

ROLE OF VATARI GUGGULU AND HINSTRADAYA TAILA IN THE MANAGEMENT OF KRIMI DANT W.S.R.TO DENTAL CARIES**Dr. Satish Sharma^{*1}, Dr. Vijayant Bhardwaj², Dr. Pawan Kumar³, Dr. Seema Rani⁴ and Dr. Swati Singh⁵**^{1,2}Reader R.G.G.P.G. Ayu. College and Hospital, Paprola, Himachal Pradesh, India.³Medical Officer, HP, Govt.^{4,5}M.S.ENT, Shalakya Tantra, R.G.G.P.G. Ayu. College and Hospital, Paprola, HP.***Corresponding Author: Dr. Satish Sharma**

Reader R.G.G.P.G. Ayu. College and Hospital, Paprola, Himachal Pradesh, India.

Article Received on 29/08/2019

Article Revised on 19/09/2019

Article Accepted on 09/10/2019

ABSTRACT

Ayurveda is the God gifted very ancient and the first medical science and composed by the originator Brahma and treated as Panchama Veda. Krimidanta is vata kapha dominant disease. It can be correlated with dental caries according to symptoms. Vatari guggulu and Hinstradaya Taila having Kapha Shamak properties is taken as the drug of choice to control Krimi Danta. Aim and objectives were to evaluate the efficacy of Vatari guggulu and Hinstradaya Taila on Krimi danta. All the selected patients fulfilling the criteria were taken in 3 groups of 10 patients and were advised to take Hinstradaya Taila for local application and Vatari Guggulu for oral use for 30 days. All patients completed their trial out of which two patients showed moderately relief. Eight patients were reported with complete cure of the disease. Over-all result of Gp.I which was on Hinstradaya Taila revealed that 40% were markedly improved and 60% were moderately improved. Overall result of vatari guggulu revealed that 30% patients were moderately improved, 70% patients made marked improvement. Overall result of combined therapy revealed that 80% patients show improvement and 20% made moderately improvement.

KEYWORDS: Krimi danta, Vatari guggulu, Hinstradaya Taila.**INTRODUCTION**

From the earliest time mankind must have experienced injury and disease, and hence made attempts at prevention, relief or cure, under the influence of the instinct of self-preservation or of parental feelings and sympathy for others. The lessons thus gained by crystallized into empirical knowledge.

Disease of the oral cavity, in their various forms, have afflicted mankind since the down history, and studies in paleopathology have indicated that destructive disease as evidenced by bone loss, has affected the man in such diverse culture. Oral diseases are the most common non-communicable diseases (NCDs) and affect people throughout their lifetime, causing pain, discomfort, disfigurement and even death.^[1] Historical records with medical topic reveal an awareness of dental diseases and the need for treating. Almost all of the early writings that have been preserved have sections or chapters dealing with oral diseases. The relationship of oral disease, particularly periodontal diseases, was often considered and underlying systemic disease was postulated as a cause of dental disorder.

Toothache has affected mankind for time immemorial. The Chinese^[2] as well as Egyptains^[3] have left records

describing caries and dental abscesses. The Chinese considered these to be caused by white worms residing within the teeth. Their recommended treatment of this ailment using is well documented.

India is known from very early times for highly developed system of medicine. History tells us about the past time, how the time, how the time began, the development and evolution of the mankind occurred. It helps to reveal hidden facts and ideas of cancer and subject. Similarly the medical works of ancient India devoted a significant amount of space to oral and particularly to periodontal problems. In Susruta Samhita there are numerous descriptions of several disease of oral cavity,^[4] with loose teeth and purulent discharge from gingival, whereas in Charaka Samhita, tooth brushing and oral hygiene are stressed.

AIMS AND OBJECTIVES

- To advise preventive measures to check the occurrence of disease in individuals.
- To study the effect of drug on the disease.
- To prove the effectiveness of drug in the patients of Krimi Danta.

- To explore the pathogenesis of disease on the basis of classical texts and modern literature.
- To study the side effects of the drugs if any.

