

RUTU TRIVRIT: A POTENTIAL FORMULATION FOR THERAPEUTIC APPLICATIONS

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ABSTRACT

Ayurveda, the ancient Indian system of medicine, emphasizes not only curative but also preventive and promotive health care through practices like Ritucharya (seasonal regimen). In this context, the term “Rutu Trivrit” refers to a specific formulation or therapeutic approach involving the herb Trivrit (*Operculina turpethum* Linn.) used in alignment with seasonal transitions. Trivrit (*Operculina turpethum* Linn.) that has been widely used for its excellent therapeutic effect, since vedic period till date. According to Acharya Charaka, trivrit is an agrya dravya for sukha virechana (term “Sukhavirechana” combines *Sukha* ("gentle" or "comfortable") and *Virachana* ("purgation"). Therefore, Sukhavirechana denotes a mild, non-distressing purgation therapy designed to clear the bowels without causing significant discomfort. In the Charaka Samhita, particularly in the Kalpa Sthana, various formulations of Trivrit (*Operculina turpethum*) are described, each with specific Anupanas (vehicles) to enhance the absorption, bioavailability, and therapeutic effect of the primary drug accordance with bala, agni, rutu, etc.

KEYWORDS: Trivrit, *Operculina turpethum*, Rutu, Rutu sukhavirechana, Anupana, Rutu Trivrit.

INTRODUCTION

Trivrit (*Operculina terpepethum Linn*) is an herb of Indian origin, it belongs to Convolvulaceae family. Since it has potent medicinal properties and virechaka in action it is used as an easy purgative that is sukh virechaka in various ailments. Virechana is one of five major shodhana procedures having a great significance in treating various diseases and expelling vitiated doshas out of body as described by Acharya Charaka.^[1] It is particularly beneficial for disorders caused by Pitta, especially when Pitta is associated with either Vata or Kapha. Acharya Charaka categorized virechana into 3 levels of Intensity: Mridu, Madyama, Tikshna. Similarly, Virechana Dravya can be classified based on their mode of action as Anulomana, Sramsana, Bhedana and Rechana. Among many Ayurvedic herbs that are useful for easy purgation Trivrit (*Operculina turpethum Linn*) is considered as sukhavirechaka. Rutu Trivrit is a unique concept explained in kalpasthana of charaka Samhita where specific combination of drugs is given in specific rutu and yields better result as it is in accordance with anupana, bhavana and samskara etc in order to expel the vitiated doshas completely and to attain dhatusamya.^[2]

REVIEW ON RUTU

Introduction

Definition^[3]: Which is in a tendency to move continuously in a cyclic manner is called as ritu (seasons). The period of one year is divided into six ritus- Shishira (winter season), Vasanta (spring season), Grishma (summer season), Varsha (rainy season), Sharada (autumn season), and Hemanta (winter season). Tikta (bitter), Kashaya (astringent), Katu (pungent), Amla (sour), Lavana (salt), Madhura (sweet) tastes are predominated in food and medicines in respective seasons. According to the intensity of sun rays, these six seasons are divided into two groups such as;

1. Adaana kaala (debilitating period)
2. Visarga kaala (strengthening period).

According to purificatory therapy, these are grouped in two groups as follows;

1. Sadharan ritu (General seasons) - Pravrita, Sharada, Vasanta ritu.
2. Vishista ritu (specific seasons) - Hemanta, Grishma, Varsha ritu

Predominance of Guna, Rasa, and Bala in Adaana kala is given in following table

| Ritu of Adana kala | Guna (properties) | Rasa (teste) | Bala(strength) |
|--------------------------|--------------------------------------|----------------------|-----------------------------|
| Shishira (winter season) | Alpa rukshata (mild dryness) | Tikta(bitter) | Uttam (superior strength) |
| Vasant (spring season) | Madhyama rukshata (moderate dryness) | Kashaya (astringent) | Madhyama (medium strength) |
| Grishma (summer season) | Ati rukshta (excess dryness) | Katu (spicy) | Durbala (inferior strength) |

