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PHARMACEUTICAL STUDY OF ROHITAKADI VATI W.S.R. TO ITS HEPATO-PROTECTIVE ACTION

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ABSTRACT

Rohitakadi vati is an ayurvedic formulation mentioned in the classical text of *Bhaishajya Ratnavali* in the treatment of hepatic disorders. This article aims to prepare the *Rohitakadi vati* as per the text and review its hepatoprotective action. The organoleptic parameters of *Rohitakadi vati* are as follows, colour dark brown, mild odour of *yamanika,* salty in taste, smooth in touch and appearance is round and uncoated. The development of the present study will serve as reference standard for drug preparation and help in further research studies to evaluate the effect of *Rohitakadi vati* in hepatic disorder cases.

Keywords: *Rohitakadi vati*, hepatic disorders, hepatoprotective

INTRODUCTION

The liver is the largest organ in the body performing multifold functions. These include the manufacture and excretion of bile, the manufacture of several major plasma proteins, the metabolism of proteins, carbohydrates and lipids, the storage of vitamins and iron, and the detoxification of toxic substances such as alcohol and drugs. Toxic liver injury produced by drugs and chemicals may virtually mimic any form of naturally occurring liver disease. The ancient science of Ayurveda is blessed with varieties of herbal and

mineral drugs which are effective in reducing hepatotoxicity and protects the liver from further damage. *Rohitakadi vati* is the combination of herbals drugs which is mentioned in the classical text of *Bhaishajya Ratnavali* in the context of hepatic disorders.

OBJECTIVE

- To prepare *Rohitakadi vati* mentioned in the classical text of the *Bhaishajya Ratnavali*. (Chapter - 41 *Pleeha Yakritroga chikitsa adhyaya*, verse no. – 22 to 24)
- To review the hepatoprotective action of the ingredients of *Rohitakadi vati*.

Table 1. INGREDIENTS OF *ROHITAKADI VATI* (FIG. 1A & 1B)

S.No	Ingredients	Botanical / Chemical Name	Classification/Family	Part Used	Ratio
1.	*Rohitaka*	*Tecomella undulata*	Bignoniaceae	Bark	10
2.	*Chitraka*	*Plumbago zeylanica*	Plumbaginaceae	Root	10
3.	*Yamanika*	*Trachyspermum ammi*	Umbelliferae	Seed	10
4.	*Ikshura*	*Asteracantha longifolia*	Acanthaceae	Seed	10
5.	*Saindhava Lavana*	Rock Salt	*Lavana*	NA	2
6.	*Nausaadara*	Ammonium Chloride	*Sadharana Rasa*	NA	1
7.	*Karanja*	*Pongamia pinnata*	Leguminosae	Leaf	Q.S.

PHARMACEUTICAL PROCEDURE

1. ***Chitraka Shodhana***: *Churnodaka* (Lime water) was prepared in the ratio of 1:240 i.e., 8.4g of lime was mixed in 2 L of water in a vessel and then was kept still for 12 h. After 12 h, it was filtered through cotton cloth. The obtained clear water was *Churnodaka.* (Fig.2a) *Chitraka* roots were immersed in *Churnodaka* for 9 h (Fig 2b). After that, the roots were washed with lukewarm water for 3 times and were dried completely in sunlight.
2. ***Nausaadara Shodhana***: 20g of *Nausaadara* was crushed into fine powder and was completely stirred in 60 ml of water (1:3) in a vessel. After that, it was filtered through cotton cloth. The obtained water was heated in a stove (Fig.3a and 3b). After complete evaporation of water, a clean powder of *Nausaadara* was obtained (Fig. 3c).
3. The ingredients from no.1 to 4 were separately ground into coarse powder and sieved by #85 mesh number to obtain fine powder (Fig. 4)
4. Fresh leaves of *Karanja* were steamed for 20 minutes (Fig. 5a and 5b), then finely ground by adding a little amount of water and was then thoroughly squeezed in cotton cloth to obtain the fresh *swarasa.* (Fig.5c)
5. 10g of fine powder of drug 1 to 4 (mentioned in table) were put in the mortar. Then 2g of *Saindhava Lavana* and 1g of *Nausaadara* were added (Fig. 6a).
6. *Bhavana* of 150ml fresh juice of *Karanja* leaves were given to the mixture for 3 hours (Fig. 6b).
7. Finally, *bhavita* mixture was dried in the shade, followed by the preparation of pellets of 500mg (Fig.6c)

HEPATOPROTECTIVE ACTION

1. **Rohitaka -** Khatri *et al.,* studied the hepatoprotective activity of ethanolic extract of stem bark of *Tecomella undulata* against thioacetamide-induced hepatotoxicity in albino rats. Further Patel et al., studied the hepatoprotective activity of ethanol extract of its bark in paracetamol-induced hepatotoxicity. The plant showed a significant hepatoprotective effect.
2. ***Chitraka*** – Kanchan et al., reported the hepatoprotective activity of petroleum ether extract of *Plumbago zeylanica* roots against paracetamol-induced liver damage.
3. ***Yamanika*** **–** KR Anilkumar et al., evaluated *the* Ameliorative effect of extract of *Trachyspermum ammi* on hexachlorocyclohexane-induced lipid peroxidation in rat liver. It was concluded that hexachlorocyclohexane administration resulted in

hepatic free radical's stress, causing toxicity, which could be reduced by *T. ammi*.

