

GUDA CHATUSHTAYA GUTIKA: A REVIEW

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ABSTRACT

Introduction: A great number of classical and other literary works provide knowledge about pharmaceuticals and formulations, and also ways for maintaining health through proper daily and seasonal routines. In Ayurvedic pharmaceuticals, Vati/Gutika kalpana is one of the most significant secondary preparations. Sharangadhara has mentioned number of Vati kalpanas, one of which is 'Guda chatushtaya Gutika,' in which he uses individual dravya in combination with Guda to treat different conditions. **Aim:** The purpose of this study was to assess the properties of Sunti, Pippali, Jeeraka, and Haritaki, as indicated in Guda chatushtaya gutika, in treating various conditions. **Materials and Methods:** 'Guda chatushtaya Gutika,' details the formation of vati with individual dravya such as Sunti, Pippali, Jeeraka, and Haritaki keeping Guda in common. **Conclusion:** Guda-Sunti Yoga useful in Ama, Guda-Pippali Yoga helps in Ajirna, Guda-Jeeraka is beneficial in Mutrakrechra, Guda-Haritaki useful in Arshas.

KEYWORDS: Ayurveda, Pharmaceuticals, Dosage form, Vati kalpana.**INTRODUCTION**

In Ayurvedic medicine, pharmaceuticals are utilized in both their raw and processed forms, resulting in a range of formulations. When medications or formulations are ready for consumption, they must be not only efficacious but also simple to administer and pleasing to the patient. In the presence of a physician, Ayurvedic classics believe 'drug' to be a very essential health management tool. This tool must be used with precaution; else, it may cause risks to the patient receiving it, and in some cases, leading to death.

"An unknown medicine is like a poison, a weapon, a fire, or the Vajra," Acharya Charaka advises in this aspect. He goes on to suggest that no substance in the Universe is without therapeutic potential and hence might be used as a medication source if used wisely and for the appropriate conditions.^[1]

A great number of classical and other literary works provide knowledge about pharmaceuticals and formulations, and also ways for maintaining health through proper daily and seasonal routines. The authors of these texts have classified the pharmaceuticals in wide and varied manners of dosage forms. Ayurvedic formulations vary widely, however there are five basic traditional forms known as 'Panchavidha kashaya'

kalpana explained by Sharangadhara.^[2] from which all other pharmacological formulations or forms are derived.^[2]

In Ayurvedic pharmaceuticals, vati/Gutika kalpana is one of the most significant secondary preparations. In the pharmaceutical world, vati is the most widely produced solid dosage form. They're made up of one or more herbal, herbo-mineral, or mineral drugs. The ingredients are dried and made into fine powders, separately and grounded to soft mixtures then they are rolled into pills. At last stage the formulation should not stick to the fingers when rolled, which is the criterion used to determine the final stage of the formulation before producing pills.

Pills can be dried in the shade or in sunlight, depending on the specifications given in the classics. Paaka (consistency) should be cooked on a low heat when Sugar, Jaggery, Guggulu is mentioned. The components' powders are put to the Paaka and quickly combined. Vatis should be rolled and dried in the shade while still warm. Vati is administered in the dose of 1 karsa (12 gm) in accordance with bala of the patient.^[3]

Sharangadhara has mentioned number of vati kalpanas, one of which is 'Guda chatushtaya Gutika,' in which he

uses individual dravya in combination with Guda to treat different conditions.^[4]

MATERIALS AND METHODS

In the context of Vataka kalpana in madhyama khand, Acharya Sharangadhara has described four types of vati kalpana containing Guda named 'Guda chatusthaya

Gutika' in which he describes formation of vati with individual dravya like Sunti (Zingiber officinale), Pippali (Piper Longum), Jeeraka (Cuminum cyminum), Haritaki (Terminalia chebula) with Guda (Jaggery) as common ingredient, in treating Ama (Inappropriately digested food), Ajirna (Dyspepsia), Mutrakrechra (Dysuria), Arshas (Haemorrhoides) respectively.

