# Medicinal properties of Chakramarda – A review article

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# ABSTRACT

*Chakramarda* (English - Ring worm plant, Cassio tora Linn) is used for the management of numerous skin disorders i.e., ringworm, eczema, psoriasis etc. Cassio torais a very popular and common plant widely distributed in India. It is an annual shrub and grows everywhere in India. Numerous medicinal properties have been attributed to this plant in Ayurveda (traditional system of Indian medicine). Various parts of this plant i.e., leaves, seeds, root etc. possess medicinal properties. It has *katu rasa*, *katu vipaka* and *ushna virya*. This plant is *laghu, ruksha* in *guna* and *kapha-vatshamaka.* The present article is an effort to gain and explore the information about the plant *chakramarda* from various Ayurveda texts like *Samhitas, Ras Granthas* and *Nighantus*. This article concludes various synonyms, morphological properties, pharmacological properties, ethnomedical properties and medicinal as well as clinical uses.

**Keywords**: *Chakramarda,* Cassio tora, Ring worm plant, skin disorders etc.

# INTRODUCTION

*Chakramarda* is a famous medicinal plant frequently found in India and other tropical countries. Numerous medicinal properties have been attributed to this plant in Ayurveda (traditional system of Indian medicine). The plant of *Chakramarda* is available in all regions of India especially during rainy seasons and it grows commonly roadsides. It has *katu rasa*, *katu vipaka* and *ushna virya*. This plant is *laghu, ruksha* in *guna* and *kapha-vatshamaka*1. In *Ayurveda Samhitas*, *Chakramarda* is said to be very useful in many disease especially in skinn disorders like *Kushta, Dadru* etc.

Various anthraquinones have been isolated from the seeds of *chakramarda.* Sennosides, Naphthopyrone etc. are have been isolated from the leaves of the *chakramarda*. The extracts of the plant is used as a remedy for several skin diseases, rheumatic disorders and as laxatives. It also shows hepato-protective activity and anti-inflammatory activity.

The present article summarizes the most standard information of chakramarda regarding its identification, medicinal use, pharmacological properties,chemical composition, ethanomedical uses, etc. A balanced correlation between Ayurveda and modern views has been tried.

 

Fig. Plant and seeds of *Chakramarda*

*Cassia tora linn*. has following taxonomical classification2 –

|  |  |  |
| --- | --- | --- |
| 1. Kingdom | :- | Plantae |
| 2. Class | :- | Dicotyledons |
| 3. Subclass | :- | Polypetalae |
| 4. Series | :- | Thalamiflorae |
| 6. Order | :- | Parietalas |
| 7. Family | :- | Ceasalpinaceae |
| 8. Genus | :- | Cassia  |
| 9. Species | :- |  *Tora* |

# MATERIALS AND METHODS

The essential part to elaborate the properties of *chakramarda* is review of literature. Various *Ayurveda* classical texts i.e. *Samhitas, Nighnatus* and books related medicinal plants various journals, research articles etc. were studied in order to understand the *chakramarda*. The internet media was also used to gain the knowledge of the subject.

**Table 1:-** Synonyms attributed to *chakramarda* by different classical texts of *Ayurveda3*

|  |
| --- |
| **Pharmacognostical characters** |
| *Meshlochan* | Leaf resembles of eyes of *mesha* (sheep) |
| *Uranakhya* | The seeds are similar to sambar’s eye |
| *Dadrubeej* | Seeds are rough in nature |
| **Synonyms based on pharmacological actions** |
| *Edgaj* | Its leaves and flowers resemble sheep’s eye |
| *Dadrughna* | It cures *dadru* |
| *Chakri* | It grows gregariously |
| *Kharjughna* | It cures *kandu* (itching) |
| *Kushtaghna* | It is used in treatment of *kushta* |
| *Pamagati* | It is used in treatment of *pama* |
| *Chakramarda* | It cures ringworm |
| *Prapunnat* | It causes adverse effect on virility |
| *Padmat* | It blossoms during time period of sunrise |

# CLASSIFICATION:-

In *Charak Samhita, chakramarda* mentioned in *shakavarga*, it is edible as a vegetable4.

 In *Sushrut Samhita*, it is mentioned in *urdhvabhagahara gana*.

In *Ashtanga Hridaya*, *chakramarda* is described by its synonyms like *edgaja*

and *prapunnada*. It is mentioned in treatment of *shiroroga*.

# PHARMACOLOGICAL PROPERTIES

**Table 3:-** Pharmacological properties of *chakramarda* according to various *nighantus5,6,7,8,9,10*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Nighantu*** | ***Rasa*** | ***Vipaka*** | ***Virya*** | ***Guna*** | ***Doshghnata*** | ***Rogaghanta*** |
| ***Ashtanga nighnatu*** | ***-*** | ***-*** | ***-*** | ***-*** | ***-*** | ***-*** |
| ***Dhanawanatari nighantu*** | *Katu* | ***-*** | *Ushna* | ***-*** | *Vatakaphaghna* | *Kandu, dadru* |
| ***Madanpalnighnatu*** | ***-*** | ***-*** | ***-*** | ***-*** | *Vatapittaghna* | ***-*** |
| ***Shodhala nighnatu*** | ***-*** | ***-*** | ***-*** | ***-*** |  ***-*** | ***-*** |
| ***Kaidev nighnatu*** | *Madhura and lavana* | ***-*** | *Sheeta* | *Laghu, guru, ruksha* | *Vatakaphaghna* | *Kandu,gulma, kas* |
| ***Bhavprakash nighantu*** | *Katu* | ***-*** | *Ushna* | ***-*** | ***-*** | ***-*** |
| ***Raj nighantu*** | ***-*** | ***-*** | *-* | ***-*** | ***-*** | ***-*** |
| ***Nighnatu ratnakar*** | *Madhura* | ***-*** | *-* | *Laghu, Ruksha* | *Pittavataghna* |  |
| ***Shaligram nighnatu*** | *Katu* | ***-*** | ***-*** | *Sheet* | *Vatapittaghna* | *Kushta,kandu, krumighna* |
| ***Priya nighantu*** | ***-*** | ***-*** | ***-*** | ***-*** | ***-*** | *Kandu, dadru* |
| ***Nighnatu adarsh*** | *Madhura and Katu* | *Katu* | *Ushna* | ***-*** | *Vatakaphaghna* |  |

