Antipyretic Activity of Gudduchi (Tinospora cordifolia)- A Review

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Authors’ contributions

This work was carried out in collaboration among all authors. Author KAH designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors NG and SDM managed the analyses of the study. Author SDM managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Pyrexia is defined as elevation of body temperature. It is a response due to tissue damage, inflammation, alignancy etc. Fever is associated with symptoms of lethargy, depression, anorexia, sleepiness etc. In Ayurveda, many drugs are attributed with jwaragna property. Among these described drugs guduchi (Tinospora cordifolia) has the best antipyretic activity. Indian medicinal plants and their derivatives are having invaluable source of therapeutic agents to treat various disorders. Nowadays, many drugs have been developed from plants which are active against a number of diseases.

Keywords: Guduchi; antipyretic activity; ayurveda; Tinospora cordifolia.

1. INTRODUCTION

Pyrexia implies an elevated core body temperature above 38°C that is above the normal variations. Various herbs have been been mentioned which are having the antipyretic action. Tinospora cordifolia is mentioned one among the drugs which is having antipyretic
properties is placed among the Jwaraghana drugs by Acharya Sushruta [1]. A number of clinical studies have also reported beneficial effects of Gudduchi in fever. More demand of herbal medicine in recent years is observed due to lesser side effect when it compares recent synthetic drugs. To overcome this pharmaceutical industries nowadays develop in vitro systems for production of medicinal plants and their extracts [2].

2. DESCRIPTION OF PLANT

*Tinospora cordifolia* (Gudduchi) a large succulent climbing shrubs or deciduous vines about 15-25 m long. Stem striate, leaves Simple, alternate, broadly ovate, 5 -12cm across. Flowers unisexual, greenish yellow, pedicellate seeds curved, endospermic, cotyledons flattened, radical short [3].
Rasa (taste):- Tikta, Kasaya
Guna (Acidity):- Laghu
Veerya (Action):- Ushna
Doshagnata: - Tridoshagnta.
Part used- The entire plant stem leaves and roots are used in medicine.

4. CHEMICAL COMPOSITION [5]
*Tinospora cordifolia* Tinospora Cordifolia belongs to different classes such alkaloids, diterpenoids, lactones, glycosides, steroids phenolics, aliphatic compounds and polysaccharides. Leaves of this plant are rich in protein (11.2 %) and are fairly rich in calcium and phosphorus.

5. THERAPEUTIC INDICATIONS [6]
In Ayurved, uducchi is indicated to treat various disorders like Jwara, Visama jwara, Kushta, Visarpa,Kandu,Daha, Vataraktha, Krimiroga,Pandu, Kamala,pravahika, Grahani, Daurbalya, Hridaurbalaya, Dhatukshaya, Prameha, Mutrakricha, Phiranga.

6. DOSES [7]

Powder :- 1-3 masa (3-6g)
Decotion :- 4-8 tola (50-100ml)
Sattva :- 5-15 ratti (1-2 grm)

7. FORMULATIONS [8]
Rasayana Churna
Sudarshana Churna
Guduchyadi Kwata
Punamavastaka Kwata
Amritarishta
Guduchi Ghrita
Amirtadi Ghrita
Gudduchyadi Taila
Samshamana Vati

8. MEDICINAL PROPERTIES AND USES
The stem of Gudduchi (*Tinospora cordifolia*) is one of the main constituents of several ayurvedic preparations used in general debility, dyspepsia, fever and urinary diseases.

- The stem is bitter, diuretic, stimulates bile secretions, enriches the blood and cures Jaundice [9].
- The root of *Tinospora Cordifolia* is given in combination with other drugs as an antidote to snake bite and corpion bite [10].
- The extract of its stem is useful in skin diseases [11].
- Dry barks of *Tinospora Cordifolia* have Anti Spasmodic, Anti allergic, Anti inflammatory and Anti pyretic properties [2].

9. ANTIPYRUTIC ACTION OF THE DRUG
*Tinospora Cordifolia* (Gudduchi) possesses rasa like Tikta which is pittashamaka and kaphahara. *Tinospora cordifolia* also has vidahi properties. This rasa is also considered as doshasamaka.

10. CONCLUSION
*Tinospora cordifolia* is highly effective as an antipyretic agent. Mainly Antipyretic activity is due to dual inhibition of COX and LOX enzymes. It has also gastroprotective and immune modulator activities. There is no chance of drug dependence with its use. Moreover, udduchi (*Tinospora cordifolia*) plant is present in abundance throughout the year, so the procurement is easy, cost effective and it is easy to administer.

CONSENT
It's not applicable.

ETHICAL APPROVAL
It's not applicable.

COMPETING INTERESTS
Authors have declared that no competing interests exist.

REFERENCES


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