Journal of Comprehensive Pharmacy

Review Article

Available Online at: www.jcponline.in

ISSN NO: 2349-5669

Review on *Dechachistia crotonifolia* Wight & Arn.

Afsar Shaik ^a, Prasanna R Yalavarthi ^b, Chandra S Kothapalli Banoth ^c

^a Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, Nellore, Andhra Pradesh, India.

^b Department of Pharmaceutics, Sri Padmavathi School of Pharmacy, Tirchanoor-517503, Tirupathi, Andhra Pradesh, India.

^c Director, Oil Technological and Pharmaceutical Research Institute, JNTUA, Ananthapur-515002, Andhra Pradesh, India

ARTICLE INFO

Article history:

Received 15 April 2016

Accepted 16 May 2016

Available online 27 June 2016

*Corresponding author:

Afsar Shaik

Email:

afsarsk_14@yahoo.com

Tel.: +91-9885398761.

ABSTRACT

Nature has been a source of medicinal agents for thousands of years and an impressive number of modern drugs were made which is identical from natural sources to treat many diseases. Higher plants, as sources of medicinal compounds, have continued to play a dominant role in the maintenance of human health since ancient times. Over 50% of all modern clinical drugs are of natural product origin and play an important role in drug development programs in the pharmaceutical industry. The investigations on medicinal plants were needed as the treatment will be safe to treat diseases and cost effective. The findings on *Dechachistia crotonifolia* are very much limited so an attempt was made to gather the profile of *Dechachistia crotonifolia*.

Key Words: *Dechachistia crotonifolia*, therapeutic use, plant profile.

INTRODUCTION

Dechachistia crotonifolia belongs to the family Malvaceae, which is a shrub, grows at a height of 2m. This plant is widely grown in deciduous forests of Western Ghats and Deccan plateau, Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu and Kerala [1]. India is rich in medicinal plants which worth's about millions. The wild grown plants are many with a wide range of pharmacological uses where the researches on such plants are needed to explore their uses to treat many diseases. An attempt was made to investigate on *Dechachistia crotonifolia* where the investigations on this particular plant were very much limited [2, 3].

ORIGIN AND DISTRIBUTION

Dechachistia crotonifolia is widely grown in deciduous forests of Western Ghats and Deccan plateau, Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu and Kerala. In Andhra Pradesh it is widely distributed around the regions of Tirumala [4].

COMMON NAME [5]

It is commonly known as Croton Leaf Mysore Mallow.

VERNACULAR NAMES

Telugu- Adavi gogu

Kannada- Kolle

Tamil- Selangamaram.

PLANT PROFILE [6]

Botanical Name: *Dechachistia crotonifolia* Wight & Arn.,

Kingdom; *Plantae*

Subkingdom: *Eucaryota*

Phylum: *Tracheophyta*

Class: *Magnoliopsida*

Order: *Malvales*

Family: *Malvaceae*

Subfamily: *Malvoideae*

Genus: *Decaschistia*

Species: *Decaschistia crotonifolia*

DESCRIPTION OF THE PLANT

Leaves: Leaves alternate, ovate-lanceolate, cordate to rounded at base, serrate or slightly lobed, acute at apex, 3-4 x 1.5-8 cm, stellate-tomentose on both surfaces more so on nerves beneath; midnerve with a basal nectary; petioles to 5 cm long, terete, brown-stellate-tomentose; stipules linear-subulate, ca 1 cm long, stellate-tomentose [7].

Flowers: Flowers axillary, solitary or 3-6 in racemose clusters due to reduction of upper leaves; pedicels 3-15 mm long, densely stellate-pubescent. Epicalyx lobes linear, 5-10 x 1-1.5 mm, connate at base, pubescent.

Calyx campanulate, 5-lobed; lobes ovate, 6-8 x 2-3 cm, stellate-hairy on both sides. Corolla 5-6 cm across, yellow with a dark maroon centre. Petals 5, obovate, 3-4 x ca 2.5 cm, connate and adherent to staminal tube at base, densely stellate-pubescent outside, glabrous inside. Staminal column antheriferous throughout; tube ca 2 cm long; anthers purple. Ovary ovoid, ca 4 mm across, pubescent, 10-loculed; locules 1-ovuled; styles ca 2 cm long; stigma capitate, glandular-hairy, brown [8].

