

International Research Journal of Ayurveda & Yoga

Vol. 5 (8),70-80, August, 2022

ISSN: 2581-785X; <https://irjay.com/>

DOI: [10.47223/IRJAY.2022.5809](https://doi.org/10.47223/IRJAY.2022.5809)



Role of *Triphala* and *Madhu* in Oral Hygiene: A Clinical Study.

Paramjeet kaur¹ , Amit Kumar Shukla², Archana Mishra³

1. PG Scholar, Dept of Swasthivritta, Major S D Singh P G Ayurvedic College& Hospital, UP.
2. Reader, Dept of Swasthivritta, Major S D Singh P G Ayurvedic College& Hospital, UP.
3. Professor, Dept of Swasthivritta, Major S D Singh P G Ayurvedic College& Hospital, UP.

Article Info

Article history:

Received on: 22-06-2022

Accepted on: 10-08-2022

Available online: 31-08-2022

Corresponding author-

Paramjeet kaur, PG Scholar, Dept of Swasthivritta, Major S D Singh P G Ayurvedic College& Hospital, UP.

Email:-

yogiparamkaur@gmail.com

ABSTRACT:

Introduction: Dental caries and periodontal diseases are among the most important global oral health problems. In Ayurveda, *Katu*, *Tikta* and *Kashaya Rasas* are described for *Dantadhavana*. Most of the products available in the market are sweet in taste which favor the growth bacteria in of oral cavity whereas the *Rasas* mentioned in Ayurveda are supposed to suppress the growth of bacterial activity and resulting adverse effects on gums and teeth, thus the proposed formulation (*Triphala*, *Madhu*) is supposed to promote oral hygiene and restrict chances of gum and teeth disorders.

Materials and methods: The role of *Triphala churna* with *Madhu* for *Dantadhavana* in healthy individuals was assessed.

Results: The drug *Triphala churna* and *Madhu* plays a significant role in management of dental diseases as well as in maintaining healthy oral hygiene.

Keywords: *Triphala churna*, *Madhu*, oral hygiene, gum infection.

INTRODUCTION

In today's modernization and fast-moving hectic lifestyle common man has no time to take care of his health. Many bad habits are developed in human beings. Some of them are alcohol, smoking, junk food, tobacco chewing etc. So, these habits produce many drastic effects on gums and teeth. Commonly occurring disorders of gums and teeth are discoloration of teeth, swollen gums, secretary gums, bleeding gums, gingival inflammation, loose tooth etc. and chronic conditions like pyorrhea alveolar necrosis of gums, recession of gums, dental caries, oral cancer etc. In this view Ayurveda plays an important role for the prevention of diseases. In Ayurveda many drugs which are essential for *Dantadhavana* are stated. Out of those "*Triphala* and *Madhu*" were selected. Oral diseases continue to be a major health problem world-wide. Dental caries and periodontal diseases are among the most important global oral health problems, although other conditions like oral and

pharyngeal cancers and oral tissue lesions are also of significant concern.¹ Oral health is integral to general well-being and relates to the quality-of-life that extends beyond the functions of the craniofacial complex. The link between oral diseases and the activities of microbial species that form part of the micro biota of the oral cavity is well-established.² The global need for alternative prevention and treatment options and products for oral diseases that are safe, effective and economical comes from the rise in disease incidence (particularly in developing countries), increased resistance by pathogenic bacteria to currently used antibiotics and chemotherapeutics, opportunistic infections in immunocompromised individuals and financial considerations in developing countries.^{3,4} Despite several chemical agents being commercially available, these can alter oral micro biota and have undesirable side-effects such as vomiting, diarrhoea and tooth staining.^{5,6}



This work is licensed under a [CC BY 4.0 License](https://creativecommons.org/licenses/by/4.0/)

