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Exploring the HepatoprotectiveActivity of Harita Manjari (*Acalypha indica.L*): Review of an Anukta Dravya

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Abstract: ***Ayurveda system is a unique means to maintain health by usingHerbal preparations, Mineral preparation and animal products. Hence the knowledge of plants becomes essential in Ayurveda. InAyurveda system medicinal plants are documented by means of Rasapanchaka and Karma. Chronological upgradation of knowledge on medicinal plants has been observed from Vedic Kala to Samhita Kala and up to Nighantu(lexicon) Kala, in fact during Nighantu period added a great number of valuable exotic as well as folklore plants. India officially recognizes over 3500 plants for their medicinal value. It is generally estimated that over 6000 plants in India are in use for folk, traditional and herbal medicine. Such undocumented or unexplained drugs are known as Anukta Dravya (extra pharmacopeial drugs). Liver disease is the tenth most common cause of death in India as per the World Health Organization. Liver disease affects every one in five Indians; Liver diseases do not usually cause any obvious signs or symptoms until it's advanced and the liver is damaged. Haritha Manjari (Acalypha indica L) belongs to family Euphorbiaceae and is a common weed found in Asia, including India. So, this article aims to Explore the Hepatoprotective activity of Haritha Manjari (Acalypha indica L) - An Anukta dravya.***

Keywords: Hepatoprotective, Chronological upgradation, Anukta Dravya,Undocumented, Harita Manjari

I. INTRODUCTION

In the world there is no substance whichcan be used as a medicinal drug, On the condition that they are used with rational method and with a definite objective as per Acharya Charaka [(1)]. Ayurveda system is a unique means to maintain health by using Herbal preparations, Mineral preparation and animal products. Hence the knowledge of plants becomes essential in Ayurveda. It is estimated that up to80% of world'spopulation rely on herbal medicine products as a primary source of healthcare needs[(2)]. WHO appreciated the importance of medicinal lants for public health care and has framed guidelines to support the developing nations in their efforts to formulate national policies on traditional medicine and to study their potential usefulness as therapeutic agents[(3)].

In Ayurveda system medicinal plants are documented by means of Rasapanchaka and Karma. Chronological upgradation of medicinal plants has been observed from Vedic Kala to Samhita Kala and up to Nighantu (lexicon) Kala, in fact during Nighantu period added a great number of valuable exotic as well as folklore plants. India officially recognizes over 3500 plants for their medicinal value. It is generally estimated that over 6000 plants in India are in use in folk, traditional and herbal medicine. As such we shouldn't confine our ourselves only to peripheral knowledge of medicinal plants available only in Brihattrayi, Laghuttraye etc, rather expand it by studying Anukta dravyas surrounding us. Anukta means "Na-uktamAnuktam" which means those plants which are already in folklore use due to their medicinal properties but unexplained in the system of medicine, such undocumented or unexplained drugs are known as Anukta Dravya (extra pharmacopeial drugs).Liver disease accounts for two million deaths annually and is responsible for 4% of all deaths (1 out of every 25 deaths worldwide); approximately two-thirds of all liver-related deaths occur in men [(4)]. Liver disease is the tenth most common cause of death in India as per the World Health Organization. Liver disease affects every one in five Indians; Liver diseases do not usually cause any obvious signs or symptoms until it's advanced and the liver is damaged. Haritha Manjari (*Acalypha indica L*) belongs to family Euphorbiaceae and is a common weed found in Asia, including India.

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II. AIMS AND OBJECTIVES

Present study Aims to review Harita Manjari (*Acalypha indica L).* The Objective of this study is to Explore Hepatoprotective Activity of Harita Manjari (*Acalypha indica L).*

III. MATERIALS AND METHODS

Drug review

Haritha Manjari is commonly known as kuppigida in Kannada, found abundantly in Dry regions of Karnataka.

Sanskrit name- Harita Manjari

Botanical name- Acalypha indica L

Family-Euphorbiaceae

Vernacular name

Table no.1 Vernacular names of Harita Manjari

Language	Name
English	Indian acalypha, Indian copperleaf, Indian nettle
Kannada	Kuppigida
Tamil	Kuppameni
Malayalam	Kuppameni

Habitat- It grows in disturbed places such as waste lands, roadsides. It also grows in rocky hillsides, forest edges and riverbanks. It grows from sea-level up to 1350mt altitude[(5)].

Morphology- an erect annual herb that can be easily distinguished by the cup-shaped involucre. It can grow up to height of 1.2 mts tall in favourable conditions, or else slight shorter. The leaves are broad ovate or rhombic ovate in shape with long petiole. Flowers small and arranged in axillary spikes in greenish white colour with a rachis terminating in a triradiate hood. Fruits are 3 lobed capsules; seeds are small and brown in colour.