MATERIAL AND METHODS

Selection of the patients

This clinical study was conducted on outdoor patients attending dental OPD of Shalaky Tantra Department of R.G.G.P.G.Ayu.college & Hospital, Paprola. The Patients were selected irrespective of caste, race, religion, age, sex, etc. fulfilling the criteria of selection as and eligible for the study.

The selection of the patients will be applied by random sampling method. Patients were diagnosed on the basis of both subjective and objective criteria of Krimi Danta (Dental caries).

Criteria of Diagnosis

The patients were diagnosed on the basis of following signs and symptoms of Krimi Danta.

- Odontalgia
- Odonitis
- Discolouration
- Pus discharge
- Swelling
- Cavity formation
- Tooth mobility
- Bleeding gums
- Burning sensation
- Halitosis

Criteria for patient selection

1. Inclusion criteria

All the patients above the age group 15 presenting with signs and symptoms of Krimi Danta were taken into accounts.

2. Exclusion Criteria

- Patients not willing for trial.
- Case of uncontrolled diabetes, hypertension, TB, head injury, accidental cases, scurvy, purpura, pregnancy, leukemia, antiplatelet drugs, Ca of gums etc.

3. Plan of Work

- Proforma –A detailed clinical proforma was prepared to study the patients as well as disease.
- Investigation- Routine haematological analysis was carried out. Whenever necessary dental X-ray were taken.
- Groups patients were divided into following group
Group I - Treated with Hinstradaya taila
Group II –Treated with Vatari guggulu
Group III- Treated with both Hinstradaya taila and Vatari guggulu

Drug Dose and Schedule

Hinstradaya taila^[6] - 0.5ml BD for local application

Vatari guggulu^[7] - 500 mg BD orally

Duration - 30 days

Follow up - 15 days

Drug Review

S.N	Dravya	Rasa	Guna	Virya	Vipaka	Doshkarma	Actions /Uses
1.	Arand Taila	Madhura Katu kashaya	Snigdha, Tikshan Sukshma	Ushana	Madhura	Kapha- pittahara	Sothhara, Virechankrimighan
2.	Shudh Gandhak						Deepan, pachan, Balya
3.	Shudh Guggulu	Katu, Tikta	Laghu, Tikshan Ruksha	Ushana	Katu	Tridosh-hara	Mutrla, Nadibalya, Medohara, Artvajanya
4.	Amla Churna	Pancha Rasa	Guru, Ruksha Sheeta	Sheeta	Madhura	Tridosh- shamak	Aruchi, Vibandha, Arsha, Udarvrta
5.	Haritaki Churna	Kashaya, Tikta Madhura Katu, Amla	Laghu, Ruksha	Ushana	Madhura	Tridosh- shamka	Shothahara, Deepaka, Pachana Nadibalya, Medhya
6.	Vibhitak Churna	Kashaya	Ruksha Laghu	Ushana	Madhura	Tridosh- shamka	CNS stimulant, anti-stress, Purgative

Vatari Guggulu

Method of preparation

Well identified ingredients were taken in equal quantity and fine powder was prepared separately of each ingredient except Guggulu and Arand Taila. Fine powder of all the contents was mixed properly with the purified Guggulu and Aranda Taila.

Dosage: 500mg BD orally.

Hinstradaya Taila

S. N.	Dravya	Rasa	Guna	Virya	Vipaka	Doshkarma	Action/Uses
1.	Jatamansi	Tikta Kashya Madhura	Laghu Snigdha	Sheeta	Katu	Tridosh-shamka	Medhya Balya, Nidra-janaka
2.	Haridra	Katu Tikta	Ruksha	Ushana	Katu	Tridosh-hara	Krimighana Vishaghan
3.	Katukam	Tikta	Ruksha Sheeta Laghu	Sheeta	Katu	Kapha-pitta Hara	Lekhan Bhedna
4.	Bala	Madhura	Laghu Snigdha Pichala	Sheeta	Madhura	Vata-pitta Shamka	Balya Hridya Prajasthapana
5.	Gojivhika	Madhura Tikta	Laghu Snigdha	Sheeta	Madhura		Chedana
6.	Bilva	Kashaya Tikta	Laghu Ruksha	Ushana	Katu	Kaphavata Shamka	Antiviral Cardiac stimulant Analgesic
7.	Til Taila	Madhura Kashaya	Guru Snigdha Ushana	Ushana	Madhura	Kaphavata Shamka	Medohara Lekhniya

