Rasamruta, 9:20 October 2017



**World's First e - journal of Ayurveda** Scientific Revolution in Ayurveda!

# VatsakadiKwathaChurna:APolyherbal Formulation For Diarrhea

Dr Dinesh Gupta\*, DrTitiksha Sharma\*\*, DrParamvir Singh\*\*\*, DrJagadeshMitti\*\*\*\* Jammu Institue of Ayurveda & Research, Nardani Jammu, J&K

## Abstract

Herbal medicines are significant and reliable sources for treating various infectious and non infectious diseases. It is well known that infectious diseases account for high proportion of health problem, especially in developing countries. Microorganism has developed resistance to many antibiotics and this have created immense clinical problem in the treatment of infectious disease. Vatsakadikwathachurna a polyherbal formulation which is known to be antidiarrheal.

The clinical manifestations of Atisara are similar to 'Diarrhoea' in modern medicine which is treated with specific Antibiotics and Antispasmodics. After reviewing the properties of the vatsakadikwathachurna ,we can conclude that it possesses anti diarrheal properties and this looks promising in the treatment of diarrhea.

Keywords:-Polyherbal,diarrhea, vatsak (kutaj)

# Introduction

Diarrhoea is a common gastrointestinal disorder characterized by an increase in stool frequency and a change in stool consistency.<sup>1</sup>It remains one of the major health threats to populations in the tropical and subtropical poor countries. In developing countries, the majority of people living in rural areas almost exclusively use traditional medicines in treating all sorts of diseases including diarrhoea. <sup>2</sup> Antibiotic resistance has become a global concern <sup>3</sup>. The clinical efficacy of many existing antibiotics is being threatened by the emergence of multidrug-resistant pathogens <sup>4</sup>.

Complementary system of medicine such as Ayurveda, Siddha, Unanai and Chinese medicine have gained its popularity in recent years <sup>5</sup>.Vatsakadikwathachurnapossessess antidiarrheal properties mentioned in the text.<sup>6</sup>

## Method of preprationvatsakadikwatha churna<sup>7</sup>

Following ingredients are used for the preparation of Vatsaka dikwa thachurna

S.No	Ingredients	Latin name	Family	Part used	Quantity
1	Vatsaka	Holarrhenaantidysenterica	Apoynaceae	St. bk.	1 part
2	Ativisha	Aconitum heterophyllum	Ranunculaceae	Rt.	1 part
3	Bilva	Aegle marmelos	Rutaceae	Fr.P	1 part
4	Udichya	Pavoniaodorata	Malvaceae	Rt.	1 part
5	Musta	Cyperusrotundus	Cyperaceae	Rz.	1 part

Rt.- root, St.bk.- stem bark , Fr. P- fruit pulp, Rz.- rhizome

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

Ingredients of Vatsakadikwathachurna and their pharmacological and therapeutic properties

S.No.	Name of the drug	Rasadipanchak&Ayurvedic properties	Pharmacological
			properties
1	Vatsaka (Kutaj)	Rasa –katu,kashaya	Antidiarrheal <sup>9,10,11</sup>
		Guna- ruksha	Antibacterial <sup>12,13</sup>
		Virya- sheeta	
		Rogaghanta- arsha,atisar,kushta,jwara	
		<b>Karma</b> - agnideepka,pachaka <sup>8</sup>	
2	Ativisha	Rasa –katu,tikta	Antidiarrheal <sup>15,</sup>
		Guna- ushna	
		Virya-ushna	
		Rogaghanta-	
		atisara,ama,visha,vamana,krimiroga	
		<b>Karma</b> - agnideepka,pachaka <sup>14</sup>	

3	Bilva	Rasa –katu,tikta,kashaya	Antidiarrheal <sup>17,18,19</sup>
		Guna- snigdha,ushna	Antibacterial <sup>20</sup>
		Virya- ushna	Antiinflammatory <sup>21</sup>
		Rogaghanta- atisara,pravahika,grahni,	
		Madumeha,karnaroga,vataroga,	
		kamla,arsha,shotha,jwara	
		<b>Karma</b> - agnideepka,pachaka,grahi <sup>16</sup>	
4	udichya	Guna- ruksha, laghu	Antibacterial <sup>23</sup>
		Virya- sheeta	
		Rogaghanta-atisara,ama,aruchi,hrulasa,	
		Visarpa,hrudyaroga,	
		<b>Karma</b> - agnideepka,pachaka <sup>22</sup>	
5	Musta	<b>Rasa</b> – katu,tikta,kashaya	Antidiarrheal <sup>25</sup>
		Virya-sheeta	Antispasmodic <sup>26</sup>
		Rogaghanta- jwara,aruchi,trisha,kapha	
		pitta nashakkrimihar	
		Karma-	
		agnideepka,pachaka,grahi,swedajanaka <sup>24</sup>	