MORPHOLOGICAL CHARACTERISTICS OF HARITA MANJARI (*Acalypha indica L*)



Fig.no 1 Leaves



Fig. no 2 whole plant with Root

Part used- Leaf, Roots and whole plant.

Rasa panchaka (AyurvedicPharmacoepia) [(6)]

Table.no 2 Rasa Panchaka of Harita Manjari

Rasa	Kashaya, Tikta, Madhura
Guna	Laghu, Ushna, Ruksha
Veerya	Ushna
Vipaka	Katu
Prabhava	Vamaka, Kaphagna

Chemical composition- Phytochemical analysis of *Acalypha indica L* shows the presence of Alkaloids–Acalypus and Acalyphine, Saphonins, Flavanoids,Phenols, Amino acids, Acalphamide, Quinones, Kaemferol.

Karma of *Acalypha indica L* due to virtue of its Rasapanchaka

1) *Based on rasa*

- Kashaya rasa- Rookshana(drying), Pitta-Kapha shamana
- Tikta rasa- Deepana paachana,Lekhana(scraping), Pitta-Kapha shamana
- Madhura rasa- Vishahara(antitoxic), Daha prashamana(reduces burning sensation), Pitta shamana

2) *Based on Guna*

- Laghu-Lekhana, Kledachoosana(drying), Uparopana(healing), Kaphavatashamana
- Ushna-Pachana, Kapha vilayana(loosens the aggregated kapha) and Kaphavatashamana
- Ruksha-Uparopana(healing), Kapha shamana

3) *Based on Veerya*

- Ushna- Paachana, Kapha vilayana (loosens the aggregated kapha), Kaphavatashamana

Indications- Scabies, Asthma,Jaundice, Fever, Constipation.

Folklore use-

- Harita Manjari leaves juice about 10ml in early morning on empty stomach is remedy for Jaundice.
- Harita Manjari roots powder is used in fever.
- Harita Manjari whole plant Kashaya (water extract) is useful in Asthma.
- Harita Manjari Fresh leaves juice is useful in Paediatric Asthma.

Dose-

Fresh juice-5 to 10 ml
Kahaya- 20 to 40ml
Powder- 3 to 6 gms

Disease review

- Liver disease accounts for two million deaths annually and is responsible for 4% of all deaths (1 out of every 25 deaths worldwide); approximately two-thirds of all liver-related deaths occur in men.
- Liver disease is the tenth most common cause of death in India as per the World Health Organization. Liver disease affects every one in five Indians; Liver diseases do not usually cause any obvious signs or symptoms until it's advanced and the liver is damaged.
- The most common causes of cirrhosis worldwide are viral hepatitis, alcohol, and non-alcoholic fatty liver disease.
- Hepatotropic viruses are the aetiological factor in most cases of acute hepatitis, but drug-induced liver injury increasingly accounts for a significant proportion of cases.
- In Ayurveda system Liver pathology can be traced under the umbrella of Pandu, Kamala and Udara samprapti(pathology).

Kamala Samprapti [7]

Patient suffering from Pandu
⇩
Pitta aggravating Ahara and vihara
⇩
Aggravation of Pitta
⇩
Burns Rakta and Mamsa
⇩
Destroys Rakta and Mamsa
⇩
Kamala
⇩
Kumba kamala, Halimaka, Lagaraka

UdaraSamprapti [8]

Dosha prakopa due to nidana leading to agnimandya
⇩
Dosha sanchaya vitiating Pranavayu, Pachakagni and Apanavayu
⇩
Urdhwa and Adho marga avarodha
⇩
Produces adhmana in kukshi pradesha
⇩
Udara roga

- Hence the hepatoprotection will be the utmost criteria while treating such fatal disorders.

Hepatoprotective activity

Hepatoprotective activity refers to a substance's ability to protect the liver from damage or injury, particularly from toxins. This can involve preventing or repairing liver damage caused by various factors like toxins, free radicals, or inflammation. Hepatoprotective agents can be natural compounds, synthetic drugs, or even dietary modifications.

Hepatoprotective action can be achieved by Antioxidant drug, Anti-inflammatory drug [9], Enzymes improving drugs and Anti-toxic drugs [10].

IV. DISCUSSION

1) The plant possesses various pharmacological activities, and its secondary metabolites investigations prove its importance as a valuable medicinal plant widely used in traditional medicinal system of India and many other countries has been reported to possess antioxidant, anti-bacterial, antifungal, hepatoprotective.

2) Owing to its Rasa Panchaka, it mainly acts as pittahara, lekhaniya, pachaneeya and kapha vilayana drug. These properties help to reverse the samprapti of Kamala (Jaundice) and helps in cure of the liver pathology.