Method of Preparation

Firstly Til Taila Murchana should be done. Then all the ingredients should be mixed well to make fine powder. Then this powder should be mixed with Murchit Til Taila and water. Then this should be prepared under low heat.

Dosage: 0.5 ml OD for local application

Clinical Study**Criteria of Assessment**

The improvement in the patients was assessed on the basis of relief in signs and symptoms of the disease. All the signs and symptoms were given scoring depending upon their severity, frequency or duration to assess the effect of drugs.

The criteria has been introduced which is based upon the under assumption and is as follow- Scoring Pattern-

1. Odontalgia

- 0 Absence of pain
- 1 Occasional mild pain
- 2 Moderate troublesome pain
- 3 Moderately severe troublesome pain
- 4 Very severe

2. Odontitis

- 0 Absence of hypersensitivity of teeth
- 1 Mild hypersensitivity of teeth
- 2 Moderate hypersensitivity of teeth
- 3 Severe hypersensitivity of teeth

3. Pus discharge

- 0- Absence of pus
- 1- Mild appearance of pus
- 2- Moderate appearance of pus(patient can observe pus in the spit)
- 3- Large amount of pus

4. Discolouration

- 0- Absence of discolouration
- 1- Mild appearance of discolouration
- 2- Half discolouration of cavity
- 3- Full discolouration of cavity

5. Swelling

- 0- Absence of swelling
- 1- Mild swelling over gums in one or two regions with slight local tenderness
- 2- Moderate swelling
- 3- Severe swelling causing difficulty in chewing food articles.

6. Cavity Formation

- 0- Absence of cavity
- 1- Mild appearance
- 2- Noticeable appearance of cavity (patient can observe cavity)
- 3- Large size of cavity causing lodgement of food stuffs.

7. Tooth Mobility

- 0- Fixed tooth
- 1- Slight mobile
- 2- Moderate mobile
- 3- Moderately severe mobile.

8. Bleeding gums

- 0- Absence of bleeding
- 1- Slight bleeding on brushing or on occasionally bleeding
- 2- Moderate bleeding on brushing or on eating hard articles
- 3- Severe bleeding on brushing.

9. Burning sensation

- 0- Absence of burning sensation
- 1- Mild burning sensation
- 2- Moderate burning sensation (frequently and not causing much discomfort)
- 3- Severe burning sensation causing discomfort in routine activity.

10. Halitosis

- 0- Absence of halitosis.
- 1- Mild appearance of halitosis.
- 2- Moderate appearance of halitosis.
- 3- Severe halitosis persistent even after repeated cleaning of mouth.

Criteria for assessment

Effect of therapy was assessed as follows

Complete remission- 100% relief of the complaints

Highlyimproved- More than 75% relief of the complaints

Markedly improved- 50 to 75% relief of the complaints

Mild improve- Less than 50% relief of the complaints

Unimproved- No relief of the complaint

Effect of Therapy**Chart Gp. I**

S.N.	Symptoms	N	Mean score		% Relief	SD+	SE+	't'	P	Signi fiance
			BT	AT						
1.	Odontalgia	10	3.2	1.6	50	0.699	0.221	7.236	<0.001	HS
2.	Odonitis	10	2.6	1.2	53.85	0.516	0.163	8.573	<0.001	HS
3.	Pus Discharge	3	1.5	0.5	53.33	0.471	0.149	6.708	0.003	S
4.	Discolouration	10	2.6	1.4	46.15	0.422	0.133	9.000	<0.001	HS
5.	Swelling	8	2	1.3	35	0.483	0.153	4.583	<0.001	HS
6.	Cavity Formation	10	3.3	3.3	0	000	000	0000	0	NS
7.	Tooth mobility	3	1	0.4	60	0.699	0.221	2.714	0.024	S
8.	Bleeding sensation	4	1	0.5	50	0.527	0.167	3.000	0.015	S
9.	Burning sensation	2	1.6	0.4	75	0.632	0.200	6.000	<0.001	HS
10	Halitosis	10	2.1	1.1	47.62	0.471	0.149	6.708	<0.001	HS