Table 1: Composition of vati.

| Sl. no. | Guda | Ingredient | Indication |
|---------|------|------------|---------------|
| 1. | | Sunti | Ama |
| 2. | | Pippali | Ajirna |
| 3. | | Jeeraka | Muttrakrechra |
| 4. | | Haritaki | Arshas |

Table 2: Description of individual dravya.

| Sl. No. | Ingredient | Botanical name - Family | Properties | Chemical constituents |
|---------|------------|-------------------------------------|--|--|
| 1. | Sunti | Zingiber officinale - Zingiberaceae | Rasa (taste) – Katu (pungent) Guna (qualities) – Guru (heavy), Rooksha (dryness), Teekshna (strong, piercing) Vipaka- Madhura – Undergoes sweet taste conversion after digestion. Veerya – Ushna – Hot potency. Effect on Tridosha – Balances Kapha | a-Curumene, B- D-Curcumene, B-Bourbornene, d-Borneol, Citral, D-Camphene, Citronellol, Geraniol, Gingerol, a-&b-Zingiberenes, Zingiberol, Zingerone, Gingerols, Paradol, Gingerone A, ginner glycolipids A, B & C; Gingerdiol; Gingerone B& C etc. |
| 2. | Pippali | Piper longum - Piperaceae | Rasa (taste) – Katu (pungent) Guna- Laghu (light), Teekshna (sharp) Vipaka- Madhura – Undergoes sweet taste conversion after digestion Veerya – Ushna – Hot potency. (wet variety has cold potency) Effect on Tridosha – Balances Vata and Kapha Doshas. | Essential oil. Mono and sesquiterpenes, caryophyllene (mainly), Piperine, Piperlongumine, Piperlonguminine, Pipernonaline, Piperundecalidine, Pipericide, Sesamin, B-sitosterol four aristolactams (cepharanone B. aristolactum All. Piperlactum A and piperolactam B) five 4-5 dioxoaporphines etc. |
| 3. | Jeeraka | Cuminum cyminum – Umbelliferae | Guna– Laghu (light to digest), Rooksha (dry) Rasa (taste) – Katu (pungent) Vipaka (taste conversion after digestion) – Katu (pungent) Veerya (potency) – Ushna (hot) Effect on Tridosha – Kaphavatahara – balances Kapha and Vata, increases Pitta | Cuminaldehyde, cymene and terpenoids, thymol. |

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|----|----------|---------------------------------|---|---|
| 4. | Haritaki | Terminalia chebula-Combretaceae | Rasa (taste) – Five tastes except salt, Astringent dominant Guna (qualities) – Laghu – lightness, Rooksha – dryness Vipaka – Madhura – Undergoes sweet taste conversion after digestion Veerya – Ushna – Hot potency | chebulagic acid, chebulic acid, tannic acid, gallic acid (~1.2%), ethyl gallate, ellagic acid, chebulinic acid, chebulanin, corilagin, terflavin A, punicalagin, terchebulin, casuarinin, 2,4-chebulyl- β -D-glucose and glucose esterified with gallic acid to various degrees (eg., 1,6-O-galloyl- β -D-glucopyranose), Hydroxy anthraquinones glycosides etc |
|----|----------|---------------------------------|---|---|

DISCUSSION

According to research, Ginger hydroalcoholic extract can diminish the contractile response to KCl and carbachol, indicating a relaxing response. As a result, the relaxing action of ginger is not mediated by nitric oxide. In addition, the findings revealed that ginger extract can inhibit carbachol-induced contractions in rat ileal smooth muscle.^[5]

