

CONCEPT OF TRUPTHI - A CRITICAL REVIEW ON TRUPTHIGNA DASHEMANI OF CHARAKA

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ABSTRACT

Trupthi is a kaphaja vikara where in patient feels early fullness of stomach. It is commonly seen in chronically ill patients and one who is on heavy medications. Such patients (chronically ill patients) who are suffering from early satiety will have poor respond to chemotherapy agents and increases the toxicity from the medicines which further decreases their survival time. By the usage of Trupthigna dravyas along with the other medications from initial stage of treatment helps not only curage but also helps in the prevention of complications arising in chronically ill patients like Trupthi, arochaka, weight loss etc. Here is an attempt to discuss the mode of action of Trupthigna dravyas and its role in the improving the quality of life in chronically ill patients.

KEYWORDS: Trupthi, Early Satiety, Trupthigna Dravyas, Chronically ill patients, Quality of Life.

INTRODUCTION

Acharya Charaka classified various drugs into 50 ganas depending on the important karmas performed by them and based on diseases where it can be used like kasahara, deepaniya, jeevaniya, kustagna, krimigna, trupthigna etc. So one among 50 ganas which is mentioned to be efficient in trupthi (early satiety) is TRUPTHIGNA GANA¹.

Trupthi is considered as one among the 20 kaphaja nanathmaja vyadhis. It is a condition characterized by the symptoms early satiety and loss of appetite.² Due to consumption of hetus responsible for the vitiation of kapha dosha - kapha vrudhhi takes place and this kapha dosha causes agnimandya and this leads to the diseases like trupthi, ajeerna, arochaka etc (agni mandya janya vyadhis). According to

Ayurveda classics some of the conditions where trupthi is seen as a symptom is in Jwara and Kaphaja jwara and it is seen as the preprodromal symptom Gulma³.

TRUPTHIGNA ==> SATIETY REMOVAL e.i, which removes the early satiety.

The 10 drugs which comes under gana are Nagara, Cavya, Chitraka, Vidanga, Murva, Guduchi, Vacha, Musta, Pippali and Patola⁴. According to contemporary science - Satiety is the feeling in which food intaken by the humans produces a sense of food gratification.⁵

Mechanism of Satiety and Hunger:

It is controlled by Hunger and Satiety systems which act through hunger and satiety hormones respectively. Hunger and satiety hormones are continually working

against each other. The hunger peptide, ghrelin, for example, is a potent trigger of growth hormone. Ghrelin binds to growth hormone secretagogue receptors (GHSRs) and increases its release by sixfold.⁶ Although one can feel the stomach filling up after meal, it can take 15-20 minutes after food is first eaten, for the full range of satiety signals to reach the brain. By this

Pathology of Early Satiety:

Chronic disorders or the Aetiology of Early Satiety like compression of Deodenum or damage to vagus nerve etc



Causes the stomach to empty slowly which makes the food to stay in stomach for longer duration



Causes the impairment or absence stomach movement called as Gastroparesis (common cause for Early satiety)



Causes EARLY SATIETY.

In some of the conditions where patients experience early satiety are:

*Stomach ulcer, *GERD, *Cancer of the stomach, pancreas, gall bladder, liver, or ovary, *Gastric outlet obstruction (an obstruction that blocks food from entering the small intestine), *Lymphoma, *Post-operative patients, *HIV patients, *Cancer, *Heartburn, *Anxiety, *Depression, *Ascites (accumulation of fluid in the abdomen), *Enlarged liver and many chronically ill patients.⁷

Such patients (chronically ill patients) who are suffering from early satiety will have poor respond to chemotherapy agents and increases the toxicity from the medicines which further decreases their survival time.⁸

time and for some time afterwards one can experience feelings of fullness. Despite these sophisticated mechanisms that exist to control energy intake, people often still eat when they feel full or refrain from eating when hungry. Sometimes patients feels satiety (fullness) in the initial stages of having the food which is termed as "Early Satiety".