3) Kamala patient must be treated with mridutiktavirechana[11],according to treatment principle, hence Harita *Manjari (Acalypha indica*) being mild bitter purgative is very effective in the treatment.

4) In Tamil Siddha medicine this herb is helpful in rejuvinating the body, hence due to this property it helps to Detoxification of damaged liver cells due to pathological condition and helps to restore the normalcy.

V. CONCLUSION

1) By the study of Anukta Dravya (Extrapharmacopieal drugs) some of the rare endangered species which are in edge of the extinction can be replaced with these drugs for the pharmaceutical works.So,this will provide new ways to preserve some endangered species by adapting in treatment.

2) Additional activity can be explored by screening the drugs and at the end the Standardized drug can be added in API Monograph.

3) Further Preclinical and Clinical studies need to be conducted for the proper assessment of Harita Manjari in Liver Diseases.

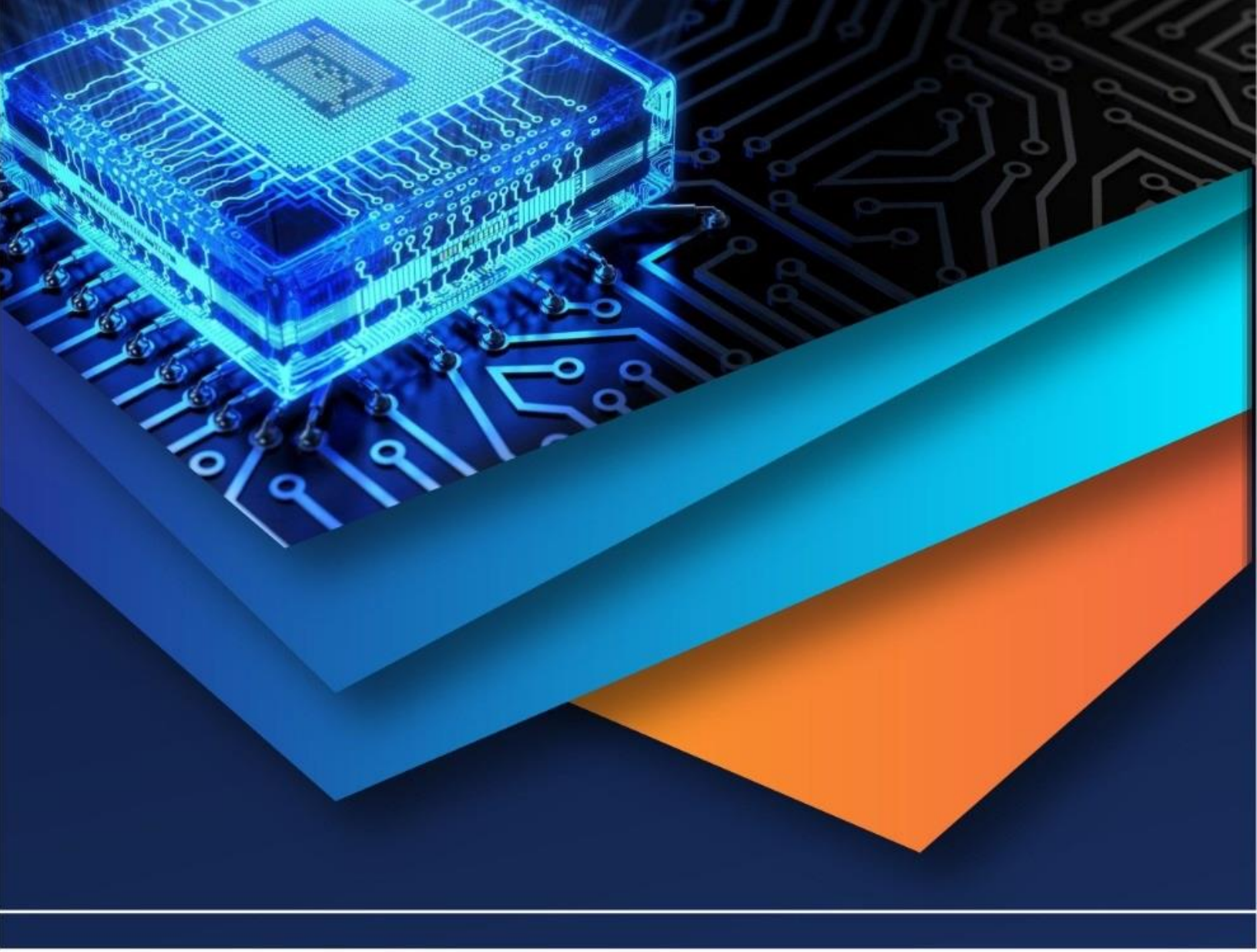
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