Gp.II

S.N.	Symptoms	N	Mean score		% Relief	SD+	SE+	't'	P	Signi fiance
			BT	AT						
1.	Odontalgia	10	3.4	2.1	38.2	0.483	0.153	8.510	<0.001	HS
2.	Odonitis	10	2	1	50	0.471	0.149	6.708	<0.001	HS
3.	Pus Discharge	2	1.3	0.6	30.76	0.561	0.163	2.449	0.037	S
4.	Discolouration	10	2.9	2	31.03	0.316	0.100	9.000	<0.001	HS
5.	Swelling	7	2.7	1	62.9	0.483	0.153	11.129	<0.001	HS
6.	Cavity Formation	10	3.2	3.2	0	000	000	0000	0	NS
7.	Tooth mobility	4	0.4	0.3	25	0.316	0.100	1.000	0.343	NS
8.	Bleeding sensation	5	0.7	0.2	71.4	0.527	0.167	3.000	0.015	S
9.	Burning sensation	3	1.4	0.7	50	0.483	0.153	4.583	<0.001	HS
10	Halitosis	10	1.8	1.4	22.22	0.669	0.221	1.809	<0.104	HS

Gp.III

S. N.	Symptoms	N	Mean score		% Relief	SD+	SE+	't'	P	Signi fiance
			BT	AT						
1.	Odontalgia	10	3.3	0.7	75	0.527	0.167	15.00	<0.001	HS
2.	Odonitis	10	2.3	0.3	86.95	0.816	0.258	7.746	<0.001	HS
3.	Pus Discharge	3	2.2	0.7	63.63	0.699	0.221	6.332	<0.001	HS
4.	Discolouration	10	2.4	0.5	79.16	0.568	0.180	10.58	<0.001	HS
5.	Swelling	9	2.5	0.5	80	0.816	0.258	7.746	<0.001	HS
6.	Cavity Formation	10	2.9	2.9	0	000	000	0000	0	NS
7.	Tooth mobility	3	1.8	0.8	55.55	0.667	0.211	4.743	<0.001	HS
8.	Bleeding sensation	5	2.5	0.5	80	0.471	0.149	13.41	<0.001	HS
9.	Burning sensation	5	2.3	0.3	86.95	0.471	0.149	13.41	<0.001	HS
10	Halitosis	10	1.7	0.5	70.58	0.789	0.249	4.811	<0.001	HS

OVERALL RESULT**Overall Result of Hinstrdaya Taila**

Hinstrdaya Taila wise distribution of 10 patients.

Results	No.of patients	Percentage
Complete remission	0	0
Marked improvement	4	40
Moderate improvement	6	60
Mild improvement	0	0

Unchanged	0	0
-----------	---	---

Over-all result of Gp.I which was on Hinstradaya Taila revealed that 40% were markedly improved and 60% were moderately.

Overall Result of Vatari Guggulu

Vatari guggulu wise distribution of 10 patients

Results	No.of patiens	Percentage
Complete remission	0	0
Marked improvement	7	70
Moderate improvement	3	30
Mild improvement	0	0
Unchanged	0	0

Overall result of vatari guggulu revealed that 30% patients were moderately improved, 70% patients made marked improvement.