Ghrelin plays a vital role in improving the health condition through its part in stimulating appetite and providing adequate energy intake in some of the hospitalized patients especially critically ill patient such as ICU patients and patients with major surgery, cancer, or HIV⁹.

Early satiety can be accompanied with other symptoms like loss of appetite, nausea, diarrhoea, vomiting, difficulty swallowing, stomach pain, jaundice, involuntary weight loss, muscle wasting. In this regard an attempt is made to critically review the actions of trupthigna dravyas and its role in the prevention and cure of the various complications and syndromes arising from this early satiety.

Table No 1: Ten Trupthigna Dravyas

Drug	Rasa	Guna	Veerya	Vipaka	Doshagnatha	Karma
Nagara	Katu	Guru, Ruksha, Thikshna.	Ushna	Madhura	Vata kapha hara	Deepana Bhedana
Chavya	Katu	Laghu, Ruksha.	Ushna	Katu	Kapha vata hara	DeepakaPachaka
Chithraka	Katu	Laghu, Ruksha, Thikshna.	Ushna	Katu	Vata Kapha hara	Deepaka Pachaka Grahi.
Vidanga	Katu, Kashaya	Laghu, Ruksha, Thikshna	Ushna	Katu	Vata Kapha hara	DeepakaKrimigna
Murva	Tikta, Kashaya	Guru, Ruksha	Ushna	Katu	Kapha Vata hara	Deepaka Pachaka
Guduchi	Tikta, Kashaya	Guru, Snigdha	Ushna	Madhura	Tridosha hara	Deepaka Grahi Balya
Vacha	Katu, Tikta	Laghu, Thikshna	Ushna	Katu	Kapha Vata hara	Deepaka Pachaka
Musta	Katu, Tikta, Kashaya	Laghu, Ruksha	Sheetha	Katu	Kaphapitta hara	Deepaka Pachaka Jwarahara
Pippali	Katu	Laghu, Snigdha, Tikshna.	Anushna	Madhura	Kapha Vata hara	Deepaka Pachaka
Patola	Tikta, Katu	Laghu, Ruksha	Ushna	Katu	Kapha Pitta hara	Deepaka Rochaka Avatala

Table No 2: Various ganas under which 10 Tripthigna dravyas.

Drugs	Ganas of Charaka samhita
Nagara	Trupthigna, Arshogna, Deepaniya, Shoolaprashamana.
Chavya	Trupthigna, Arshogna, Deepaniya, Shoolaprashamana.
Chithraka	Trupthigna, Arshogna, Deepaniya, Shoolaprashamana, Lekhaniya.
Vidanga	Trupthigna, Kustagna, Krimigna.
Murva	Trupthigna, Stanya shodana.
Guduchi	Trupthigna, Trishna nigrahana, Vayasthapana, Stanya shodana, Daha prashamana.
Vacha	Trupthigna, Arshogna, Lekaniya, Samjnasthapana, Asthapanopaga.
Musta	Lekaniya, Trupthigna, Trishna nigrahana, Stanya shodana, Kandugna.
Pippali	Deepaniya, Kantya, Trupthigna, Shoolaprashamana, sheetaprashamana, Kasa hara, Hikka nigrahana, Shirovirachanopaga, Asthapanopaga.
Patola	Trupthigna, Trishna nigrahana.

Mode of Action Of Trupthigna Dravyas :-

1. Nagara: - *Zingiber officinalis*, *Zingiberaceae*.

Ginger is widely used to treat a number of medical conditions, including nausea, dyspepsia, flatulence, abdominal pain, and improvement in food intake and digestion (Cupp, 2000, Hu et al., 2011). Studies reported that its action on gastric motility and improvement in food intake could be mediated through augmented secretion of ghrelin or motilinor through suppression of glucagon like peptide-1 (Tack et al., 2006, Luiking et al., 2003). Thus by the above study it can cure not only early satiety but also its associated symptoms like diarrhoea, loss of appetite, nausea.