Furthermore, the standard Western medicine has had only limited success in the prevention of periodontal disease and in the treatment of a variety of oral diseases. Hence, the search for alternative products continues and natural phytochemicals isolated from plants used in traditional medicine are considered as good alternatives to synthetic chemicals.⁷ In this view Ayurveda playing an important role for the prevention of diseases. In Ayurveda many drugs which are essential for *Dantadhavana* are stated. Out of those, "*Triphala* and *Madhu*" were selected. Globally the awareness of maintaining oral hygiene is growing day by day, various toothpastes and mouthwashes are available in the market with claim to reduce bacterial activities and maintain and proper oral hygiene but are not much effective. In Ayurveda, *Katu*, *Tikta* and *Kashaya Rasas* are described for *Dantadhavana*. most of the products available in the market are sweet in taste which favor the growth bacteria in of oral cavity whereas the Rasas mentioned in Ayurveda are supposed to suppress the growth of bacterial activity and resulting adverse effects on gums and teeth, thus the proposed formulation (*Triphala*, *Madhu*) is supposed to promote oral hygiene and restrict chances of gum and teeth disorders.

AIM

To study the role of *Triphala churna* with *Madhu* in oral hygiene.

OBJECTIVES

To assess the role of *Triphala churna* with *Madhu* for *Dantadhavana* in healthy individuals.

MATERIALS AND METHODS

Study Design- Single blind clinical trial

Drug : *Triphala* (*Amalaki*, *Bibhitaki*, *Haritaki*)

Ethical Clearance number:- Ref/C.S.J.M.U/338-MC26-682 /2018

Selection of Patient:

30 patients were selected and written consent were taken. They were advised *Triphala churna* with *Madhu* for *Dantadhavana* for 30 days twice a day. *Triphala churna* was be prepared in college pharmacy and *Madhu* was collected from market. For preparation of *Triphala churna*, *Amlaki*, *Haritaki* and *Bibhitaki* were collected and then drugs were cleaned and dried properly. After that each one was separately powered and sieved well. Finally mix of all three drugs in equal parts was preserved in an airtight

container. 1gm *Triphala churna* with 2gm *Madhu* for each *Dantadhavana* (*Kavala*) was used. Examination was done of the individuals as Performa; follow up was done after every week for 1 month.

Criteria For Diagnosis

An extensive temporal profile (Performa) compiled on the basis of principles of Ayurveda and Modern Medicine with detailed clinical history and respiratory examinations was prepared to assess the mode of onset and progress of the conditions. Complete history, sign and symptoms, *Dashvidhpariksha*, *Nidanpanchak* etc. of each patient was compiled and filled in the Performa.

Inclusion Criteria

1. Age – 15 to 40 years
2. Sex – both male and female
3. Individuals were selected irrespective of sex, religion & occupation.

Exclusion Criteria

1. Individuals which are contraindicated in *samhitas* for *Dantadhavana*.
2. *Vagbhatt* add two more diseases - *Hridayaroga* & *Netraroga*
3. Patient of Diabetes Mellitus
4. Patients of leukoplakia & *Mukhagat arbuda*

Consent & Treatment Protocol

The purpose of the study, the procedures to be carried out and the potential risks and benefits were explained to the patients in detail in non-technical terms and in their language. Thereafter their written consent was taken before starting the procedure. Table 1

FOLLOW UP:

After 7 days.

Subjective Criteria for assessment

1. *Mukha Varasya*
2. *Jivaha Mala*
3. *Danta Mala/ Dental Plaque*
4. *Aruchi*

Modern Criteria

1. Swelling gums
2. Sensitivity of Teeth
3. Halitosis
4. pH of saliva

Place of study

Will be collected from Hospital (Major S.D. Singh P.G. Ayurvedic Medical College & Hospital)