Overall Result of Combined Therapy

Combined therapy wise distribution of 10 patients

Results	No. of patients	Percentage
Complete Remission	0	0
Marked improvement	8	80
Moderate improvement	2	20
Mild improvement	0	0
Unchanged	0	0

Overall result of combined therapy revealed that 80% patients show improvement and 20% made moderately improvement

DISCUSSION

Probable mode of action

Krimi danta is mainly caused by vitiated vata along with vitiated kapha and krimi. So more aphasize is laid on drugs which are vata, kapha and krimi Ghana.

When we see the properties of hinstradaya tail it is noted that the drug is having katu, tikta and kashaya and madhura rasa. Katu rasa acts as Shodhana, lekhana, sneha-kledashaka, vrananashak, krimighana and kaphashamka. Acharya vagabhatta has also claimed that katu rasa is ropana, sandhaniya, vata-pitta shamka and also immunity promoter.^[8]

Tikta rasa act as Shodhana, lakhana, chedana, kledana, puyashoshana and krimighana.^[9] Drug is sheeta in virya which is pitta raktashamka¹⁰ by nature. Vipaka is katu which normalize vitiated kapha dosha. Guru and snigdha guna in hinstradaya taila help to pacify vata dosha. In this way hinstryada taila having the properties krimighana, vednasthapka, shotha, raktashodhaka, vranaropana. The above action of drug is helpful in reducing symptoms like odontalgia, cavity formation, Swelling and pus discharge. Hence this drug is effective in krimi danta. Ongoing through the reference related to the properties of the drug Vatari guggulu it is seen to be

predominantly katu, tikta and kashaya rasa. Laghu, ruksha, tikshana guna, ushana virya and katu vipaka. Tikta rasa acts as Shodhana, lekhana, cheedna, kleda puyashoshana and krimighana. Katu rasa is also Shodhana, lekhana, sneh kleda shoshaka and kaphnashaka. Kashay rasa is having ropana, Shodhana, lekhana, kledshoshka and raktashodhaka properties. Being mainly katu-tikta rasa, it is krimighana, Shodhana, kledopuya shoshana and pitta kapha shamka. Its gunas being laghu, ruksha, tikshana, it is kapha shamak and kledoshoshak and its virya being ushana it is kapha vatashamak and also sravoshoshaka. Its vipaka being katu and normalize vitiated kapha. Krimidanta is mainly caused by vitiated vata along with vitiated kapha and krimi. All the constituents of the Vatari guggulu have the property of krimighana, shooldprashamna, shothahara, vednasthapka, raktshodhaka and dushtvranhara. Pus discharge is always due to the action of microorganisms. In Ayurveda microorganism comes under krimi. Because of krimighana kledopuyashoshaka properties of the drugs the pus discharge will be automatically reduced. When there is pus formation in the mouth halitosis can be found. When there is reduced pus discharge halitosis will also be reduced.

Being ushana virya it is having vata shamka property and reduces odontalgia which is caused by vata. Again it is having sravoshashaka property hence, it reduces discharge, swelling and halitosis. Mainly mukha rogas occur due to vitiation of kapha and because the ushana

virya property of the drug it checks dosa and ultimately it is useful in mukha rogas. Danta rogas come under the mukha rogas.

Hence, it is also useful in danta rogas. Katu vipaka also normalize the vitiated kapha dosas.^[11] Hence, it is useful in mukha rogas such as danta rogas.

Majority of the ingredients of Vatari guggulu having the properties of krimighana, shothhara, vednasthapaka, shooplprashamana, uttam ama pachaka, raktashodhaka, vranaropana, kledopuyashoshaka and sravoshoshaka. In the disease krimi danta having the cardinal signs and symptomssuch as odontalgia, odonitis, swelling, discharge and cavity formation etc. The above actions of the drugs act directly and symptoms of krimi danta. Hence, this drug is effective in rkimi danta. The discussion may be concluded with the point that by the large application of Hinstradaya tail locally and vatari guggulu orally are economical and useful drugs, provided patients understand the nature of the disease and abide by strict Ahaar regimen. Community dentistry will play the vital role in almost eradicating Krimi danta.