# Discussion

According to one study, Kutajand bark is capable to kill free living amoebae and it also kills entamoebahistolytica in the dysenteric stools of experimentally infected kittens and the herb is markedly lethal to the flagellate protozoon <sup>27</sup>. The strong antibacterial activity of the Holarrhenaantidysenterica extract inhibits growth of enteropathogenic Escherichia coli (EPEC) bacteria strains. The EPEC strains are notorious for resisting the activities of multiple antibiotic drugs. The effectiveness of Holarrhenaantidysenterica in treating diarrhea induced by EPEC strains makes it an effective alternative to conventional antibiotic drugs used for treating dysentery <sup>28</sup>. The medicinal plant could also inhibit formation of bloody stools, a symptom of enterohaemorrhagic Escherichia coli (EHEC) infection.<sup>29</sup>. Studies suggest that Holarrhena

antidysenterica prevents and treats EPEC infections by prevented bacterial adhesion. The antiadherence effect of the alkaloids of the herb provides a rational basis for treating diarrhea induced by EPEC infection.<sup>30</sup>.Holarrhenaantidysenterica is also effective in

treating multi-drug resistant Salmonella infection, which is an important cause of severe enteric diseases worldwide<sup>31</sup> Most ingredients have *katu,tikta,kashaya rasa*, and *Kashaya* dominant drugs can be incorporated in the subsequent phases which facilitates for Shoshana (absorption) of liquefied or detoxified, a state produced by Tikta Rasa and Katu Rasa<sup>32</sup>The crude extract of *Bilwa* has shown antioxidant<sup>33</sup>, effective in experimental models of irritable bowel syndrome and physiological diarrhoea<sup>34,35</sup>. *Udichya* has shown the antimicrobial activity.<sup>36</sup>*Musta* has produced its antidiarrhoeal effect through decreasing intestinal secretions and antispasmodic effect by inhibiting the intestinal motility.<sup>37</sup>

## Conclusion

Pharmacological activities of ingredients of the *vatsakadikwathachurna*has shown its use as, antidiarrheal, antimicrobial, antibacterial, anti-inflammatory and antispasmodic qualities .So this review helps the researcher to explore this formulations for pharmacological activities of the *vatsakadikwathachurna*.

\* Assisitant Professor , Dept of Rasashastra&BhaishyaKalpana Jammu Institue of Ayurveda & Research, Nardani Jammu, J&K

\*\*Consultant Ayurveda , Sri Sri Ayurveda Jammu ,J&K

\*\*\*H.O.D Rasashastra&Bhaishjayakalpana ,GurunanakAyurvedic Medical College, Gopalpur Ludhiana.

\*\*\*\*Prof., J.S.S Ayurveda Medical college, Mysore, Karnataka, India

## List of refrences

1. J Lin; T Puckree; TP Mvelase. Journal of Ethanopharmacology, 2002, 79, 53-56.

2. OO Adeyemi; AJ Akindele. Journal of Ethanopharmacology, 2009, 123, 459-463.

3. Westh H, Zinn CS, Rosdahl VT *et al.* An international multicenter study of antimicrobial consumption and resistance in Staphylococcus aureus isolates from 15 hospitals in 14 countries. Microb Drug Resist 2004; 10:169-176.

4. Bandow JE, Brotz H, Leichert LIO *et al.* Proteomic approach to understanding antibiotic action. Antimicrob Agents Chemother 2003; 47:948-955

5. Eisenbera DM, Kessler RC, foster Norlock C, Calkins CE, Delbanco TL DRD. Unconventional medicine in united states- prevalence, costs and pattern of use NEJM 1993

6. AFI- Part 11, First English edition, published by the controller of publications civil lines , 110054 in 2000 under the Ministry of Health & Family Welfare Govt. of India Dept of ISM , page no 83.

7 AFI- Part 11, First English edition, published by the controller of publications civil lines, 110054 in 2000 under the Ministry of Health & Family Welfare Govt. of India Dept of ISM, page no 83.

8. Dr G.S. Pandey ,BhavaprakashNighantu Indian MetricaMedica of Sh. Bhava Mishra ,reprint 2004, published by Chaukhambha Bharti Academy ,Varanasi ,PP -346.

9. Ashish Mishra et al ,Therapeutic significance and pharmacological activities of antidiarrheal medicinal plants mention in Ayurveda: A review , published in journal of intercultural ethnopharmacology, 04 May, 2016.

10. Gupta Kunal et al. ,Antidiarrhoeal activity of polyherbal formulation in various animal modes of diarrhoea. Published un international research journal of pharmacy. 09/08/12.

11. D.Kavitha et al, Antibacterial and antidiarrhoeal effects of alkaloids of *Holarrhena antidysenterica* WALL, published in the year December 2003.

12. Srivastava niraj et al ,Antibacterial Activity of Kutaj (*Holarrhenaantidysenterica*Linn.) in childhood diarrhea: - *In vitro* study, published in the pharma innovation journal .