2. Chavya: - *Piper chaba*, *Piperaceae*.

Piper chaba has been used in traditional medicine as carminative, stimulant.¹⁰ It is useful in liver diseases and is a component of digestive¹¹. The other activities exhibited are hepatoprotection.¹² In Ayurveda it has shown anti-inflammatory, antidiarrheal activity in mice¹³. By this studies it is proved to have anti diarrhoeal, hepatoprotective and digestive activities which infers its usage in curing early satiety caused in liver disorders and associated disorders like diarrhoea.

3. Chithraka: - *Plumbago zeylanica*, *Plumbaginaceae*.

In India it is used to treat various conditions like diarrhoea, dyspepsia, piles etc (Gupta et al, 1993) and in various other parts of the world like taiwan (Kamboj and Dhawan, 1982), northwest ethiopia (Giday et al 2006), southwestern nigeria (Gupta et al, 1993) for ulcers and gastrointestinal disorders. Various activities like anti-ulcer activity¹⁴, hepatoprotective activity¹⁵ etc

are proved by various studies. By its various studies of its usage in dyspepsia, ulcers and GIT ailments it can be said that it can be used to cure early satiety alone and which is caused by ulcer and associated conditons like diarrhoea.

4. Vidanga: - *Embelia ribes*, *Myrinaceae*

The fruit is good appetizer, jaundice, and anthelmintic¹⁶. It possess a wide spectrum of medicinal properties including hepatoprotective, ulcerative colitis^{17,18}. It is proved for its Antianxiety activity^{19,20,21} and Antidepressant activity²². It is said to be used in Weight loss treatment²³. Early satiety may also be seen in depression and anxiety, and since it is proved for its anti-anxiety and anti-depressant activity it can be used in both prevention and curing aspect of early satiety. By its indication in weight loss treatment it can be helpful in preventing the complication of early satiety i.e, weight loss also.

5. Murva: - *Marsdenia tenacissima*, *Asclepideaceae*

Murva is used in several Ayurvedic formulations as an ingredient for the treatment of inte -

rmittent fever, abdominal colic, laxative, piles, digestive ailments etc.²⁴ Murva is an important controversial drug used in diseases like diabetes; stomach disorders (udara roga)²⁵. By its indications and its rasa panchaka it can be said to be effective in curing Trupthi induced by GIT problems.

6. Guduchi: - *Tinospora cordifolia*, *Meninspremaeae*.

It is used in following diseases :- dyspepsia, jaundice and chronic diarrhoea and dysentery²⁶. Its various scientifically proved activities are: Hepatoprotective activity

(Bishayi et al, 2002 and Mehrotra et al, 2000), Immuno modulatory activity (Desai et al, 2002), Anti-HIV Activities^{27,28} and Anti-Cancer Activity²⁹. By its direct reference of usage in dyspepsia, as deepaka and is also said to be grahi, proved with various activities can be considered to prevent and cure early satiety alone and the one caused by liver disorders, HIV and associated symptoms like diarrhoea etc.

7. Vacha: - *Acorus calamus*, *Araceae*.

The word 'acorus' is originated from the Greek word 'acoron' which in turn derived from the 'coreon' word means 'pupil'³⁰. Native tribes used as a carminative and also for cholice³¹. It is used in the conditions like flatulence, dyspepsia etc³². It has many biological activities like carminative and also used for treatment of chronic diarrhoea, dysentery³³. It is scientifically proved for its: Antiulcer and cytoprotective activity, Antispasmodic activity, Antihepatotoxic activity³⁴, Antidiarrheal activity, Anti-anxiety³⁵ and Antidepressant activity³⁶. By its actions and various proved activities it can not only used to cure early satiety caused by various disease but also the one caused by depression, anxiety, liver disorders and cures the complications too.

8. Musta: - *Cyperous rotundus*, *Cyperaceae*

It is used for gastrointestinal spasms, stomach disorders, nausea, vomiting, indigestion and irritation of bowel³⁷. According to the Ayurveda, its rhizomes were considered antispasmodic, aromatic, carminative, stomachic³⁸. Various proved activities of Musta are :- Anti-emetic activity and Antispastic activity, Gastroprotective activity³⁹, Antidiarrhoeal

Activity, Hepatoprotective activity⁴⁰. By all the above proved activities it can said to be used in early satiety induced in liver disorders and associated symptoms like nausea, vomiting, stomach pain, diarrhoea.

