



# Therapeutic Application of Different Formulations (*Kalpana*) of Guduchi (*Tinospora Cordifolia*)

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## Abstract

In *Ayurveda*, *rasashastra* and *bhaishajya Kalpana* plays a very important role in therapeutics. The main basic dosage forms are five i.e. *panchvidha Kashaya Kalpana* (five formulations), *swarasa* (liquid), *kalka* (paste), *kwatha* (decoction), *hima* (cold infusion) and *phanta* (hot infusion). These *Kashaya kalpanas* are mainly designed to obtain different mode of actions, different powers from same *dravya*. In this paper, the main stress is on *guduchi (Tinospora cordifolia)* formulations and its therapeutic applications, that how a single drug being used in different formulations in different therapeutic indications. The findings were presented in a tabular form and discussed to suggest any generalized remark.

**Keywords:** Guduchi; Ayurveda; Kalpanas

**Abbreviations:** CH: Charaka Samhita; SU: Sushruta Samhita; AH: Ashtang Hridaya; SHA: Sharangdhara Samhita; HA: Harita Samhita; KA: Kashyapa Samhita; BH: Bhel Samhita.

## Introduction

The success of treatment mainly depends upon the four factors which are known as *chatushpada (quadraped)* that is *bhishak (doctor)*, *dravya (medicine)*, *upasthata (attendant)* and *rogi (patient)* [1, 2(A.H. Su:1/27) [1]. *Bhishak (doctor)* is pivotal in the entire process of therapeutics because he only can initiate the process of treatment with knowledge of *dravyas (medicines)* and its applications. Here *dravya (drug)* refers to *aushadh (medicines)* and can be administered in many forms, formulations and dosages. In *Ayurveda*, *rasashastra* and *bhaishajya Kalpana* plays an important role in therapeutics as they play very important roles while prescribing medicine to a patient. The main basic dosage forms are five i.e. *panchvidha Kashaya Kalpana* [2] (five formulations), *swarasa (liquid)*, *kalka (paste)*, *kwatha (decoction)*, *hima (cold infusion)* and *phanta (hot infusion)* and there are secondary formulations too i.e. *asava, arishta*

(fermented formulations), *snehpaka (oil preparations)*, *avaleha*, etc.

It is often observed that the same *dravya (drug)* can be used in various *kalpanas (formulations)* which indicates the fact that *kalpanas* results in different therapeutic outcome. The importance of different types of formulations also includes is to make it easily palatable, for better absorption and compatible for individual use. As in modern pharmacology, certain drug dosage forms are mentioned according to the condition of the patients like unconsciousness, nausea, vomiting as well as in different medical conditions [3]. Depending on the routes of administration, different dosage forms are there which includes liquid, solid and semi solids dosage forms i.e. tablets, pills, syrups, capsules, etc. these dosage forms are given to the patient according to the medical condition as well as easy to use.

There are many types of *kalpanas* described in *Ayurveda*. *Panch vidhya Kashaya kalpanas* (five formulations) are the primary *aushadh kalpanas (medicinal formulations)*, wide range of *upkalpanas (secondary formulations)* are

also there which are being used as they have advantages like easy to administer, longer shelf life, high therapeutic effects and taste [4]. These different types of formulations provide a wide dosage forms in accordance with the patient requirements. These *Kashaya kalpanas* are mainly designed to obtain different mode of actions, different powers from same *dravya*. As in these *kashaya kalpanas*, *swarasa* is said to be strongest in potency whereas *phanta* is said to be least in strength. So, in case of strong patients and when the symptoms are intense then *swarasa Kalpana* could be used whereas when the patient and symptoms are weak then *phanta* could be used.

*Kashyap* has explained about different pharmacological actions of different types of *kalpanas*. For example, he explains the use of *hima Kalpana* to be used in *pitta Pradhan roga*, *kwatha Kalpana* to be used in adults and *phanta Kalpana* is indicated in children as well as weak patients [5].

This paper discusses about different formulations of *guduchi* (*Tinospora cordifolia*) and their therapeutic implications. The main parts of *guduchi* which are used in preparing formulations are root, stem and leaf. Depending on the media used for preparations of these formulations such as water in *hima*, *kwatha*, *taila* and *ghrita* in *sneh kalpanas*,

etc. the pharmacological actions of a drug also changes and it gives different results clinically [6]. These formulations will have different properties and actions and consequently will be used in different clinical conditions. Considering all these facts, this paper aims to explore various forms of *guduchi* used in classical literature of *Ayurveda* and its possible explanation of therapeutic uses.