Grading of Assessment Criteria Table 2

OBSERVATION

The data shows maximum number of patients i.e. 19 (63.33%) were male and 11 patients i.e. 36.66% were female. The data shows that maximum number of patients in age group 21-30 were 16 pts. i.e. 53.33, 6 pts.i.e. 20% were in age group 15-20, 8 pts.i.e. 26.66% were in age group 31-40. The data shows that maximum number of patients i.e. 27 (90%) were hindu and only 3 patients i.e. 10% were muslim. The data shows that maximum number of patients i.e. 28 (93.33%) were married and only 2 patients i.e. 06.66% were unmarried. The data shows maximum number of patients i.e. 25 (83.33%) were graduate and 3 patients i.e. 10% were post graduate and only 2 patients were studied at H.S.C level. No patient is illiterate in this study. The data shows that maximum number of patients i.e. 25 (83.33%) were belongs to urban habitat and 5 patients i.e. 16.66% were from rural habitat. The data shows that all female patients i.e. 11 (36.66%) were house-wives and 11 patients i.e. 36.66% running own business and only 8 patients i.e. 26.66% were service man. The data shows that maximum number of patients i.e. 22 (73.33%) were belongs to middle class and only 8 patients i.e. 26.66% were belongs to upper middle class. No patient belong to poor class either upper class. The data shows that maximum number of patients i.e. 21 (70%) were having mixed diet and 9 patients i.e. 30% were having vegetarian diet. Above data reveals that Madhura Rasa dominance was found in diet of about 83.33% of the patients followed by 63.33%, 53.33 % and 50% of the patients which were found to have *Lavana Rasa*, *Amla Rasa* and *Katu Rasa* dominance in the diet respectively. Only 13.33% and 10% patients were reported to have *Tikta* and *Kashaya Rasa* dominance in the diet. The data shows that maximum number of patients i.e. 20 (66.66%) were having regular bowel habit and 10 patients i.e. 33.33% were having irregular bowel habit. The data shows that maximum number of patients i.e. 25 (83.33%) were found addicted to drink Tea while 26.66% of patients were addicted to drink coffee. 6.66% of patients were addicted towards Tobacco and 20% were addicted to Alcohol. The data shows that maximum number of patients i.e. 20 (66.66%) having *KaphaVaata Prakriti* and 7 patients i.e. 23.33% having *KaphaPitta Prakriti* and only 3 pts. i.e. 10% having *Vata Pitta Prakriti*. Maximum patients 17 i.e. 56.66% were *Madhyamsara*, 40% patients were *Pravarasara* and only 1 patient i.e. 3.33% was *Avarasara*. Maximum patients 16 i.e. 53.33% were *Avara Samhanana*, 26.66% patients were *Madhyam Samhanana* and only 4 patient i.e. 13.33% was

Pravara Samhanana. Maximum patients 16 i.e. 53.33% were *Madhyamsatva*, 40% patients were *Pravarasara* and only 2 patient i.e. 6.66% was *Avarasatva*. Maximum patients 24 i.e. 80% were *Madhyam Satmya*, 16.66% patients were *Pravara Satmya* and only 1 patient i.e. 3.33% was *Avara Satmya*. Maximum patients 15 i.e. 50% having *Madhyam Abhyavaharna Shakti*, 40% patients were *Pravara* and only 10% patients having *Abhyavaharna Shakti*. Maximum patients 14 i.e. 46.66% having *Madhyam Jarnashakti*, 43.33% patients having *Pravara* and only 3 patient i.e. 10% has *Avara Jarnashakti*. Maximum patients 13 i.e. 43.33% having *Avara Vyayamshakti*, 40% patients having *Pravara* and 5 patient i.e. 16.66% has *Madhyam Vyayamshakti*.

RESULT

Effect of Therapy (Table 3)

Subjective Criteria (B.T & A.T pts. distribution) Table No. 4

Mukha Varasya Table No. 5 In symptom *Mukha Varasya* mean value in before treatment was 1.46 and after treatment it reduces to 0.53, the difference is 0.93 and relief in symptom is 63.69%. The difference in the mean values of the two groups is greater than would be expected by chance; there is a statistically significant difference between the input groups ($P = <0.001$).

Jivha Mala Table No. 6 In symptom *Jivha Mala* mean value in before treatment was 1.36 and after treatment it reduces to 0.33, the difference is 1.03 and relief in symptom is 75.73%. The difference in the mean values of the two groups is greater than would be expected by chance; there is a statistically significant difference between the input groups ($P = <0.001$).

Danta Mala/ Dental Plaque Table No.7-In symptom *Danta Mala/ Dental Plaque* mean value in before treatment was 1.16 and after treatment it reduces to 0.26, the difference is 0.90 and relief in symptom is 77.58%. The difference in the mean values of the two groups is greater than would be expected by chance; there is a statistically significant difference between the input groups ($P = <0.001$).

Aruchi Table No. 8 In symptom *Aruchi* mean value in before treatment was 1.56 and after treatment it reduces to 0.53, the difference is 1.03 and relief in symptom is

66.02%. The difference in the mean values of the two groups is greater than would be expected by chance; there is a statistically significant difference between the input groups ($P = <0.001$).

