
A survey on ethnomedicinal uses of *Acacia catechu* Willd. in District Jaipur, Rajasthan.

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ABSTRACT

*Plants and plants products play an important role in the life of common people in India. There is a great importance of *Acacia catechu* Willd. among the people of Jaipur District, Rajasthan. It is commonly known as Khair tree and belongs to family Fabaceae. *A. catechu* is ethnomedicinally used in stomatitis, snake bites, diarrhea and many dermatological problems by the local people of this area. The Decoction of bark (Katha) is used to cure mouth ulcer, sore throat etc. Katha is commonly used in Ayurvedic preparations since time immemorial.*

Keywords: *Acacia catechu, Fabaceae, Katha, Bark, Wood*

INTRODUCTION

India is endowed with herbal wealth of about 5000 plant species of known medicinal and aromatic properties. It has a variety of agroclimatic conditions, which increases its biodiversity and gives rise to many ethnic groups of users. In terms of both the volume and the value of medicinal plants exported, India ranks second in the world (Pakrashi *et al.*, 1996). Millions of rural households used medicinal plants in a self-help mode. Major sources of medicinal plants are obtained from folkloric information (51.48%) followed by Ayurvedic information (19.49%). The practitioners of the Indian Systems of Medicine used medicinal plants in preventive, promotive and curative applications. Analysis of information on medicinal plants indicates that around 8000 plant species are used by different systems of medicine in India. Whole plant, bark and roots are used in majority of such plants, while secretory products, seeds and stem are used in some cases (Gupta *et al.*, 2006).

Acacia is the most significant genus of family: Leguminosae, first of all described by Linnaeus in 1773. It is estimated that there are roughly 1380 species of *Acacia* worldwide, about two-third of them native to Australia and rest of spread around tropical and subtropical regions of the world (Maslin *et al.*, 2003; Orchard and Maslin, 2003). *A. catechu* Willd. is a valuable bioresources and has been exploited commercially in tannin and katha industry for decades (Annonymus, 1985). *Acacia catechu* Willd. has a great importance due to its medicinal properties. It is a historical plant, widely used in traditional medicine especially in Asia (Hashmat and Hussain, 2013). A study on ethnomedicinal uses of *A. catechu* Willd. in Jaipur District, Rajasthan, is presented here.

TAXONOMICAL CLASSIFICATION

Kingdom : Plantae
Subkingdom : Tracheobiont
Superdivision : Spermatophyta

Division : Magnoliophyta
Class : Magnoliopsida
Subclass : Rosidae
Order : Fabales
Family : Fabaceae
Genus : *Acacia*
Species : *catechu*

COMMON NAMES

A.catechu is also known as Katha (Urdu), Khadir (Hindustani and Punjabi), Khoyer (Bengali and Assamese), Khair and Babul (Hindi), Kaath (Marathi), and Kachu (Malay) as mentioned by Stohs and Bagchi, 2015.

MORPHOLOGICAL DISCRPTION

Acacia catechu is a medium sized deciduous tree with crooked and forked trunk. It is found growing in both natural and plantation forms in most of the parts of country up to an elevation of 1300m above mean sea level (Singh and Lal, 2006). Leaves are bipinnately compound, with 9-30 pairs of pinnae and a glandular rachis; leaflets 16-50 pairs, oblong-linear, 2-6 mm long, glabrous or pubescent. Flowers are 5-10 cm long (auxiliary spikes, pentamerous), white to pale yellow and with a campanulate calyx of 1-1.5 mm length, and a corolla of 2.5-3 mm length. Stamens are numerous and far exerted from the corolla, with white to yellowish white filaments (Hashmat and Hussain, 2013).

CHEMICAL CONSTITUENTS

Major chemical constituents of *A. catechu* are catechin, epicatechin, epicatechin gallate, procatechinic acid, tannins, alkaloids quercetin and kaempferol, porifera sterol glucosides , (+)-afzelechin gum are also present in minor quantity(Hashmat and Hussain, 2013).

MATERIAL AND MATHODS

Study area: Jaipur is the capital city of Rajasthan state and situated in its eastern part. It extends from latitude 26.92 degrees in the north to longitude 75.82 degrees in the east. The city covers an area of 200.4sq.kms and lies at an altitude of 431m above sea level. It has a semi-arid climate and receives over 556mm of rainfall annually.

Methodology: Ethnomedicinal surveys of *A. catechu* were carried out during 2008-2009 in Jaipur District, Rajasthan. The method of collecting information about the ethnomedicinal uses of the plant was based on personal interviews with people of various age groups in the area studied.

RESULTS AND DISCUSSION

Some ethnomedicinal uses of different parts of *A. catechu*, by the local people of Jaipur District, Rajasthan are following under these headings

Bark

The paste of the bark is used as a medicine for the treatment of stomatitis by the people of the area studied. The bark of the tree is also valuable in the treatment of snake bites. The decoction of bark blended with milk is taken to cure a cough and cold and also used to cure rigorous diarrhea. The bark is moreover utilized as a medicine to treat the wounds. Due to its decontamination properties it is used at the site of the wound which reduces the probability of infections. It is also used in various dermatological diseases as an effective medicine.

Wood

Heartwood is boiled with other useful ingredients to prepare the decoction and taken as syrup by the pregnant ladies to maintain their body temperature. In addition to this, due to the beneficial values of the water boiled with heartwood, is used to take shower by women after delivery to cure the body pains. Katha or decoction of heartwood is believed to be as astringent and cooling agent and is useful in a sore throat, cough, and diarrhea. Besides these, it is also applied in the mouth and on the tongue to cure mouth ulcer and maintain oral hygiene.

Seed

The extract of the seeds is useful in some skin diseases. It is also helpful in numerous women related problems.

The present study is in support of many researchers (Gupta *et al.*, 2006; Singh and Lal, 2006; Hasmat and Hussain, 2013) as they found the somewhat similar properties and uses, during their work on the same species. Besides these ethnomedicinal properties of *A. catechu*, katha (decoction of heartwood), is commonly used in Ayurvedic preparations and serves as one of the major components in masticatory i.e. chewing of betel leaf (pan) in India (Singh and Lal, 2006). From present study it is concluded that, as the species has been used ethnomedicinally by the local people of the studied area for very long time, there is a requirement to plan a better and contemporary updated preparations, using the medicinal value of the species.

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