## Materials and Methods

All the relevant literature corresponding to different formulations were searched and compiled i.e. from different *samhitas* (*ayurvedic text*), textbooks, research papers, journals, websites and published articles, etc.

Compiled literature was analysed to find out the instances of use of different formulations, their variations, properties, actions and their uses. These findings were presented in a tabular form and discussed to suggest generalised remark if any.

## Observations

Total 14 formulations of *guduchi* are found which are given below:

| S.no. | Different kalpanas of guduchi           | Total incidences |
|-------|---|------------------|
| 1     | Swarasa                                 | 11               |
| 2     | Kalka                                   | 1                |
| 3     | Kwatha                                  | 25               |
| 4     | Sheeta Kashaya                          | 1                |
| 5     | Churna (powder)                         | 1                |
| 6     | Vati (tablet)                           | 1                |
| 7     | Panaka(drinks)                          | 1                |
| 8     | Ghrita (clarified butter preparation)   | 9                |
| 9     | Taila (oil preparation)                 | 9                |
| 10    | Takra(buttermilk)                       | 1                |
| 11    | Lepa(paste)                             | 1                |
| 12    | Shaka (vegetable)                       | 1                |
| 13    | Amrita arishta (fermented formulations) | 1                |
| 14    | Guduchyadi rasanjana (extract)          | 1                |

**Table 1:** Formulations of *guduchi*.

| S.no. | Guduchi formulations | Indications   | Pharmacological activity   |
|-------|----------------------|---|--|
| 1     | Swarasa              | Halimaka (chronic obstructive jaundice) (ch), Medhya rasayana (memory boosting) (ch,a.h), Sarvakushtha (leprosy)(su), Vattaja jwara (fever)(su,ha), jirna jwara (chronic fever) (ah), Madatayaa (alcoholism)(ah), prameha (diabetes) (ah,sha), kamla (jaundice) (ah), vatotra, vatarakta (arthritis), (ah), Vattashonita (arthritis), (ah), tritiyaka jwara (fever)(ha)   | Medhya rasayana [7], antimicrobial activity [8],                                   |
| 2     | Kalka                | Shopha (inflammation)(ha)   |  |
| 3     | Kwatha               | Medoroga (obesity)(ch), pittaja jwara (fever)(su,ha), mahakushtha (leprosy)(su,ha), sarpimeha (type of diabetes) (su), rasayana (rejuvenation)(su), niruhabasti (enema)(su), kukunaka(eye disease)(su), vattaja jwara (fever)(su), sannipataja chardi (emesis)(su), Vattashonita(ah,sha), galganda (goitre) (ah), mukha arbuda (mouth carcinoma)(ah), yoni prakshalana (vaginal wash)(ah), Visarpa (herpes zoster)(ka), Sannipataja jwara (fever)(ha), Pitta, kapha jwara(ha,sha), Arsha (piles)(ha), Trishna (thirst)(ha), Sarvangavata(ha), Amlapitta (hyperacidity) (ha), Sarvajwara(sha), Jirnajwara(sha), Tritiyaka jwara(sha), Jwara atisara (diarrhoea associated with fever) (sha), Netra roga (eye disorder) (sha) | Gouty arthritis [9]  |
| 4     | Sheeta Kashaya       | Jirna jwara (chronic fever) (sha)   |  |
| 5     | Churna               | Rajyakshama (tuberculosis)(ha), Vajikarana (aphrodisiac)(ha)  | Antimicrobial activity [10], rasayana [11]   |
| 6     | Vati                 | Netra vyadhi(ch)  |  |
| 7     | Panaka               | Jwara (fever) (bh)  |  |
| 8     | Ghrita               | Kasa (cough)(ch,ah), jirna jwara(su), laghraka(complication of jaundice)(su), mukha roga (mouth disorder)(ah), halimaka(ka), vishma jwara(ka), rajyakshama (tuberculosis) (ha), bala roga, (pediatric disorders)(ha), kushtha(sha)  | Antipyretic activity [12], anti-stress effect with immunosuppressing activity [13] |
| 9     | Taila                | Vatavyadhi (nervous disorder) (ch), vata rakta(ch), mudha garbha(obstructed labour) (su), anuvasanavasti (enema)(sha)   | Immuno stimulating activity [13]   |
| 10    | Takra                | Arsha (piles) (su)  |  |
| 11    | Lepa                 | Valamik(myocytoma)(su)  |  |
| 12    | Shaka                | Jwara(su)   |  |
| 13    | Amrita arishta       | Kaphaja visarpa(ka)   |  |

**Table 2:** Describing different formulations of *Guduchi* with its different therapeutic applications and different pharmacological activity.