In healthy individuals, Sunti increases gastrointestinal emptying and induces antral contractions. In symptomatic patient groups, these effects could be useful. Sunti has been shown to help with upper gastrointestinal issues.^[6] Pachana is regarded to be the first and most effective treatment for Ama. Sunti's Amapachana property was investigated in the context of elevated ESR related with Amavatha. There was a considerable decrease in the severity of subjective symptoms such as Angamarda (Body Part Pain), Aruchi (Anorexia), Alasya (Lethargy), Gourava (Heaviness), Apaka (Indigestion), and Sopha (Oedema), as well as a slight decrease in the ESR value.^[7] In patients with functional dyspepsia, ginger enhances the rate of gastric emptying, which is related with an increased frequency of gastric antral contractions but no change in fundus dimensions.^[8] Sunti is an anti-oxidant that can either reduce or prevent the formation of free radicals. Antioxidant enzymes such as GSH, SOD, and glutathione peroxidase are all increased by ginger extract.^[9] Besides these, Sunti has been reported to enhance the digestion of food.^[10]

Pippali's anti-giardial activity in soluble fractions of hexane, chloroform, and n-butanol was comparable to that of the drug-free control. Piper longum has both specific and nonspecific immunostimulatory activity, as evidenced by the conventional test criteria.^[11] Entamoeba histolytica is inhibited by pippali extract in rats. This plant material's ethanolic extract and piperine, a pure

chemical, respectively healed 90% and 40% of rats with caecal amoebiasis.^[12]

Piper longum increases the rate of gastric emptying and enhances the propulsive function of the small intestine, as well as increasing the pace of gastric emptying. The cholinergic receptor is most likely the mechanism of action.^[13] In vitro ovidical, larvicidal, and adulticidal activity of methanolic extract and its fractions from Piper longum fruits was demonstrated in a study, concluding that the methanolic extract and fractions of Piper longum showed substantial anthelmintic activity.^[14] Piperine (18.57 percent) was discovered to be the most prevalent component in a GC-MS analysis of Piper longum extract, suggesting that it could be a key contribution to the extract's antihelmintic efficacy. This finding is consistent with recent research that show piperine has a potent antibacterial impact.^[15]

Except for E. coli and K. pneumoniae, all bacterial strains were sensitive to chloroform extract and ethanol extract. For B. subtilis and S. aureus, an ethanol extract of cumin was found to be highly efficient. The findings imply that cumin seeds may have antibacterial activity against a spectrum of microorganisms that are resistant to antibiotics.^[16] Jeeraka has been proven to help with a range of kidney disorders. A number of studies have found that cumin and its key component, thymoquinone (TQ), can protect against kidney impairment induced by pesticides and other toxins in the environment. Cumin can also help prevent ischemia shock in the kidneys. Antioxidation, anti-inflammation, anti-apoptosis, and antifibrosis are among the processes behind black cumin and TQ's kidney protection potential, as evidenced by their regulatory roles in the antioxidant defence system, NF- κ B signalling, caspase pathways, and TGF signalling. In clinical trials, black seed oil was proven to improve disease outcomes and normalise blood and urine parameters in advanced CKD patients. While cumin and

its derivatives have shown to have urinary protective properties.^[17]

Haritaki helps to ease bowel movement, one of the complications in hemorrhoids. It helps in reducing the pile mass and reducing the bleeding. Terminalia chebula's 'anti-spasmodic' effects were proved in one of several investigations by a reduction in aberrant blood pressure and intestinal spasms. This supports its long-standing usage in the treatment of spastic colon and other gastrointestinal problems.^[18] Terminalia chebula was found to considerably enhance gastric emptying in a research. The improvement in gastric emptying was similar to that seen with metoclopramide. This suggests that Terminalia chebula could be a viable alternative to currently available prokinetic medicines.^[19] One of the clinical investigations looks into the laxative properties of Terminalia chebula. Terminalia chebula helps with symptoms such as frequency, evacuation, and consistency. The ability of Haritaki water extract to block the [3H] Hypoxanthine into the Plasmodium falciparum K1 multidrug-resistant strain in vitro and in vivo demonstrates antiplasmodial action.^[20] An antiplasmodial activity of Haritaki seed extract was also discovered in a study.^[21]

CONCLUSION

Guda-Sunti Yoga useful in Ama, Guda-Pippali Yoga helps in Ajirna, Guda-Jeeraka is beneficial in Mutrakrcha, Guda- Haritaki useful in Arshas. Research updates too suggest the same.

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