13 D.Kavitha et al, Antibacterial and antidiarrhoeal effects of alkaloids of *Holarrhena antidysenterica* WALL, published in the year December 2003.

14 .Dr G.S. Pandey ,BhavaprakashNighantu Indian MetricaMedica of Sh. Bhava Mishra ,reprint2004, published by Chaukhambha Bharti Academy ,Varanasi ,PP -127

15. Ashish Mishra et al ,Therapeutic significance and pharmacological activities of antidiarrheal medicinal plants mention in Ayurveda: A review , published in journal of intercultural ethnopharmacology, 04 May, 2016.

16. Dr G.S. Pandey ,BhavaprakashNighantu Indian MetricaMedica of Sh. Bhava Mishra ,reprint 2004, published by Chaukhambha Bharti Academy ,Varanasi ,PP -274

17. S Brijesh et al 2009, Antidiarrhoeal activity of *Aegle marmelos*unripe fruit: Validating its traditional usage, published in BMC Complementary and Alternative Medicine, November 2009 18. Dr Vijay Anand Raju 2016, Evaluation of antidiarrhoeal and antiinflammatory activity of Aegle marmeloson albino wistar rats, published in Pelagia Research Library, 2016.

19. Ashish Mishra et al ,Therapeutic significance and pharmacological activities of antidiarrheal medicinal plants mention in Ayurveda: A review , published in journal of intercultural ethnopharmacology, 04 May, 2016.

20. Mazumder R, Bhattacharya S, Majumder A, Pattnaik AK, Tiwari PM, Chaudhary S. Antibacterial evaluation of *Aegle marmelos*root extract. Phtother Res. 2006;20:82-84.

21. Dr Vijay Anand Raju 2016, Evaluation of antidiarrhoeal and antiinflammatory activity of Aegle marmeloson albino wistar rats, published in Pelagia Research Library, 2016

22.Dr G.S. Pandey ,BhavaprakashNighantu Indian MetricaMedica of Sh. Bhava Mishra ,reprint 2004, published by Chaukhambha Bharti Academy ,Varanasi ,PP -238

23. Seems Nakhare et all, January 1992, Antimicrobial Acitivity of the Essential Oil of PavoniaodorataWilld.,

24. Dr G.S. Pandey ,BhavaprakashNighantu Indian MetricaMedica of Sh. Bhava Mishra ,reprint 2004, published by Chaukhambha Bharti Academy ,Varanasi ,PP -243.

25. Ashish Mishra et al ,Therapeutic significance and pharmacological activities of antidiarrheal medicinal plants mention in Ayurveda: A review , published in journal of intercultural ethnopharmacology, 04 May, 2016.

26. Prashant B. Shamkuwar, Antispasmodic effect of Cypreusrotundus , 2012, published in Scholars research library.

27. Indian Chem J, 1981, 20B: 62. and Chopra, R.N,: Indigenous Drugs of India, Academic Publishers, Calcutta, 1982

28. Kavitha D, Shilpa PN, Devaraj SN. "Antibacterial and antidiarrhoeal effects of alkaloids of Holarrhenaantidysenterica WALL." Indian J ExpBiol 2004; 42(6):586-94.

29. Voravuthikunchai S, Lortheeranuwat A, Jeeju W, Sririrak T, Phongpaichit S, Supawita T. "Effective medicinal plants against enterohaemorrhagic Escherichia coli 0157:H7." J Ethnopharmacol 2004; 94(1):49-54.

30. Kavitha D, Niranjali S. "Inhibition of enteropathogenic Escherichia coli adhesion on host epithelial cells by Holarrhenaantidysenterica (L.) WALL." Phytother Res 2009; 23(9):1229-36.

31. Rani P, Khullar N. "Antimicrobial evaluation of some medicinal plants for the anti-enteric potential against multi-drug resistant Salmonella typhi." Phytother Res. 2004; 18(8):670-3.

32 Harishitha kumara et al ,Medohara and Lekhaniyadravyas (anti- obesity and hypolipidemic drugs) in Ayurvedic Classics: A critical review published in AYU in junw 2016 pp 14.

33. Sabu MC, Kuttan R. Antidiabetic activity of *Aegle marmelos* and its relationship with its antioxidant properties. Indian J Pharmacol. 2004; 48:81.

34. Shoba FG, Thomas M. Study of antidiarrhoeal activity of four medicinal plants in castor-oil induced diarrhoea. J Ethnopharmacol. 2001;76:73-76.

35. Jagtap AG, Shirke SS, Phadke AS. Effect of polyherbal formulation on experimental models of inflammatory bowel diseases. J Ethnopharmacol. 2004;90:195-204.

36. Seems Nakhare et all, January 1992, Antimicrobial Acitivity of the Essential Oil of PavoniaodorataWilld

37. Prashant B. Shamkuwar, Antispasmodic effect of Cypreusrotundus , 2012, published in Scholars research library.