9. Pippali: - *Piper longum*, *Piperaceae*.

The ripe fruit is stomachic, antidiarrhoeic, antidysentric, asthma, bronchitis, abdominal complaints, jaundice⁴¹. It is proven for: Anti-depressant activity⁴², Antiulcer activity, Antiamoebic activity and Hepatoprotective activity. By its all the above activities it can be used in prevention of early satiety caused by depression and liver disorders and can be used to cure it and its associated symptoms.

10. Patola: - *Trichosanthes dioica*, *Cucurbitaceae*.

Juice of leaves of *T. dioica* is used as febrifuge and also in subacute cases of enlargement of liver & spleen⁴³. In Charaka Samhitha leaves & fruits used for treating alcoholism & jaundice. Leaves are used in odema and alopecia. It is proved for: Hepatoprotective activity and In ascitis it is proved to reduce the accumulation of fluid. According to classics it is said to be deepaka, rochaka, avatala etc. By its hepatoprotective activity and its positive effect in ascites it can inferred that it helps in prevention and cure of early satiety caused by liver disorders and ascites.

DISCUSSION

Trupthi (early satiety) is seen both in the acute and chronic diseases. Long-term early satiety during chronic disease, however, is deleterious to an organism and may be associated with mal nutrition, weight loss, muscle depletion, which can ultimately result in death. It also makes the patient not

able to sustain the power of chemotherapies in case of cancer or chemical medicaments given in all the either acute or chronic conditions. It becomes a major complication with the patients suffering from cancers, HIV, TB, even is seen in the post-operative patients. Among the 10 drugs of the trupthigna gana - Studies has been conducted on Nagara which mentions it acts on the gastric motility by means of Grelin - hunger hormone production. So Trupthigna gana dravyas may be by the production of Grelin - hunger hormone does the action of Trupthi hara.

CONCLUSION

This review is the first attempt to compile and correlate the probable actions of Trupthigna gana dravyas and their role in preventing the deterioration of the general health of the chronic patients. By the use of the trupthigna gana dravyas along with medicines in the chronic patients, in post-operative patients not only maintains the general health but also improves their quality of life, thus prevents the increase in the mortality and morbidity rates. Trupthigna gana dravya plays a vital role in improving the health condition through its part in stimulating appetite and providing adequate energy intake in some of the hospitalized patients especially critically ill patient such as ICU patients and patients with major surgery, cancer, or HIV. Trupthigna gana dravyas not only cures the early satiety but also has the additional actions of curing the associated symptoms.

REFERENCES

1. Chakrapanidutta, Charka Samhita, Chakrapani teeka,5th Edition, Chuakhamba publication,2005.
2. Vaidya Harishchandra Simha Kushvaha.

Charaka Samhitha.

3. Dr||Ramprasad and Dr||Dhathathri. Madhava nidananusara roga lakshanagala vishleshane.
4. Chakrapanidutta, Charka Samhita, Chakrapani teeka,5th Edition, Chuakhamba publication,2005.
5. https://en.wikipedia.org/wiki/Satiety_value. 20 march 2017.
6. Nirmala, G.C., Suchitra, B. R and Pavankumar K. N. Appetite Regulating Hormones. Veterinary World, Vol.2(6): 242-246.
7. <http://healthtools.aarp.org/health/satiety-early>. 20 march 2017.
8. <http://www.cancernetwork.com/cancer-management/anorexia-and-cachexia/page/0/2>. 18 march 2017.
9. Peyman Rezaie, Mohsen Mazidi, Mohsen Nematy. Ghrelin, food intake, and botanical extracts: A Review. Vol. 5, No. 4, Jul-Aug 2015, 271281.
10. Sharma Vinay, Kalyani Renuka, Vyas Palak, C.R, Harisha, Prajapati, P.K. "Pharmacognostical and Phytochemical study of *Piper Longum*. L and *Piper Retrofractum* Vahl." Journal of Pharmaceutical and Scientific Innovation 2012, 1 (1): 62-66.
11. Kim, K.J, Lee, M.S, Jo.K, Hwang, J.K. "Piperidine alkaloids from *Piper retrofractum* Vahl. Protect against high-fat diet-induced obesity by regulating lipid metabolism and activating AMP-activated protein kinase". Biochemical and Biophysical Research Communications 2011, 411(1):219-225.
12. Morikawa.T, Matsuda.H, Yamaguchi.I, Pongpiriyadacha.Y, Yoshikawa.M "New amides and gastroprotective constituents from the fruit of *Piper chaba*." Planta Medica 2004, 70: 152-159.
13. Phongpaichit. S, Vuddhakul. V, Subhadhirasakul. S Wattanapiromsakul. C.