Swelling Gums Table No. 9 In symptom **Swelling Gums** mean value in before treatment was 1.30 and after treatment it reduces to 0.56, the difference is 0.74 and relief in symptom is 56.92%. The difference in the mean values of the two groups is greater than would be expected by chance; there is a statistically significant difference between the input groups ($P = <0.001$).

Sensitivity of Teeth Table No. 10 In symptom **Sensitivity of Teeth** mean value before treatment was 1.23 and after treatment it reduces to 0.33, the difference is 0.90 and relief in symptom is 73.17%. The difference in the mean values of the two groups is greater than would be expected by chance; there is a statistically significant difference between the input groups ($P = <0.001$).

Halitosis Table No. 11 Above table shows that mean value before treatment was 1.667, and after treatment it reduces to 0.667, the difference is 1.0 and relief in symptom is 59.09%. The difference in the mean values of the two groups is greater than would be expected by chance; there is a statistically significant difference between the input groups ($P = <0.001$).

ph of saliva Table No. 12 Above table shows that mean value before treatment was 1.800, and after treatment it reduces to 0.467, the difference is 1.33 and relief in symptom is 74.05%. The difference in the mean values of the two groups is greater than would be expected by chance; there is a statistically significant difference between the input groups ($P = <0.001$).

Complete effect of therapy Table No. 13 Total 12 pts. i.e. 40% having marked improvement, 46.66% i.e. 14 pts. having moderate and 13.33% i.e. 4 pts. having mild improvement.

DISCUSSION

The importance has been given to Oral hygiene to maintain health and beauty. The Oral hygiene is very much necessary for healthy body. If the Oral hygiene not maintains then lot of Oral disorders to be formed because of that health of an individual cannot be maintain. In Ayurveda *Katu*, *Tikta*, *Kashaya Rasa* described for *Dantadhavana* which are very efficient. In Ayurveda many

drugs (like *Arjuna*, *Apamarga*, *Karvira*, *Amra*, *Khadira*, *Arka*, *Amla* etc.) which are essential for *Dantadhavana* are stated. Out of those I have selected *Katu-Tikta-Kashaya Rasa Pradhana* "*Triphala Churna*". In Ayurvedic text it is elaborated as all the Oral hygiene problems are a result of vitiated *Bodhak kapha*. According to rasi properties, we can consider the following action

1. The drug *Triphala* contains mainly *Katu-Tikta Rasa*, due to which the vitiated *Bodhaka Kapha* in mouth is reduced and mouth becomes clean and fresh.
2. *Jivaha Mala* which is formed due to *Kapha*, is cleaned by *Katu-Tikta Rasa* of *Triphala*.
3. *Triphala* has *Rochana* & *Deepana* properties which help in reducing *Aruchi*.
4. *Triphala* also have *Rochana Guna* which helps in reducing the *Mukhvarasya*.
5. According to all above properties of *Triphala churna* we consider that the *Katu-Tikta Rasa* reduces the *Bodhaka Kapha* in mouth, and tongue & mouth becomes clean. The taste of food feels normal.
6. *Katu-Tikta Rasa* should be used for oral hygiene because mostly diseases of oral cavity are caused by *Kapha Dosha* and *Triphala* have mainly *Katu-Tikta Rasa* so it prevents from oral hygiene problems.
7. By using *Katu-Tikta Rasa*, bad taste is reduced.
8. Taking account of all discussion we confirm that the *Katu-Tikta Rasa* of *Triphala churna* cures the disorders of teeth and prevents from oral hygiene problems.

CONCLUSION

In this study data shows that *Triphala Churna* and *Madhu* play a significant role in *Mukh vairasaya*, *jivaha mala* as well in *Aruchi*. Because of *Lekhan Karma* property of *Triphala Churna* and *Madhu*, it shows significant role in management of Halitosis. The drugs (i.e. *Triphala Churna* and *Madhu*) is cost effective, easy to prepare & easy to take. No side effects of therapy were seen. The drug *Triphala churna* and *Madhu* plays a significant role in management of dental diseases as well as in maintaining healthy oral hygiene. Hence the synergistic effect of all these drugs totally act on oral cavity i.e. teeth, *Jivaha* etc. and cures the problems in such a way that the patient feels himself guise fresh and clean oral cavity.