# CHEMICAL COMPOSITION

**Table 5:- Chemical composition of chakramarda**

|  |  |  |
| --- | --- | --- |
| **SN** | **Plant parts** | **Chemical composition** |
| **1** | Leaves | 1)Anthraquinone glycosides 2)Flavonoids1. Sennosides
2. Kaempferol-3-diglucoside
 |
| **2** | Seeds | 1)Anthraquinone 2)Naphthopyrone3)Three naphthopyrone glucoside 4)Cassiaside5)Chrysophanic acid-9-anthone |
| **3** | Seed oil | 1)Oleic 2)Linoleic 3)Palmitic 4)Stearic5)Lignoceric acids |
| **4** | Panwar gum(obtained from seeds of cassia tora) | 1)Neutral of heteropolysaccharide of galactose 2)Mannose |
| **5** | Pods | 1)Sennoides |
| **6** | Flowers | 1. Kaemferol
2. Leucopelargonidine
 |
| **7** | Stem | 1)Arachidic acid 2)Isostearic acid 3)Palmitic acid 4)Marginic acid5)Behenic acid |
| **8** | Roots | 1. Leucopelargonidine
2. β-Sitosterol
 |

# SUBSTITUTION & ADULTERATION OF CHAKRAMARDA:-

1. *Cassia tora* seeds are sometimes used as substitute for coffee.
2. Sometimes leaves of *Cassia tora* are sold by the name of leaves of *Senna*, and sometimes the true *senna* is adulterated with the leaves of chakarmarda due to its cost effectiveness.

 CLASSICAL USES OF CHAKRAMARDA:-

**Table 6:- Uses of chakramarda according to Ayurveda texts11**

|  |  |  |
| --- | --- | --- |
| 1 | Sidhma kushta | External application - The root of chakramarda mixed with kanji |
| 2 | Shiroroga | External application - The seeds of chakramarda mixed with amla dravya. |
| 3 | Dadru | External application - Seeds of chakramarda with leaves of radish  |
| 4 | Gandamala | Chakramarda taila |
| 5 | Vatavyadhi | Chakramarda leaves |
| 6 | Pama | External application - Chakramarda seeds pounded with takra  |
| 7 | Teething time | chakramarda leaves kwath |
| 8 | Kushta | Formulation of chakramarda is excellent for eradicating kushta |
| 9 | Shoth and visphota | Chakramarda juice in shotha and visphota caused by bhallataka |
| 10 | Difficult labour | The powdered root of chakramarda is placed into the vagina. |

# ETHANOMEDICAL USES12:-

**Table 7:-** Uses of chakramarda

|  |  |  |
| --- | --- | --- |
| 1) | Eczema | External application – The Root of *chakramarda*  |
| 2) | Ringworm | External application - Mixed swaras of *chakramarda* leaves with lemon juice  |
| 3) | Warts | External application - paste of *chakramarda* leaves for 7 days |
| 4) | vaginal discharge | *Chakramarda* root ground with rice water |
| 5) | Migraine | External application - Seeds of *chakramarda mixed* with *kanji*  |

**PHARMACOLOGICAL ACTIVITIES13**

# Antifungal activity:- The extract of leves revelas significant antifungal property.

# Anti-inflammatory effect:- Extract of leaves shows anti-inflammatory activity against histamine and serotonin.

# Anti-microbial activity:- Extracts of leaves shows antimicrobial property.

# Antitumor Activity:- Extracts of leaves shows anti tumor activity.

# Purgative effect:- Extract ofleaves has mild purgative action, probably due to the presence of emodine, aloe-emodine and anthraquinone glycosides.

1. **Antifertility activity:-** Extract of shows oestrogenic activity.

# Antihelmintic Activity:- Extracts of leaves shows anti helmintic activity.

1. **Antioxidant activity:-** Extract of seed of *chakramarda* has stronger anti-oxidant activity.

# DISCUSSION

The references of medicinal use of chakramarda are available in various Ayurveda texts.

The role of *Paryaya* (synonyms) of a plant (like chakramarda) is to describe morphological description, its habitat and pharmacological characters.

The chakramarda seeds have katu rasa, katu vipaka and ushna virya.

# CONCLUSION

# The present article is based on to enlighten the properties and formulation of *chakramarda* that are used in various conditions like *kushta*, fungal infection, *vatavyadhi* etc. Lot of studies reveals that it possesses very useful medicinal properties due to presence of chemical constituents effective against a large number of ailments. There is no doubt that chakramarda is a reservoir of various active components which work on various systems in the body. The further clinical and pharmacological studies should be done to investigate unexploited potential of this plant.

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