
Ethnomedicinal studies of *Abrus precatorius* used by the Primitive and Vulnerable tribal groups of North Coastal Andhra Pradesh, India

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Abstract: The paper deals with the ethnobotanical uses of *Abrus precatorius* used by the Primitive and Vulnerable tribal groups of North coastal Andhra Pradesh. The plant cures various diseases like Abortion, Alopecia, Arthritis, Catarrh, Cough, contraceptive, Dandruff, Dysentery, Easy delivery, Epilepsy, Hoarseness of the voice, Leucoderma, Migrain, Muscle pain, Paralysis, rheumatic, Refrigerant, sciatic pains, Skin diseases, Snake bite, Stomachache, Swellings, sore mouth. 12 practices were found to be new or less known.

Keyword: Ethnomedicine, *Abrus precatorius*, Primitive tribals, North coastal Andhra Pradesh.

Introduction

The study area falls in between 81° 51' and 84° 46' of Eastern longitude and 17° 45' and 19° 40' Northern latitude with a total area of 10,860 sq km covering 23 mandals of Srikakulam, Vizianagaram and Visakhapatnam districts of Andhra Pradesh. The total population of the area is 42,88,113 of which the tribals are 6,18,500 (14.42%) and the Primitive Tribal Groups (PTGs) constitutes 1,76,324 (4.11%) as per 2011 census. They are *Gadaba*, *Khond*, *Porja* and *Savara*. Though there are few publications on ethnomedicine of *Abrus precatorius* (Ramana *et al.* 2003, Uniyal and Shiva, 2005, Kshirsagar *et al.* 2003, Katewa and Galav, 2005, Jeevan Ram *et al.* 2002, Sen and Behera, 2003).

Material and Methods

The field work was done during 2008-2012 covering all the three districts of the study area and interviews were conducted with the tribes at their dwellings. During oral interviews specific questions were asked and the information supplied by the informants was noted. Those familiar with the plants were taken to the field and along with the collection of plants for the voucher specimens, the use of plants as given by the tribal informants was noted. Field trips were selected in such a way so as to cover the selected areas in different seasons of the year. During field trips information was gathered on plants used for different ailments. In 95 pockets of the study area, 139 *vaidhyas* and practitioners were consulted. Each medicinal practice was cross checked with at least 3-4 informants. The voucher specimens were collected and deposited in the Herbarium of the Department of Botany, Andhra University, Visakhapatnam.

Results:

Botanical description:

Botanical Name:*Abrus precatorius* L.

Family:Fabaceae

Local names:

Vernacular Name: Gurivinda, Guriginja, Sanscrit: Gunja, Hindi: Gunj, English: Crab's eye

Plant discription:

Straggler, branches slender, scarcely woody, young parts silky; leaves paripinnate, leaflets 10-13 pairs, opposite; racemes terminal or axillary, flowers clustered, pink; pod oblong, wrinkled; seeds blood red.

Flowering& Fruiting: July-February

Location: Gurupalli (Paderu)

Ethnomedicinal observations:

Abortion: 2 or 3 seeds are ground and the paste is mixed in a glass of water. This is administered once a day before breakfast for 3 days.

One or two seeds are ground and the paste is mixed in a glass of water. This is administered daily once before breakfast for 3 days. (If 2 or more seeds are taken it leads to permanent sterility).

Alopecia: Seed *dal* is ground into paste, mixed with coconut oil and applied on the affected areas thrice a day for one month.

***Arthritis:** Root paste mixed with half tea glass of water is administered twice a day till cure.

Cough: A spoonful of leaf juice is administered daily twice for 3 days.

The leaves are given for curing **cough** and other throat troubles.

***Catarrh & cough:** Two spoons of leaf juice is taken daily once or two spoons of leaf decoction is administered daily twice.

One white seed paste is administered daily once.

***Contraceptive:** One seed is kept in a small amount of jaggery, taken orally prevents conception for one year and two seeds are used for two years and more than two is not preferred since it leads to death.

***Seed powder with *Curcuma longa* and jaggery for contraception.** Five g of seeds, preferably white variety in fresh cow milk is boiled, and the seed coat is removed, then the grains are powdered. Mix the powder with equal weight of turmeric and jaggery, make small pills; single pill is taken per day for about 4-7 days from the fourth day of menstruation.

***Dandruff:** Leaf paste is applied externally before going to head bath till cure.

Leaf paste is applied to the scalp before going to head bath till cure.

Dysentery: A spoonful of root paste with half spoon of honey is administered twice a day for 2 days.

The paste of root mixed with cow milk is given.

***Easy delivery:** Bark paste mixed with 50 ml of water is given.

Epilepsy: 2 spoonfuls of root extract mixed in a glass of milk is administered once a day for 3 days.

***Hoarseness of the voice:** Handful of fresh leaves are chewed to clear the voice.

Leucoderma: Leaf juice is applied on the affected parts and exposed to Sun helps to reduce white spots.

Leaf juice mixed with root juice of *Plumbago zeylanica* is applied on the spots and it helps to reduce gradually. It should not be applied on the lips.

***Migrain:** Root paste of white variety plant is applied on the forehead.

Muscle pain: Root is ground into paste and is applied on the affected areas for half an hour once a day.

***Paralysis:** Root paste mixed with water is administered in two tea spoonfuls once a day till cure.

***Paralysis, rheumatic & sciatic pains:** Seed paste is applied on the affected parts.

***Refrigerant:** Dried leaf powder is administered to reduce heat.

Skin diseases: Quarter liter of gingelly oil mixed with one liter of leaf juice of *Eclipta alba* and two spoons of seed paste of *Abrus precatorius* is applied on all types of skin diseases.

Snake bite: Root paste is applied on the bitten area just after bite and a portion of it is given orally.

Stomachache: Five ml of leaf decoction is administered only once.

Swellings: Handful of leaves slightly warmed with castor oil is plastered to reduce swellings.

Sore mouth: Roots or fresh leaves are chewed.

Discussion:

The paper deals with the ethnobotanical uses of *Abrus precatorius* used by the Primitive and Vulnerable tribal groups of North coastal Andhra Pradesh. 12 practices were found to be new or less known (Jain, 1991 and Kirtikar and Basu, 2003).

Aboriginals of present study use the root of *Abrus precatorius* to treat arthritis, dysentery, migraine, muscle pain, paralysis and snake bite. Leaf is used to treat ring worm (red variety) and leucoderma (white variety). The seed is used to treat contraceptive, alopecia, rheumatic and sciatic pains. Leaf is used to treat catarrh, cough, dandruff, hair growth, hoarseness of the voice, leucoderma, refrigerant, skin diseases, stomachache, strong hair, swellings. Stem bark used for easy delivery. Whereas root is used as antiseptic after delivery in South India (Ramana *et al.* 2003), for ulcers and rheumatoid pain in North India (Uniyal and Shiva, 2005), for cough in Western India (Kshirsagar *et al.* 2003) and seed is used in North West India as abortifacient and sedative (Katewa and Galav, 2005). Jeevan Ram *et al.* (2002) observed the use of leaf of the white variety in curing leucorrhoea in South India and leaf to treat boils in East India (Sen and Behera, 2003).

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