Acknowledgements - Nil

Conflict of interest - None

Source of finance & support - Nil

ORCID

Paramjeet kaur , <https://orcid.org/0000-0003-3463-7694>

REFERENCES

1. Petersen PE. The World Oral Health Report 2003: Continuous improvement of oral health in the 21st century: The approach of the WHO Global Oral Health Programme. *Community Dent Oral Epidemiol.* 2003;31(Suppl 1):3–23.
2. Jenkinson HF, Lamont RJ. Oral microbial communities in sickness and in health. *Trends Microbiol.* 2005;13:589–95.
3. Tichy J, Novak J. Extraction, assay, and analysis of antimicrobials from plants with activity against dental pathogens (*Streptococcus* sp.) *J Altern Complement Med.* 1998;4:39–45.
4. Badria FA, Zidan OA. Natural products for dental caries prevention. *J Med Food.* 2004;7:381–4.
5. Park KM, You JS, Lee HY, Baek NI, Hwang JK. Kuwanon

G: An antibacterial agent from the root bark of *Morus alba* against oral pathogens. *J Ethnopharmacol.* 2003;84:181–5

6. Chung JY, Choo JH, Lee MH, Hwang JK. Anticariogenic activity of macelignan isolated from *Myristica fragrans* (nutmeg) against *Streptococcus mutans*. *Phytomedicine.* 2006;13:261–6.
7. Prabu GR, Gnanamani A, Sadulla S. Guaijaverin: A plant flavonoid as potential antiplaque agent against *Streptococcus mutans*. *J Appl Microbiol.* 2006;101:487–95.

How to cite this article: Kaur P, Shukla A.K, Mishra A “Role Of *Triphala* And *Madhu* In Oral Hygiene : A Clinical Study *IRJAY*. [online]2022;5(8); 70-80. Available from: <https://irjay.com> DOI link- <https://doi.org/10.47223/IRJAY.2022.5809>

Table 1 Treatment Plan

Drug	Formulation	Route	Dose	Duration
Triphla churn + Madhu	Paste	Oral	Triphla churn + 2 gm Madhu	1 months

Table 2 Grading of Assessment Criteria

<i>1. Mukha Varasya</i>	
Criteria	SCORE
Absent	0
Mild	1
Moderate	2
Severe	3

<i>2. Jivha Mala</i>	
Criteria	SCORE
Absent	0
Mild	1
Moderate	2
Severe	3

<i>3. Danta Mala/ Dental Plaque</i>	
Criteria	SCORE
No Dental Plaque	0
Dental Plaque on Lower Denture	1
Dental Plaque on Upper Denture	2
Dental Plaque on entire Denture	3

<i>4. Aruchi</i>	
Criteria	SCORE
Absent	0
Mild	1
Moderate	2
Severe	3

<i>5. Swelling Gums</i>	
Criteria	SCORE
None	0
Mild	1
Moderate	2
Severe	3

<i>6. Sensitivity of Teeth</i>	
Criteria	SCORE
No sensitivity	0
Sensitivity on cold eating	1
Sensitivity on hot eating	2
Sensitivity on sours eating	3

7. Halitosis	
Criteria	SCORE
None	0
Mild	1
Moderate	2
Severe	3

8. ph of saliva	
Criteria	SCORE
Normal 6-7	0
Mild 7-8	1
Moderate 8-9	2
Severe 9-10	3

Table 3 ASSESSMENT CRITERIA FOR OVERALL EFFECT OF THERAPY	
Parameters	% age relief
Markedly improved	More than 75 % relief in the symptoms
Moderately improved	>50 to <75 % relief
Mildly improved	>25 to <50 % relief
Unchanged	Less than 25% change in signs and symptoms

