

A REVIEW ON HOLARRHENA ANTIDYSENTRICA (PUBESCENES) LINN.

¹*Dr. Apurva Arun Bagad and ²Dr. Parshuram Pawar¹Faculty of Ayurveda, PG Scholar From Drayaguna Vigyan Deapartment, Shree Saptashringi Ayurved Mahavidyalay & Hospital Nashik.²Professor At Shree Saptashringi Ayurved Mahavidyalay Nashik.***Corresponding Author: Dr. Apurva Arun Bagad**

Faculty of Ayurveda, PG Scholar From Drayaguna Vigyan Deapartment, Shree Saptashringi Ayurved Mahavidyalay & Hospital Nashik.

Article Received on 26/05/2021

Article Revised on 15/06/2021

Article Accepted on 05/07/2021

ABSTRACT

Herbal medicine is still the mainstay of about 75- 80 % of the world population, mainly in the developing countries, for primary health care because of better culture acceptability, better compatibility with the human body and lesser side effect. One of the such medicinal plant is Holarrhena antidysentrica; family Apocynaceae which is commonly known as kurchi plant. All parts of plants are important like root, bark, flowers, seeds, The Holarrhena antidysentrica has high traditional & medicinal value for maintain disease free life. Traditionally the plant is used in dysentery, hemorrhoids, amoebic dysentery and skin disease. The plant is reported to possess anti-bacterial, anti-diabetic, anti-plasmodial activity. This activity of the plant is due to important phytochemical constituents like kurchine, conessimine.

KEYWORDS: Holarrhena antidysentrica, anti - bacterial, diarrhea, kurchine.**INTRODUCTION**

Kingdom plantae are the rich wellspring of natural compound, many of which a significant number have been utilized for medicinal purposes. In Indian culture, there are numerous natural crude drug that can possibly treat many diseases and maintain equilibrium of the body. One of them is Holarrhena antidysentrica Linn. from Apocynaceae family which is widely distributed throughout in India and commonly known in different languages like in English (kurchi, conessi tree, canessi bark), hindi (kuda, kudaiya), telugu (kodiseapala, kodaga), karachi, kurachi (bengali), kuda (marathi), kudo (gujarati), vepalli (tamil), korachi (kannada), kodagapala (malyalam), kherva (urdu), kenara (punjabi), kutaj, vatsak, girimallika, yavaphala (sanskrita).

Botanical Description: Holarrhena antidysentrica is a species of flowering plant in the Apocynaceae family. It is native to the Indian Subcontinent, mostly in southern India, Maharashtra. Its height is near about 30 -40 feet long.

Leaves: leaves are simple, green glabrous, opposite, nearly sessile, elliptic – lanceolate with pointed apex and having length 6-12 inch long and 1.5 -5 inch broad with rectangular shape.

Bark: Its bark is not smooth and slightly grey in colour.

Inflorescences: Corymbose cymes.

Flowers: white, scentless, bracts small, calyx lobes 5, acute ciliate, corolla salver shaped, tube as long as lobes, hairy outside, lobes oblong, rounded, mouth without a hairy ring. stamens 5, included carpels 2, free style

filiform, stigma thick.

Fruit: A pair of follicles about 1.5 inches long.

Seed: Greyish in colour 0.5 inch long. Seeds commonly known as indrayava.

Flowering and fruiting time: February – June.

Cultivation: Climate: It found in all over India, in almost all parts except wetlands and it originates on the 1300 m high peaks of the Himalayas. Its small plants are commonly seen in forest of *Dun* and *Saharanpur* in large quantity. Also cultivation is done in many areas. kurchi tree is not that much high.

Soil: Kurchi is generally grown in hilly areas on brown hill soil, submountain soil or red loamy soil which is mostly in acidic in nature.

Season: Flowers bloom profusely at the beginning of spring. In this time no leaves can be found in the tree.

Taxonomical classification

Kingdom: Plantae

Order: Gentianales

Family: Apocynaceae (Apocyns, Dogbane)

Class: Magnoliopsida

Super division: Embryophyta

Genus: Holarrhena R

Species: Holarrhena Pubescens wall ex G. Don

Reported phytoconstituents: conarrhimine, conimine, conamine, conessimine, norconessine, iso conessimine, kurchine, dimethyl conkurchine are other alkaloids which are present as chemical composition. The bark also consists of gum, resin, tannin, lupeol and digitenol glycoside

holadysone as chemical composition.

Ethanobotanical uses of kutaj: In *Charak Samhita Drudhabala* explained the types of kutaj with their differences.

Root: According to Acharya Sushruta root bark can be used in all types of *Arsha* (hemorrhoids).

Leaves: Leaves can be used in all types of *prameha* as per Acharya Sushruta in the form of decoction.

Seed: Seeds are commonly known as Indrayava and having tremendous therapeutic uses. It is widely used in diarrhea in crushed form and decoction. Indrayava also used in the form of paste in many skin diseases. *Ghee* mainly made from Indrayava is commonly used in blood loss. Paste of Indrayava is widely used in skin burning condition.

Flowers: According to *Acharya Sushruta* flowers can be used in *prameha*.

Bark: Bark is used in the form of decoction in hemorrhoids. for wound healing, bark is used in the form of paste.

Reported pharmacological activity: anti – bacterial activity; antidiabetic activity in vivo study; antihyperlipidemic activity; cytotoxic activity in vitro study; anti- plasmodial activity in vitro study; antidiarrheal activity.

CONCLUSION

Holarrhena antidysentrica is a natural plant of India. It is useful for various herbal formulations as antibacterial, antidiabetic. It has various pharmacological actions some of them are reported above. So it may be concluded that *H. antidysentrica* is very important medicinal plant which require more exploration to utilize its medicinal property.

REFERENCES

1. ISSN: 2277 -7695; Antibacterial activity of kutaj (*Holarrhena antidysentrica* Linn). in childhood diarrhea – In vitro study.
2. Review of *Holarrhena antidysentrica* (L) wall ex. A DC; pharmacognostic, pharmacological and toxicological perspective; Jamadagni PS, Pawar SD, Chougule S; *Pharmacogn rev*, 2017 Jul- Dec; 11(22):141 -144
3. ISSN: 0974 -360 X: *Holarrhena antidysentrica* Linn. – A Review; Gopinath G., Thirumal M: Year, 2020; 13(4).
4. *Holarrhena Antidysentrica* (Pubescens) – kurchi (Kutaj); Dr Jagdev Singh, Jan 21, 2016.
5. Evaluation of phytochemistry and pharmacological aspects of *Holarrhena Antidysentrica* (wall) – A comprehensive study review; *Journal of pharmacy research*, April 2013; 6(4): 488–497.
6. In vitro anti- oxidant activity of *Holarrhena antidysentrica* wall. methanolic leaf extract by P S Sujana Ganapathy, Y L Ramachandra, S Padmalatha Rai, 2011.
7. Holacetine – a new steroid alkaloid from *Holarrhena antidysentrica* by Rabindra N Raj, Phakir C Ghosh, Julie Banerji, 1976; 15(7): 1173-1175.
8. In vitro clonal propagation of *Holarrhena antidysentrica* (L) wall through nodal explants from mature trees by Ravindra Kumar, Kuldeep Sharma and Veena Agrawal; *In vitro cellular and developmental biology plant*, 2005; 41: 137 -144.