4. ***Ikshura*** – The methanolic extracts of the seeds show hepatoprotective activity against paracetamol and thioacetamide intoxication in rats (Singh & Handa,1999). Ahmed et al. (2001) studied the action of its seeds against chemically induced hepatocarcinogenesis in Wistar rats. Methanol extract from seed showing antitumor potential inhibits hepatocarcinogenesis in Wistar rats.
5. ***Karanja*** **-** M. Mohamed Essa & P. Subramanian (2006) reported the protective role of *Pongamia pinnata* leaf extract on oxidative stress during ammonium chloride-induced hyperammonaemia by measuring the extent of oxidative damage as well as antioxidant status. The findings showed its protective role against lipid peroxidation and suggest that it possesses antioxidant potential that may be used for therapeutic purposes.

DISCUSSION

As per Ayurveda *Rohitaka* is said to be a healer of *yakrita* and *pleeha. Yamanika* and *Chitraka* are *agnideepaka. Ikshura* pacifies *vata, ama* and *shotha. Nausaadara* was purified to remove the dirt particles present in its crystalline form. *Karanja* leaves were steamed and grinded with a small quantity of water to obtain a better yield of *swarasa.* The prepared *vati* was dark brown in colour, had an odour of *Yamanika*, salty in taste, smooth in touch and round and uncoated in appearance.

Table 2. Showing Organoleptic test of *Rohitakadi vati*

Parameter	Characteristics
Colour	Dark brown
Odour	Mild odour of yamanika
Taste	Salty
Touch	Smooth
Appearance	Round and uncoated

CONCLUSION

In the present study, *Rohitakadi vati* was prepared by the Ayurvedic classical method. All the ingredients were proven to be procured from authentic sources. The majority of contents of *Rohitakadi Vati* was already proven to be effective in hepatoprotective action. The development of the present study will serve as a reference standard in drug preparation and help in further research studies to evaluate the effect of *Rohitakadi vati* in hepatic disorder cases.

REFERENCES

1. Mohan H. Textbook of Pathology, 7th edition, Editor Harsh Mohan, Publication Jaypee Brothers Medica Publishers (p) ltd, New Delhi 2015, p. 578
2. Bhinde S. et al., Standard operating procedure of purification of Chitraka along with Pharmacognostic and Analytical Profile of Plumbagin, Ayu J 2020; Vol 4, Issue 2: 117-122
3. Shastri K. Rasa Tarangini of Sadananda Sharma , 11th Reprint ed. New Delhi: Motilala Banarasidas Publication; 2004. p. 753, Ch. 24, Ver. 575.
4. Shastri K. Rasa Tarangini of Sadananda Sharma , 11th Reprint ed. New Delhi: Motilala Banarasidas Publication; 2004. p. 280, Ch. 11, Ver. 216-218
5. Shastri K. Rasa Tarangini of Sadananda Sharma , 11th Reprint ed. New Delhi: Motilala Banarasidas Publication; 2004. p. 326, Ch. 14, Ver. 3-4

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Fig. 1A

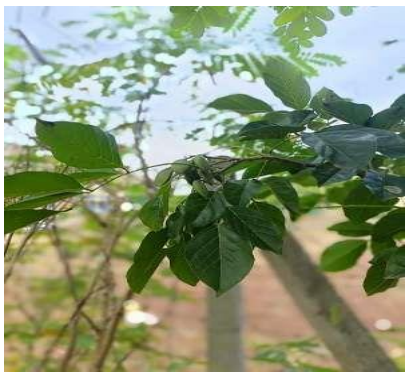

Fig. 1B

Fig. 2A

Fig. 2B

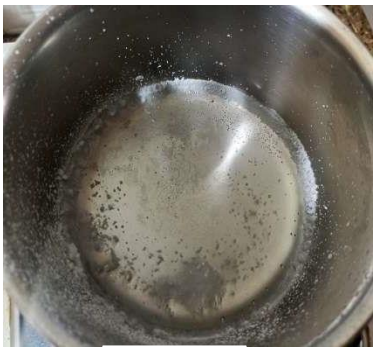

Fig. 3A

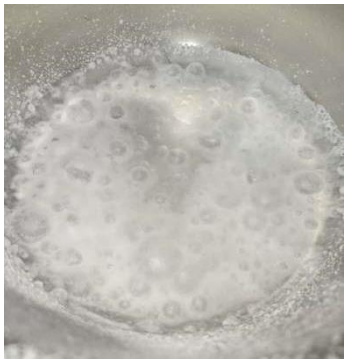

Fig. 3B

Fig. 3C

Fig. 4

Fig. 5A

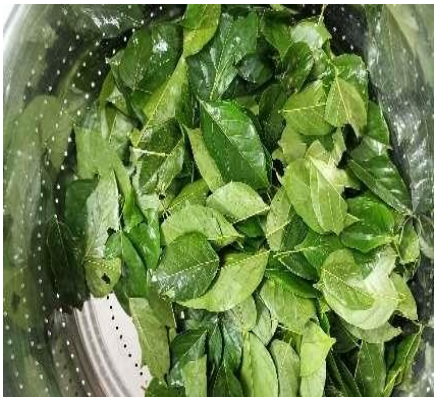

Fig. 5B

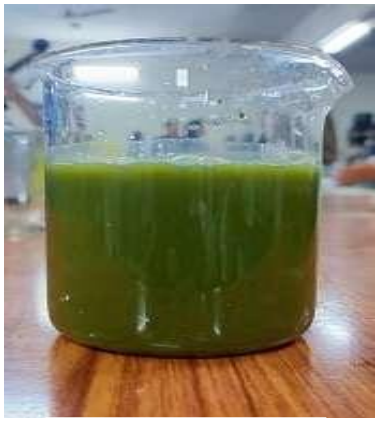

Fig. 5C

Fig. 6A

Fig. 6B

Fig. 6C