SUMMARY AND CONCLUSION

Maximum patients were from age group 25-35 years. Most of the female patients (63.37%) were recorded for study. Most of patients 73.33% were belonging to Hindu religion. Most of patients 73.33% were married. 63.33% patients were household workers. 40% patients were having primary education (up-to metric) and 43.34% patients were belonging to poor class.

Odontalgia, odonitis, discolouration, cavity formation and halitosis was observed in 100%patients, pus discharge in 26.67%, swelling in 80%, loose teeth was observed in 33.33% of patients, bleeding gums observed in 46.66%, burning sensation in 33.33%. 73.34% patients were using brush and 56.67% patients were using toothpaste for cleaning their teeth and 50% patients were cleaning their teeth once and 80% patients were not using any auxiliary aids. 46.67% patients were having habit of taking coffee and tea. 60% patients in the present study were non vegetarian. Majority of patients were taking madhra rasa dominantly in their diet 50%, followed by amla rasa 20%, lavana rasa 13.33%, katu rasa 13.33% and kashya rasa 3.34%. 46.67% patients were having krura kostha, 43.33% were having Alpa nidra. 56.7% patients were having mandagni and 50% were having avara abhyaharana Shakti.

Gingival examination of 30 patients revealed that normal colour of gingiva was observed in 60% patients. Contour was altered I 36.67% patients, gingival recession was present in 30% patients and exposure of root up-to cervical 1/3 was present in 86.66% patients. 36.66% patients were having soft consistency. Surface texture reveals that stippling was absent in 63.33% patients. Bleeding on palpitation was present in 46.66% patients and attached gingiva was adequate in 83.33% of patients.

Examination of teeth of 30 patients revealed that 32 numbers of teeth were present in maximum 56.6% patients. Carious teeth were found in all the patients. 76.66% of patients were having normal occlusion.

REFERENCES

1. <https://www.who.int/news-room/fact-sheets/detail/oral-health>.
2. Furth, Charlotte A *Flourishing Yin: Gender in China's Medical History, 960-1665*. Berkeley: University of California Press, 1999; 225.
3. Bynum, W.F. "The Rise of Science in Medicine, 1850-1913". *The Western Medical Tradition: 1800-2000*. Hardy, Anne; Jacyna, Stephen; Lawrence, Christopher; Tansey, E.M. Cambridge University Press, 2006; 198-99. ISBN 978-0-521-47565-5.
4. AmbikadattShastri, Sushruta Samhita of Sushruta with Ayurveda TatvaSandipika Hindi Commentary, Nidana sthna, Reprint edition; 2012, chapter 16 , Varanasi: Chaukhambha Sanskrit Sansthana, 2012.
5. Bhav prakash,Vidyotini Hindi commentary, by Bhisagratna, part II Chikitsa prakaran ,madhyam khand, 4th chapter, 496.
6. Bhaishya Ratnavali, Siddhiprada Hindi commentary by prof.Siddhi Nandan Mishra, Aamvata roga dhikar, Chapter, 29: 603.
7. Astanga Haridya, Sundry commentary by Ft.Vaidya Lalchand Shastri, Moti Lal Banarsi Dass 1st edition, 1977.
8. Pt. Kashinathshastri and Dr.Gorakhanathchaturvedi, Charaka Samhita of charaka with Vidyotini Hindi Commentary, Sutrasthana Reprint edition; 2009 chapter 26 versus 43 Varanasi: Chaukhambhabharati academy, 2009; 506.
9. AmbikadattShastri, Sushruta Samhita of Sushruta with Ayurveda TatvaSandipika Hindi Commentary, Sutra sthna, Reprint edition; 2012, chapter 41 versus 15, Varanasi: Chaukhambha Sanskrit Sansthana, 2012; 200.
10. AmbikadattShastri, Sushruta Samhita of Sushruta with Ayurveda TatvaSandipika Hindi Commentary, Sutra sthna, Reprint edition; 2012, chapter 41 versus 11, Varanasi: Chaukhambha Sanskrit Sansthana, 2012; 200.