarrheal ^[18,19]
3	<i>Ativisha</i>	<i>Rasa – katu, tikta</i> <i>Guna- ushna</i> <i>Virya-ushna</i> <i>Rogaghanta- atisara, ama, visha, vamana, krimiroga</i> <i>Karma- agnideepka, pachaka</i> ^[20]	Antidiarrheal ^[21]
4	<i>Chitraka</i>	<i>Rasa – katu</i> <i>Guna – laghu, ruksha, ushna</i> <i>Karma – agnideepka, pachaka vataghana, , shleshama</i> <i>pitahara Rogghanta</i> <i>Krimi, shotha kushta, arsh, kasa</i> ^[22]	Antidiarrheal ^[23]
5	<i>Bilva</i>	<i>Rasa – katu, tikta, kashaya</i> <i>Guna- snigdha, ushna</i> <i>Virya- ushna</i> <i>Rogaghanta- atisara, pravahika, grahni,</i> <i>Madumeha, karnaroga, vataroga,</i> <i>kamla, arsha, shotha, jwara</i> <i>Karma- agnideepka, pachaka, grahi</i> ^[24]	Antidiarrheal ^[25,26,27] Antibacterial ^[28] Antiinflammatory ^[29]
6	<i>Shunthi</i>	<i>Rasa - Katu</i> <i>Guna - Laghu, Snigdha (Shunthi),</i> <i>guru, Ruksha, Teekshna</i> <i>Ardraka).</i> <i>Virya - Ushna, , Vipak - Katu (Ardraka), Madhur(Shunthi),</i> <i>Doshagnata -</i> <i>Kaphavatashamak,</i> <i>Rogagnata – Amavata,</i> <i>Aruchi, Chhardi, agnimandya, Koshtavata,</i> <i>sheetpitta, Kasa, Shwasa, pratishyay.</i> <i>Karma - Shothahara, vednasthapana, Nadiuttejak,</i> <i>rochana, Dipan, Pachana,</i> <i>vatashamak, Triptighna, vatanulomak, Grahi,</i> <i>Bhedana, kaphahara, Shwasahara,</i> <i>vrishya.</i> ^[30]	Antidiarrheal ^[31] Antibacterial ^[32]
7	<i>Pippali</i>	<i>Rasa - Katu, madhur (fresh</i> <i>piper)</i> <i>Guna - Laghu, Snigdha, Tikshna,</i> <i>Veerya - Anushna sheet, sheet</i> <i>(fresh piper)</i>	Antibacterial ^[34] Antimicrobial ^[35,36] Anti-inflammatory ^[37,38] Bioavailability enhancement ^[39,40,41,42,43,44]

		<i>Vipaka - Madhur, Doshagnata - Kaphavatashamak, Kaphavata Vardhak (fresh piper) Rogagnata -Shotha, Agnimandya, Vibandh, Gulma, hikka, Yakshma, Mootravikar, shukradaurbalya, Rajorodha, kashtraprasava, Yakrutvruddhi, krimiroga, Pandu. karma - Dipana, Pachana, ruptighna, Vatanulamaka, akruduttejaka, Garbhashay sankochaka, Vrushya, kushtagna, rasayana</i> ^[33]	
8.	<i>Vatsaka</i>	<i>Rasa -katu, kashaya Guna- ruksha Virya- sheeta Rogaghanta- arsha, atisar, kushta, jwara Karma- agnideepka, pachaka</i> ^[45]	Antibacterial ^[46,47] Antidiarrheal ^[48]

CONCLUSION

This review has presented a collective knowledge on therapeutic, pharmacological property as anti diarrheal, anti-inflammatory, antibacterial, antimicrobial, bioavailability enhancer. So this review will also facilitate to gain all about the past scientific research and the necessary information about the enormous pharmacological activities of *Mustakaranjadi kwatha churna* polyherbal formulation which helps the researcher to explore this formulation for experimental, clinical studies and also for the promotion of health.

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