Predominance of Guna, Rasa, and Bala in visarga kala is given in following table

| Ritu of visarga kala | Guna (properties) | Rasa (teste) | Bala(strength) |
|-------------------------|--|-----------------|-----------------------------------|
| Varsha (rainy season) | Alpa snighdhata (Mild unctuousne) | Amla (sour) | Durbala (inferior strength) |
| Sharda (antum season) | Madhyam snighdhata (moderate unctuousne) | Lavan (salty) | Madhyama bala (moderate strength) |
| Hemanta (winter season) | Snighdhata (excess unctuousness) | Madhura (sweet) | Uttam bala (superior strength) |

Effect of Ritu on dosha

According to the sanchaya (accumulation), prakopa (aggravation) and prashamana (mitigation) of the dosha, the Shishira and Hemanta ritus seems to be similar. Hence these two ritus are explained in single ritu i.e. Hemanta ritu.

| Dosha | Sanchaya | Prakopa | Prasara |
|-------|-------------------|---------|----------|
| Vata | Greeshama | Varsha | Sharada |
| Pitta | Varsha | Sharada | Hemanta |
| Kapha | Shishira /Hemanta | Vasanta | Greeshma |

Review on Trivrit

Latin Name: *Operculina turpethum* Linn.

Family: Convolvulaceae

Kula: Trivrit kula

Gana vargeekarana of Trivrit in Various Texts

| Sr. no | Samhita / Nighantu | Varga / Ganas |
|--------|-------------------------------------|--|
| 1 | Charaka ^[4] | Bhedaniya Vishagha Asthanopanaga gana |
| 2 | Sushruta ^[5] | Shamadi Adhobhaghara gana Tikta varga |
| 3 | Vagbhata ^[6] | Virechana gana Niruha gana Shyamadi gana |
| 4 | Bhavprakash Nighantu ^[7] | Guduchyadi varga |
| 5 | Dhanwantri Nighantu ^[8] | Guduchyadi varga |
| 6 | Madanpala Nighantu ^[9] | Abhayadi varga |
| 7 | Kaiyadeva Nighantu ^[10] | Oshadi varga |
| 8 | Raja Nighantu ^[11] | Pippalyadi varga |
| 9 | Aadarasha Nighantu ^[12] | Vridhdadarvadi varga |
| 10 | Priya Nighantu ^[13] | Pippalyadi varga |

* B.N – Bhavaprakasha Nighantu, D.N – Dhanvantari Nighantu, MP. N – Madanaphala Nighantu, K.N – Kaiyadeva Nighantu, R.N – Raja Nighantu

Morphology: *Operculina turpethum* Linn. Belonging to Convolvulaceae family is a perennial twiner with milky juice. Root is long, slender, fleshy, branched and root bark is easily removable. Stem is twisted three angled hence it is known as Trivrit. Simple leaves with ovate or oblong shape. Flowers are funnel shaped and white in colour. It can be easily cultivated with seeds or layering. Harvesting of roots recommended after 18 months of plantation.



Chemical Constituents

An ether insoluble glycoside-turpethin, 2 other soluble glycosides- α , β turpethins Coumarin scopolamine along with sugars glucose, rhamnose, fructose 4-O-methyl apigenin luteolin & its derivative, gentiic, protocathechuic anillin, p-coumaric, meteoritic, ferulic acids, turpentine acids A, B, C, D & E, saponins are major components derived from various parts of this plant.^[14]

Table 3: Rasapanchaka of Trivrit According to Different Nighantus.

| Sr. No | Properties | B. N | D. N | MP. N | K. N | R. N |
|--------|------------|-----------|--------------------------------|-----------|----------------------------------|-------------|
| 1 | Rasa | Madhura | Madhura -shweta Katu- shyam | Tikta | Katu, tikta, Madhura, Kashaya | Tikta, katu |
| 2 | Guna | Ruksha | Ruksha | Ruksha | Ruksha | Ruksha |
| 3 | Veerya | Ushna | Ushna | Ushna | Ushna | Ushna |
| 4 | Vipaka | Katu | Katu | Katu | Katu | Katu |
| 5 | Prabhava | Virechana | Virechana | Virechana | Virechana | Virechana |