## Discussion

Mainly five formulations are quoted in *Charaka Samhita* which is referred as *Panchavidha Kashaya Kalpana*. The choice of *kashyaya kalpanas* not only depends on *roga (disease)* and *rogi (patient)* but also depends upon the drug being used. As *Chakrapani* mentions the word “*shakti-vishesh*” which means specific potency or specific mode of action. It indicates, different *Kashaya kalpanas* are designed to obtain different mode of actions, different potencies from the same drug and

hence these *kalpanas* are designed in order to extract active principles present in drug. The *samhitas* have described four *kalpanas* of *Pancha vidha kashaya kalpanas* except *phanta*. It seems the properties of the useful parts of *guduchi* will not be adequately transferred into the *phanta* because *phanta* contains less *sara bhaga* and thus it is not used.

*Guduchi swarasa* has 11 therapeutic applications, out of which *swarasa* is given exclusively in *medhyarasayana*, *madatayaya* and *kamla*; *guduchi kalka* has only 1 therapeutic

application which is given by *Harita* in *shopha*, *guduchi kwatha* has 25 therapeutic applications, out of which *guduchi kwatha* is exclusively given in *medoroga*, *niruhabasti*, *kukunaka*, *sannipatajachhardi*, *galganda*, *yoni prakshalana*, *Trishna*, *Sarvangavata*, *Amlapitta* and *jwaraatisara*; *guduchi sheeta* has only 1 therapeutic application which is given by *sharangdhar* in *jirna jwara*, *guduchi churna* has 2 therapeutic applications which is given by *harita* in *rajyakshma* and *vajikarana*, *guduchi vati* has only 1 therapeutic application which is given by *charaka* in *netravvyadhi*, *guduchi panaka* has only 1 therapeutic application which is given by *bhela* in *jwara*, *guduchi ghrita* has 9 therapeutic applications, out of which *guduchi ghrita* is exclusively indicated in *kasa*, *laghraka*, *vishma jwara* and *balaroga*; *guduchi taila* has 9 therapeutic applications, out of which *guduchi taila* is exclusively indicated in *mudhagarbha* and *anuvāsana vasti*; *guduchi takra* has only 1 therapeutic application which is given by *sushruta* in *arsha*; *guduchi lepa* has only 1 therapeutic application which is given by *sushruta* in *valamik* and *guduchi shaka* has only 1 therapeutic application which is given by *sushruta* in *jwara*; *guduchi arishta* has only 1 therapeutic application which is given by *kashyap* in *kaphaj visarpa*, *guduchyadi rasanjana* has only 1 therapeutic application which is given by *sharangdhar* in *timir*.

Out of all these formulations, it is observed that *guduchi kwatha* has been used widely as compared to other *kalpanas*. This might be due to the fact that *guduchi* acts best when formulated in a water medium. Since *swarasa* is comparatively *guru* and can be used in *balavan Roga* and *Rogi* and *kwatha* can be used in *madhyam bala roga* and *rogi*, *Kwatha* has got wider use than *swarasa*. In *halimaka*, *charaka* mentions *guduchi swarasa* whereas *kashyapa* mentions *guduchi ghrita*; as *charaka* mainly emphasizes on fresh drug and *kashyapa* believes that may be due to *guna antradhana* of *guduchi* is done so as to give better results in *halimaka*.

*Vagbhatta* has described the use of *guduchi swarasa* more than other *kalpanas*, which hints *vagbhatta* emphasises more on use of fresh *guduchi* than dry one. Only *Sharangdhar* has mentioned *guduchi swarasa* only in *jwara* whereas all other texts indicated use of *guduchi swarasa* as *medhyarasayana*. It is also observed that multiple *kalpanas* of *guduchi* are used in one single disease *Jwara*. It can be attributed to the multifaceted pathology involved in different types of *Jwara* and the versatility of *guduchi* to counteract these pathogenesises. Different formulations enable *guduchi* to be used in different *jwaras*.

## Conclusion

Out of 5 basic formulations described in *Ayurveda*, *Guduchi* has been used in 4 types except *phanta kalpana*.

*Kwatha* is the most widely used formulation amongst these four. There are other formulations of *guduchi* described in the text like *churna*, *panaka*, *arishta*, *shaka*, *lepa*, *takra*, *ghrita* and *taila Kalpana*. All these formulations have different therapeutic applications suggesting that formulations do lead to alteration in pharmacological activity and consequent therapeutic applications.

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