Fruit: Capsules globose-depressed, to 2 cm across, enclosed in calyx, densely stellate-pubescent, 10 valved; seeds reniform, ca 5 x 3 mm, glabrous, brownish black.

Fig No. 1

Figure 1: Twig of *Dechachistia crotonifolia*

CHEMICAL CONSTITUENTS

The phytochemical investigations are limited but even though the same genus of different species are found rich in flavonoids content namely *Dechachistia parviflora* Kruz, native to Thailand consists of parviflorals A–F [9, 10].

THERAPEUTIC USES

Flowers: refrigerant, emollient and emmenagogue, aphrodisiac; decoction given in bronchial catarrh; infusion of petals is a refrigerant drink in fever, demulcent in cough.

Leaves: anodyne, arthritis, emollient and aperient; juice beneficial in gonorrhoea, antifertility, uterine and vaginal discharges.

Root: The root is valuable in coughs. Externally they are used in all kinds of inflammation.

PHARMACOLOGY

It is well accepted that the leaves and flowers of *Dechachistia crotonifolia* have various pharmacological properties. *Dechachistia crotonifolia* (Fam. Malvaceae) is a shrub available throughout India. Various parts of this plant, like leaves, flowers and roots, have been known to possess medicinal properties like aphrodisiac, menorrhagia, oral contraceptive, laxative, etc. A detailed

literature review was made and it is identified as very limited investigations were made and it was found that the same genus of other species in Thailand reported to have a high flavonoidal content so it may have several pharmacological uses like antifertility, antiinflammatory.

REFERENCES

1. Prasad E A V, Jayarama Gupta M, Sankaranna G and Raghu V. A Geobotanical Aspect Of Tirumala Hill Range, Chittoor District, Andhra Pradesh, India. *Current Science* 1986; 55(18):893-895.
2. Muralidhara Rao D, Bhaskara Rao U V U and Sudharshanam G. Ethno-Medico-Botanical Studies From Rayalaseema Region of Southern Eastern Ghats, Andhra Pradesh, India. *Ethnobotanical Leaflets* 2006;10:198-207.
3. Savithramma. N, Yugandhar. P and Linga Rao. M Ethnobotanical Studies on Japali Hanuman Theertham- A Sacred Grove of Tirumala hills, Andhra Pradesh, India. *Journal of Pharmaceutical Sciences & Research* 2014; 6(2):83-88.
4. Wongs, N., Kanokmedhakul, S., Kanokmedhakul, K., Kongsaree, P., Prabpai, S. and Pyne, S. G. Parviflorals A-F, trinorcadalenes and bistrinorcadalenes from the roots of *Decaschistia parviflora*. *Phytochemistry* 2013;95:368-374.
5. The Ayurvedic Pharmacopoeia of India. Part I, Vol. III, 1st Ed. Published by controller of publication, Govt. of India, Ministry of health and family welfare, Department of Indian System of Medicine and Homeopathy. New Delhi 2001.
6. Khandelwal K.R., Practical Pharmacognosy, Nirali Prakashan (INDIA) Publications., Pune: 2003;38-161.
7. Wallis TE. Practical Pharmacognosy. 4th ed. Pharma Med Press, Hyderabad, India 2011; 128-131.
8. The Ayurvedic Pharmacopoeia of India. Part I, Vol. III, 1st Ed. Published by controller of publication, Govt. of India, Ministry of health and family welfare, Department of Indian System of Medicine and Homeopathy. New Delhi 2001;228-233.
9. Indian Pharmacopoeia, Vol. 1, 5th ed., Govt. of India, Ministry of health & Family welfare published by the Indian pharmacopoeia commission. Ghaziabad 2007;78.
10. Harborne JB. Phytochemical methods: A Guide to Modern Techniques of Plant Analysis. Springer Verlag., Berlin 2005;128-155.