Synonyms**Table 1: Synonyms of Aruna Trivrut in Nighantu.**

| Sr. No | Synonyms | B.N | D.N | MP. N | K. N | R. N |
|--------|---------------|-----|-----|-------|------|------|
| 1 | Bhandi | + | - | - | - | - |
| 2 | Tribandi | - | + | + | + | - |
| 3 | Tripata | + | + | + | + | + |
| 4 | Sarvanubhuthi | + | + | + | + | - |
| 5 | Sarala | + | + | + | - | - |
| 6 | Tryasra | - | + | + | + | - |
| 7 | Kakakshi | - | + | - | - | - |
| 8 | Kumudagandini | - | + | - | - | - |
| 9 | kalindi | - | - | - | - | + |
| 10 | Kumbha | - | - | + | + | - |

Table 2: Synonyms of Shyama Trivrit in Nighantus.

| S.No | Synonyms | B. N | D.N | MP. N | K. N | R. N |
|------|--------------|------|-----|-------|------|------|
| 1 | Ardhachandra | + | + | + | - | + |
| 2 | Palindi | + | - | - | + | - |
| 3 | Sushennika | + | + | - | + | + |
| 4 | Masuravidala | + | + | + | + | + |
| 5 | Malavika | - | + | + | - | + |
| 6 | Tamrapushpa | - | - | - | + | - |
| 7 | Kalameshika | + | + | + | + | + |
| 8 | Koshapala | - | - | - | + | - |

Table no. 4: Karmas of Trivrit acc.to different Nighantu:

| Sr No. | Nighantu | Karma |
|--------|------------------------|-----------------------------|
| 1 | Bhavaprakasha Nighantu | Tridosahara, Kaphapittahara |
| 2 | Raja Nighantu | Kaphapittahara |
| 3 | Madanapala Nighantu | Kaphapittahara |
| 4 | Madanadi Nighantu | kaphapittahaa |
| 5 | Kaiyadeva Nighantu | kaphapittahaa |

Concept of Anupana (vehicle)^[15]

Paribhasha: Anupana (vehicle) is defined as the pana (drink) which is taken immediately after ahara (food), oushadha anga and oushadha yoga (medicines).

Anupana karmukata: As the oil added to water spreads quickly on the surface of water, so the oushadha (medicine) along with the Anupana spreads in the body and produces its effect when administered with appropriate Anupana.

Benefits and Importance of Anupana: Anupana invigorates, gives contentment, helps in proper movement of food inside, stability of body, softens the consumed food, increases the kledata (moisture) and helps in proper digestion of the food.

RUTU –TRIVRIT^(16,17)

Trivrit as sukhavirechaka is widely used in various treatment procedures. To maximize the benefits of Trivrit, it should be administered with various rutus, adjuvants to enhance its effectiveness based on the rutus.

Table 5: Rutu-Trivrit and its Drug properties.