“Evaluation of the Antimycobacterial Activity of Extracts from Plants Used as Self-Medication by AIDS Patients in Thailand.” *Pharmaceutical Biology* 2006. 44 (1): 71-75.

14. Falang et al., (2012) have investigated the anti-ulcer activity of aqueous root extract of *Plumbago Zeylanica* on aspirin and indomethacin induced acute gastric ulceration in albino rats.

15. Zarmouh et al., 2010 proved the hepatoprotective activity of ethnolic extract of *plumbago zeylanica* in biochemical damages induced by streptozotocin diabetic rats.

16. Varier PS. Indian medicinal plants - A compendium of 500 species, Orient longman (Pvt), Chennai, India, 2006, pp. 368-371.

17. Wang DG, Sun YB, Ye F, Li W, Kharbuja P, Gao L, Zhang DY, Suo J. Anti-tumor activity of the X-linked inhibitor of apoptosis (XIAP) inhibitor embelin in gastric cancer cells. *Molecular and Cellular Biochemistry* 2014; 386: 143-52.

18. Sahu BD, Anubolu H, Koneru M, Kumar JM, Kuncha M, Rachamalla SS, Sistla R. Cardioprotective effect of embelin on isoproterenol-induced myocardial injury in rats: Possible involvement of mitochondrial dysfunction and apoptosis. *Life Sciences* 2014; 107: 59-67.

19. Antianxiety activity of Embelin isolated from *Embelia ribes*. <http://www.pharmatutor.org/articles/antianxiety-activity-embelinisolated-embelia-ribes> [Access Date: 4.11.2013].

20. Ghaisas M M, Wadikar A D, Gulati T B, Limaye R P. Anxiolytic Effect of a Methanolic Extract of the *Embelia ribes* Burm F. in Mice. *Research Journal of Pharmacy and Technology*. 2010. (3) 4: 1136 -1139.

21. Muhammad Afzal, Gaurav Gupta, Imran Kazmi, Mahfoozur Rahman, Gaurav Upadhyay, Kamran Ahmad, Faisal Imam,

Mohammad Pravez, Firoz Anwar. Evaluation of anxiolytic activity of embelin isolated from *Embelia ribes*. *Biomedicine and Aging Pathology*.2012. 2(2): 45-47.

22. Gaurav Gupta, Imran Kazmi, Muhammad Afzal, Gaurav Upadhyay, Rajnish Singh, Solomon Habtemariam. Antidepressant-like activity of Embelin isolated from *Embelia ribes*. *Phytopharmacology*. 2013. 4(1): 87-95.

23. K. Souravi and P. E. Rajasekharan. *Ethnopharmacological Uses of Embelia ribes* Burm. F. - A Review

24. Anonymus. *Ayurvedic Formulary of India*. 1st ed. (repr.). New Delhi: Govt. of India; 1978. p. 4, 8, 73, 79, 94, 106 & 111.

25. C. N. Arulanandraj, T. Punithavani and S. Indumathy. Effect of *murva* (*maerua oblongifolia*) on alloxan induced diabetes in rats, 2011.