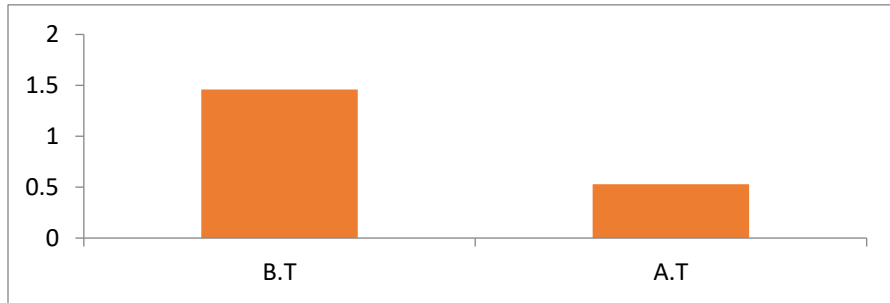
Subjective Criteria (B.T & A.T pts. distribution) Table No. 4

Symptoms		No. Of Patients			
		Grade "0"	Grade "1"	Grade "2"	Grade "3"
Mukha Varasya	B.T	00	19	08	03
	A.T	20	04	06	00
Jivha Mala	B.T	00	21	07	02
	A.T	23	04	03	00
Danta Mala/Dental Plaque	B.T	00	15	10	05
	A.T	25	03	01	01
Aruchi	B.T	00	17	09	04
	A.T	18	08	04	00
Swelling Gums	B.T	00	24	03	03
	A.T	14	15	01	00
Sensitivity of Teeth	B.T	00	23	07	00
	A.T	22	06	02	00
Halitosis	B.T	00	15	10	05
	A.T	15	10	05	00
ph of saliva	B.T	00	11	14	05
	A.T	17	12	01	00

Mukha Varasya Table No.5

N	Mean		X	%	t	P
	B.T.	A.T				
30	1.46	0.53	0.93	63.69	4.797	<0.001

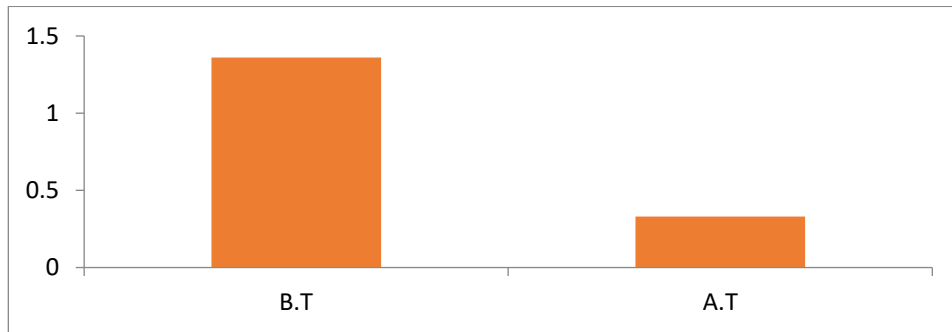
Effect on Mukha Varasya Figure 1



Jivha Mala Table No. 6

N	Mean		X	%	t	P
	B.T.	A.T				
30	1.36	0.33	1.03	75.73	6.270	<0.001

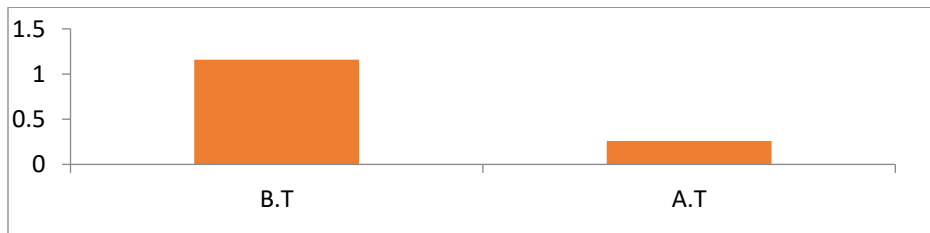
Effect on Jivha Mala Figure 2



Danta Mala/ Dental Plaque Table No. 7

N	Mean		X	%	t	P
	B.T.	A.T				
30	1.16	0.26	0.90	77.58	3.485	<0.001

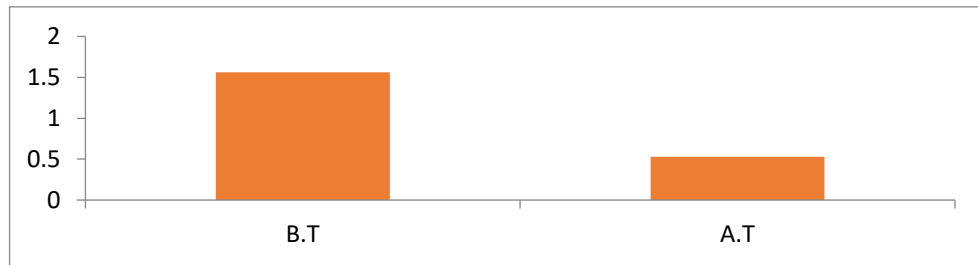
Effect on Danta Mala/ Dental Plaque Figure 3