| Rutu | Drug mention | Botanical name | Rasa | Guna | Doshaghnta | Pridominat Dosha | Anupana | Use |
|------------------|----------------|--------------------------------------|------------------|-----------------------|-----------------------------|-----------------------|---------------------------|--|
| Varsha | Trivrut | <i>Operculina turpenthum linn</i> | Madhura | Ruksha | Tridosahara, Kaphapittahara | Vata | Dakshrasa | virechana |
| | Indrayava | <i>Holarrhena antidysenterica</i> | Katu | Laghu, ruksha | Tridoshagna | | | |
| | Pippali | <i>Piper longum linn</i> | Katu | Anushna, Snigda | Kaphavata hara | | | |
| | Vishwabhashaja | <i>Zingiber officinale linn</i> | Katu | Ushna, Snigda | Kaphavata hara | | | |
| | kshoudra | <i>Honey</i> | Kashaya, Madhura | Ruksha | Kaphapittahara | | | |
| Sharada | Trivrit | <i>Operculina turpenthum linn</i> | Madhura | Ruksha | Tridosahara, Kaphapittahara | Pitta | Drakshaambu | virechana |
| | Duralabha | <i>Fagonia cretica linn</i> | Kashaya, tikta | Laghu, Ruksha | Pittakaphahara | | | |
| | Musta | <i>Cyperus rotundus linn</i> | Tikta, katu | Laghu, Ruksha | Kaphapittahara | | | |
| | Sharkara | <i>sugar</i> | Madhura | Laghu, Sheeta | Pittahara | | | |
| | Udeechya | <i>Pavonia odorata willd</i> | Madhura | Sheeta, Laghu, Ruksha | Kaphapittahara | | | |
| | Chandana | <i>Santalum album</i> | Madhura, tikta | Sheeta, laghu, Ruksha | Kaphapittahara | | | |
| | Drakshambu | <i>Vitis vinifera linn</i> | Madhura | Guru, Sheeta | Kaphapitta hara | | | |
| | satala | <i>Hibiscus rosa - sinensis linn</i> | Tikta | Laghu, sheeta | Kaphahara | | | |
| | Yastyahwa | <i>Glycyrriza glabra linn</i> | Madhura | Guru, sheeta | Vatapitta hara | | | |
| Hemanta | Trivrit | <i>Operculina turpenthum linn</i> | Madhura | Ruksha | Tridosahara, Kaphapittahara | vata (Shleshmach aya) | Water | Due to Prabhava sheetavata in this season, virechana yet it can be given necessary condition |
| | Chitraka | <i>Plumbago zeylanica linn</i> | Katu | Ruksha, Ushna | Vatakaphahara | | | |
| | Pata | <i>Cyclea peltate Hook</i> | Katu | Teekshana, Laghu | Vatakaphahara | | | |
| | Ajaji | <i>Cuminum cyminum linn</i> | Katu | Ruksha | Vatahara | | | |
| | Sarala | <i>Pinus roxburghii</i> | Madhura, Tikta | Snigda, Ushana | Vatakaphara | | | |
| | Vacha | <i>Acorus calamus linn</i> | Tikta | Ushana | Vatahara | | | |
| | swarnaksheeri | <i>Argemone Mexicana</i> | Tikta | Hima | Pittahara | | | |
| Greeshama | Trivrit | <i>Operculina turpenthum linn</i> | Madhura | Ruksha | Tridosahara, Kaphapittahara | Pitta | Equal amount of sharkara | Virechana |
| Sarvarutu yoga 1 | Trivrit | <i>Operculina turpenthum linn</i> | Madhura | Ruksha | Tridosahara, Kaphapittahara | | Churna bhavana in gomutra | Causes virechana and maladosahara in the patients who has undergoes snehana procedure |
| | Hapusha | <i>Juniperus communis linn</i> | Tikta | Guru, ushna | Kaphahara | | | |
| | Satala | <i>Hibiscus rosa sinensis linn</i> | Tikta | Laghu, sheeta | Kaphahara | | | |
| | Katurohini | <i>Picrorrhiza kurroa benth</i> | Tikta | Ruksha, laghu, sheeta | Kaphapittahara | | | |
| | swarnaksheeri | <i>Argemone mexicana linn</i> | Tikta | Laghu, ruksha | Pittahara | | | |
| Sarvarutu yoga 2 | Trivrit | <i>Operculina turpenthum</i> | Madhura | Ruksha | Tridosahara, Kaphapittahara | | Churna mixed with | Causes virechana in |