26. Kirti Sinha, Mishra NP, Singh J, Khanuja SPS; *Tinospora cordifolia* (Guduchi), a reservoir plant for therapeutic applications: A Review. *Indian journal of traditional Knowledge*, 2004; 3 (3): 257270.

27. Kalikae MV, Thawani VR, Varadpande UK, Santakke SD, Singh RP, Khiyani RK,. Immunomodulatory effect of *T. cordifolia* extract in HIV positive patients. *Ind J pharmacol* 2008; 40:107-110.

28. Akhtar S. Use of *T. cordifolia* in HIV infection. *Ind J pharmacol*. 2010; 42:57-63.

29. Ali H, Dixit S; Extraction optimization of *Tinospora cordifolia* and assessment of the anticancer activity of its alkaloid palmatine. *Scientific World Journal*, 2013; 28:376216.

30. Jhonson H “ Medicinal properties of sweet flag” Accessed on 2 November (2013). <http://www.herbalscureindia.com/herbs/Acorus-calamus>.

31. Balakumbahan R ,Rajamani K &Kumanan K, *Acorus calamus*: An overview. *Journal of*

Medicinal Plants Research, 4(25), 27402745, (2010).

32. S. Palani, S. Raja, P. Kumar, P. Parameswaran & S. Kumar, Therapeutic efficacy of *Acorus calamus* on acetaminophen induced nephrotoxicity and oxidative stress in male albino rats, Acta Pharmaceutica Scientia, 52(1), 89 -100, (2010).

33. Devi A & Ganjewala D , SAntioxidant Activities of Methanolic Extracts of Sweet Flag Leaves and Rhizomes Journal of herbs, spices and medicinal plants 17: 1 , 1-11, (2011).

34. S. Palani, S. Raja, P. Kumar, D. Venkadesan, K. Devi, A. Sivaraj & S. Kumar, Therapeutic efficacy of antihepatotoxic and antioxidant activities of *acorus calamus* on acetaminophen – induced toxicity in rats, Interantional journal of Intergrative Biology , 7(1), 39, (2009).

35. Date.B.B and Kulkarni.P.H, Assessment of efficacy of “P tabs” in insomnia and irritability, Deerghayu International, 1101(41)29-34, (1995).

36. Hashmat Imam, Zarnigar, Ghulamuddin Sofi ,Mosquito larvicidal efficacy of *Acorus calamus* extracts against *Aedes aegypti* L. larvae. Asian Pacific Journal of Tropical Disease,4(1),S181-S185,(2014).

37. Talukdar AD, Tarafdar RG, Choudhury MD, Nath D and Choudhury S. A review on pteridophyte antioxidants and their potential role in discovery of new drugs. Sci and Tech 2011; 7(1): 151-155.

38. Singh N, Kulshrestha VK, Gupta MB and Bhargava K P,. A pharmacological study of *Cyperus rotundus*, Indian J Med, Res,

1970,58, 103-109.

39. Uddin SJ, Mondal K, Shilpi JA, Rahnan MT. Antidiarrhoeal activity of *Cyperus rotundus*. Fitoterapia 2006; 77 (2): 134–13

40. Zhu M.; Luk H. H.; Fung H. S. ; Luk C. T. Cytoprotective effects of *Cyperus rotundus* against ethanol induced gastric ulceration in rats PTR. Phytotherapy research ISSN 0951-418X 1997, vol. 11, no5, pp. 392-394

41. Chauhan Khushbu, Solanki Roshni, Patel Anar, Macwan Carol, Patel Mayuree. Phytochemical And Therapeutic Potential Of Piper Longum Linn A Review .

42. Seon AL, Seong SH, Xiang HH, Ji SH, Gab JO, Kyong SL, Myung KL, Bang YH and Jai SR, Piperine from the Fruits of *Piper longum* with inhibitory effect on monoamine oxidase and antidepressant-like activity, Chem Pharm Bull, 53(7), 2005,832-835.

43. Nadakarni AK, Indian Materia Medica, 3rd edition, Bombay popular prakashan Mumbai; 1236-1237, (1982).

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