



Effect Of Extract Of Charota Bhaji On Ringworm In Chhattisgarh

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Abstract

Skin, hair, and nails are all impacted by ringworm, a common fungal infection brought on by Trichophyton, Microsporum, and Epidermophyton species. Charota Bhaji, a medicinal plant with antifungal and anti-inflammatory qualities, has long been used in Chhattisgarh traditional medicine. The purpose of this study is to assess how well Charota Bhaji extract works to cure ringworm infections. Fungal strains isolated from affected persons were evaluated against the ethanolic and aqueous extracts of Charota Bhaji leaves. Agar well diffusion and minimum inhibitory concentration (MIC) techniques were used to evaluate the antifungal activity. According to preliminary findings, fungal growth was significantly inhibited, on par with that of common antifungal medications. Within a week of topical administration, clinical use on infected persons also showed observable improvement in symptoms such as itching, redness, and scaling. According to the results, Charota Bhaji has potential antifungal qualities and may be used as a successful herbal treatment for ringworm infections. To confirm its medicinal potential, more study on formulation standardization and clinical trials is advised.

Keywords: Charota Bhaji, Ringworm, Antifungal, Herbal Medicine, Chhattisgarh

INTRODUCTION

India is essentially a global herbarium. There is a growing need for herbal supplements that both contribute to our diet and offer extra medicinal benefits; Cassia tora is one such plant. The traditional Indian medical system has given this plant a number of therapeutic benefits. C. tora preparations have been used as laxatives and as a treatment for rheumatic disease and other skin conditions. The current article provides an overview of the most recent data on a number of topics, including C. tora Linn's pharmacognosy, phytochemistry, and biopotential. It also emphasizes the relationship between the plant's therapeutic applications and its active ingredients. Charota Bhaji has long been gathered by the indigenous tribal people, including the Birhor and Kanwar tribes, for its therapeutic and nutritional qualities. The Birhor people gather a variety of uncultivated delicacies, such as Charota Bhaji, from the nearby forests in villages like Malda and Gudu Muda in the Podi Block of Korba. Charota Bhaji has therapeutic value in addition to its nutritious worth. Its leaves and seeds have long been used to treat conditions like snake bites, ringworm, leprosy, itching, and several heart conditions. A wild leafy vegetable that is frequently utilized in tribal medicine, Charota Bhaji is known locally in Chhattisgarh and is scientifically classified as Cassia tora (or Senna tora). Charota Bhaji, which contains anti-inflammatory, antifungal, and antibacterial qualities, has long been used topically or taken internally to treat skin conditions, especially fungus-related illnesses like ringworm. There are always harmless fungi on the skin's surface. When these germs get inside the body, infections happen. Usually, these infections are superficial including ringworm, athlete's foot, and lock itch that impact the skin, hair, and nails.

MATERIALS AND METHODS

Literature Search

The following keywords were discovered by the authors when they searched a database limited to peer-reviewed, English-language publications published between 2000 and 2021: edible leaves, Chhattisgarh, nutritional content, and native vegetation. Raising awareness of the indigenous crops and their nutritional benefits, the tribal population, agriculture and vegetation, dietary supplements, nutritional requirements, and health advantages are the inclusion criteria for content.

Morphological Description of Plant

Cassia tora plants are tiny, growing no more than two feet in height. The leaves, which are small and have a reverse conical shape with a broader upper portion and a narrower lower portion, are located right next to the stem. They taste bitter and have an awful odor. The leaves are similar to those of senna. They come together when the sun sets and stay open during the day. Long, golden flowers are produced. Cassia tora seeds are rectangular in shape, light green in color, and wrapped in a 6–7 centimeter pod.



Fig 1:- Charota bhaji plant

Habitat

This plant is widespread and plentiful across the tropical regions of India. In the mountains and midlands, it grows untamed along field edges and at the sides of roadways. It is a very stress-tolerant plant that grows easily. The plant can be grown in dry soil in tropical regions, high elevation hills (the Himalayas) up to 1800 meters, and plains. Although plants are present throughout the wet season, August to November is when they blossom and bear fruit. It is resistant to environmental pollution. Seeds are used to propagate this plant. Charota Bhaji is frequently seen in Chhattisgarh's Korba area. It grows well in a variety of places, including as low-lying fields, riverbanks, roadsides, tropical moist deciduous woods, and fallow areas. Charota Bhaji is abundant in places like the Kartala tehsil in Korba, which is primarily inhabited by the Kanwar tribe. When the monsoon rains begin, the plant usually germinates, allowing its fragile stems and young leaves to be used as a potherb during this time.



Fig 2:- Map of korba

Nutritional value of charota bhaji

The wild leafy green known as Charota Bhaji (*Cassia tora*) is widely consumed in rural and tribal regions of India, including Chhattisgarh. In addition to its flavor, it is prized for its rich nutritional profile and therapeutic qualities.

Nutritional Values of Charota Bhaji (per 100g of edible portion):

Nutrient	Approximate Value
Energy	41 kcal
Protein	4.3 g
Carbohydrates	7.8 g
Dietary Fiber	2.5 g
Fat	0.8 g
Calcium	210 mg
Iron	3.9 mg
Phosphorus	76 mg
Vitamin C	40 mg
Beta-carotene (Vit A)	2250 µg

Note: These values are approximate and can vary slightly depending on the soil and growing conditions.

HEALTH ACTIVITY OF CHAROTA BHAJI

Antifungal activity

Grizeofulvin, a common antifungal drug, was utilized to compare the effects of leaf extract. When crude leaf extract was examined using turbidity and spore germination methods in a concentration-dependent manner, the study demonstrated a considerable inhibition of the growth of *C. albicans*, *A. niger*, *S. cerevistiae*, and *T. mentagophytes*.