| | | | | | | | | |
|--------------------|--------------|------------------------------------|--|--|-----------------|--|---|---|
| | | <i>linn</i> | | | | | sarpi mamsarasa, and ushnaambu | the patient who has not even undergone snehana procedure |
| | Durlabha | <i>Fagonia cretica linn</i> | Kashaya, Tikta | Laghu, ruksha | Pittakaphahara | | | |
| | Vatsaka | <i>Holarrhena antidysenterica</i> | Tikta, Kashaya | Laghu, ruksha | Pittakapha hara | | | |
| | Hastipippali | <i>Piper chaba linn</i> | Katu | Teekshana, laghu | Vatakapha hara | | | |
| | Neelini | <i>Indigofera tinctoria</i> | Tikta | Ushana | Vatakaphahara | | | |
| | Triphala | <i>Terminalia bellerica Linn.</i> | All Rasa except lavana Rasa Kashaya Kashaya | Sheeta, ruksha Laghu, ruksha Laghu, ruksha | Tridoshaghna | | | |
| | Bibhitaki | <i>Terminalia chebula Linn.</i> | | | | | | |
| | Haritaki | <i>Embllica officinalis Linn.</i> | | | | | | |
| | Aamalaki | | | | | | | |
| | Musta | <i>Cyperus rotundus</i> | Tikta ,katu | Laghu, ruksha | Kaphapittahara | | | |
| | Katuki | <i>Picrorhiza krurroa</i> | Katu | Ushana, Snigda | Kaphavata hara | | | |
| Sarvrutu yoga 3 | Shunthi | <i>Zingiber officinale Linn</i> | Katu | Ushna, Snigda | Kaphavata hara | | Churuna +equal amount of sharkara given with amla Dravya | Virechana |
| | Maricha | <i>Piper longum Linn</i> | Katu | Ushna, Ruksha | Kaphavata hara | | | |
| | Pippali | <i>Piper nigrum Linn</i> | Katu | Anushna, Snigda | Kaphavata hara | | | |
| | Amalaki | <i>Embllica officinale</i> | All rasa except lavana | Sheeta, Ruksha | Tridoshaghna | | | |
| | Haritaki | <i>Terminalia chebula</i> | All rasa except lavana | Sheeta, Ruksha | Tridoshaghna | | | |
| | Vibhitaki | <i>Terminalia bellerica</i> | Kashaya | Ruksha, laghu | Kaphapitta hara | | | |
| | Hingu | <i>Ferula naethex Linn</i> | Katu, Tikta | Teekshna, ushna | Vatakaphahara | | | |
| | Souvarchala | <i>salt</i> | Lavana | Ruksha, Sara | Kaphapittahara | | | |
| | Amlavetasa | <i>Garcinia pendunculatva Roxb</i> | Amla | Laghu | Kaphavatahara | | | |

DISCUSSION

- **Effect of Trivrit in Varsha** - Varsha ritu has pre dominance of Vata dosha. Most of the drugs mentioned have katu rasa, ushna & ruksha guna and are kaphavatahara in nature. Hence,
- Trivrit provides a strong cleansing/purgative action, especially for Kapha-Pitta accumulation.
- Indrayava counters diarrhoea, helps in balancing intestinal tone, and provides astringency.
- Pippali & Shunthi stimulate digestion, balance Vata-Kapha, and reduce post-cleansing weakness.
- Kshoudra/Mishri acts as a Vata balancer, soothing the intestines after purgation.
- Draksha swaras having sheeta in nature and also act as vata pitta shamaka.
- **Effect of Trivrit in Sharada** – As it is Pitta predominant season, drugs mentioned here are having Tikta and Madhura rasa, Ruksha, Laghu and sheeta guna and kaphapittahara property.
- Musta, Chandana, Udeechya, Yashtimadhu, Duralabha these drug act as Cooling and Pitta-pacifying support herbs and anupana as Drakshambu – grape decoction helps prevent dehydration and overheating, Sharkara – adds palatability and supports strength.
- This type of compound formulation ensures Trivrit's strong action is modulated, making it safer and more comfortable for Pitta-vitiated conditions in Sharada Ritu.
- **Effect of Trivrit in Hemanta** – This is a powerful purgative and metabolic stimulant formulation, suited for use during Hemanta Ritu when Virechana is not recommended due to strong wind and cold nature of the season but can

be given in certain disease condition where Agni is strong and can handle deeper cleansing and There is Ama (toxins) from seasonal transition or dietary excess.

- Drugs indicated here have Katu, Tikta rasa, Teekshna & ushna guna and are kaphavatahara
- **Effect of Trivrit in Greeshma** – In Greeshma rutu, bala of person will be very low. Hence Trivrit is used with equal quality of sharkara, which has Madhura rasa, laghu, sheeta guna and is sadyobalakara. So virechana induced in this rutu will not cause any vyapada.
- **Effect of Trivrit in Sarvarutu** – Combination of drugs mentioned here are vatakapahara, kaphapittahara, tridosahara in nature. Therefore, used in all rutus. Rutu trivrit or Trivrit in these combinations can be effectively used in swasta and atura.

CONCLUSION

It can be concluded from the aforementioned references that Trivrit is a sukhavirechaka, that has been used from the Vedic era till date. Virechana ultimately promotes overall health and wellbeing by facilitating the elimination of excess pitta dosha and accumulated toxins from the body. Trivrit is the preferred drug in this context as per Rutus.

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