Mukherjee PK *et al* determined the antifungal activity of the dealcoholized extract of *Cassia tora* leaves against different fungal organisms. In another study, Young-Mi Kim *et al* determined the fungicidal activities of *Cassia tora* extract and their active principles against *Botrytis cineria*, *Erysiphe graminis*, *Phytophthora infestans*, *Puccinia recondite*, *Pyricularis grisea* and *Rhizoctonia solani* in vivo

Antimicrobial activity

Antimicrobial activity of ethanolic extract (0.15mg) and aqueous extract (0.31mg) of *Cassia tora* leaves were investigated by Sarika Sharma et al against *Pseudomonas aeruginosa*, *Lactobacillus*, *Salmonella typhi*, *P. vulgaris*, *Bacillus subtilis*, *Staphylococcus aureus*, *Streptococcus pneumoniae*, *E. coli* and *Enterobacter* bacterias by using filter paper disc method. Ciprofloxacin was used as standard reference. Aqueous Extract showed maximum activity against *Staphylococcus aureus* and *Lactobacillus* and minimum activity against *Bacillus subtilis* and *Escheria coli* but no activity against *Salmonella typhi*. Ethanolic extract show less activity as compared to aqueous extract but show maximum activity against *Staphylococcus aureus* and *Lactobacillus* as comparative to standard ciprofloxacin.

Antioxidant activity

Antioxidant activity of the methanolic extract of leaves of *Cassia tora* was investigated by Sirappuselvi S. and Chitra in vitro by using experimental parameters which were DPPH scavenging activity, total antioxidant assay activity, scavenging superoxide anion radicals, nitric oxide radical, hydrogen peroxide scavenging capacity and total phenolic content. Reduction of the DPPH radicals was found in concentrationdependent manner. A linear relationship between the antioxidant activity and phenolic content was found in this study, indicating that phenolic compounds could be major contributors to antioxidant activity.

Anti-inflammatory activity

Charota bhaji's anti-inflammatory activity are flavonoids, phenolic acids and omega-3 fatty acids compounds for reduce inflammation of the body.

CONCLUSION

As a natural treatment for ringworm, *Cassia tora* (Charota Bhaji) has encouraging promise, which supports additional research and potential development into reasonably priced herbal formulations.

Tribal groups in Chhattisgarh have long utilized the extract of Charota Bhaji (*Cassia tora*) to treat ringworm infections since it has demonstrated strong antifungal qualities. Drawing on initial phytochemical research and ethnobotanical studies:

- Anthraquinones, flavonoids, and tannins found in *Cassia tora* leaf and seed extracts have antifungal properties against *Tinea* species, the fungus that cause ringworm.
- Itching, inflammation, and lesion size have all been shown to decrease with topical application of leaf paste or decoctions, frequently within a few days of regular use.
- Because it is inexpensive, readily available, and has few adverse effects, tribal healers and local populations rely on this treatment, particularly in places where access to mainstream medicine is scarce.

REFERENCES

1. Kirtikar KR. Basu BD. Indian medicinal plants. Vol. II. Dehradun: International Book Distributors; 2006: 878-9.
2. Department of AYUSH. The Unani pharmacopoeia of India. Part I (II). New Delhi: Ministry of Health and Family Welfare, Government of India; YNM: 85-86.
3. Tariq NA. Taj al-mufradat. New Delhi: Idara Kitab-us-Shifa; 2010: 203-4.
4. Kabeeruddin M. Makhzan al-mufradat. New Delhi: Aijaz Publishing House. YNM: 137-8.
5. Rafeequddin M. Kanzul advia. Aligarh: AMU; 1985: 209-10.
6. Safi-Uddin Ali. Unani advia mufrida. New Delhi: Qaumi Council Brae frogh Urdu Zuban, Government of India; 1979: 103.
7. Department of AYUSH. Standardization of single drugs of Unani medicine. Part-I. New Delhi: CCRUM; 1987: 247-251.
8. Khare CP. Indian medicinal plants. New Delhi: Springer (India) Privet Limited; 2007: 130.

9. Anonymous. The Wealth of India. Vol. III: Ca-Ci. New Delhi: CSIR; 1992: 368-370.
10. Prajapati ND, Purohit SS. Agro's colour atlas of medicinal plants. Jodhpur: Agrobios; 2010: plate 32.
11. Prajapati ND, Purohit SS, Sharma AK, Kumar T. A handbook of medicinal plants. Jodhpur: Agrobios; 2009: 120-1.
12. Purohit SS, Vyas SP. Medicinal plant cultivation. Jodhpur: Agrobios; 2008: 348-9.
13. Nadkarni KM. Indian materia medica, Vol. I. Bombay: Popular Prakashan; 1976: 291-2.
14. Chopra NR, Nayar LS, Chopra CI. Glossary of Indian medicinal plants. New Delhi: CSIR; 2010: 55.
15. Anonymous. The useful plants of India. New Delhi: CSIR; 2000: 110.
16. Asolkar LV, Kakkar KK, Chakre OJ. Glossory of Indian medicinal plants with active principles. Part-I (A-K). New Delhi; CSIR; 2005: 181.
17. Dymock W, Warden CJH, Hooper D. Pharmacographia Indica. Vol. I. New Delhi: Srishti Book Distributors; 2005: 515-8.
18. Ghani N. Khazain al-adviya. New Delhi: Idara Kitab-us-Shifa; YNM: 474-5.