Aruchi Table No. 8

N	Mean		X	%	t	P
	B.T.	A.T				
30	1.56	0.53	1.03	66.02	5.489	<0.001

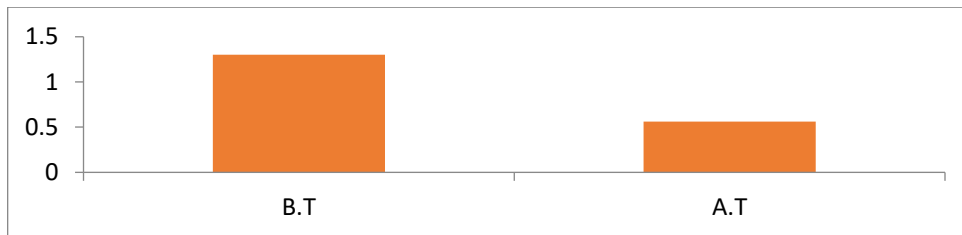
Effect on Aruchi Figure 4



Swelling Gums Table No. 9

N	Mean		X	%	t	P
	B.T.	A.T				
30	1.30	0.56	0.74	56.92	4.647	<0.001

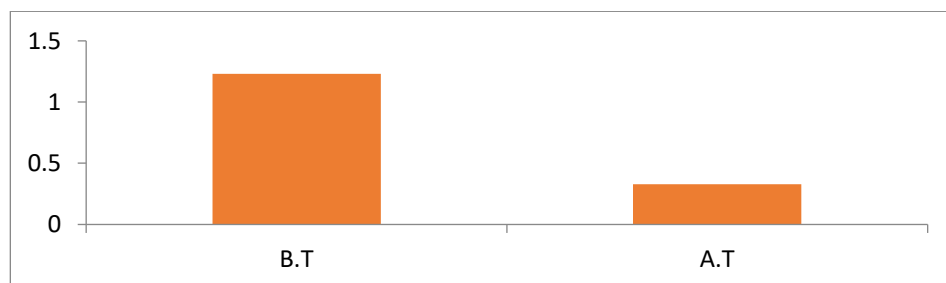
Effect on Swelling Gums Figure 5



Sensitivity of Teeth Table No. 10

N	Mean		X	%	t	P
	B.T.	A.T				
30	1.23	0.33	0.90	73.17	6.630	<0.001

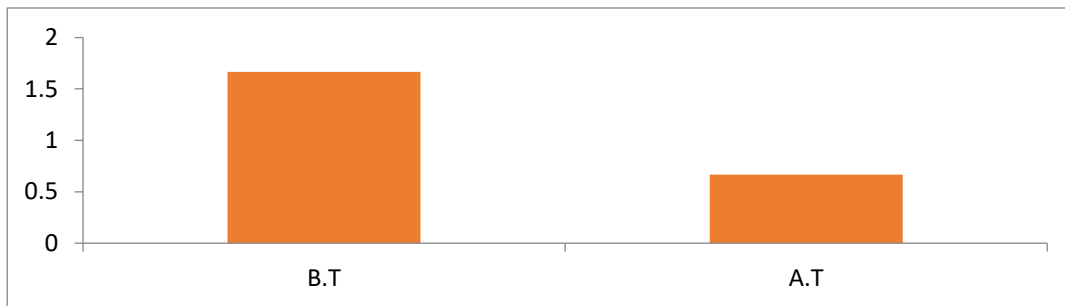
Effect on Sensitivity of Teeth Figure 6



Halitosis Table No. 11

N	Mean		X	%	t	P
	B.T.	A.T				
30	1.667	0.667	1.0	59.98	5.109	<0.001

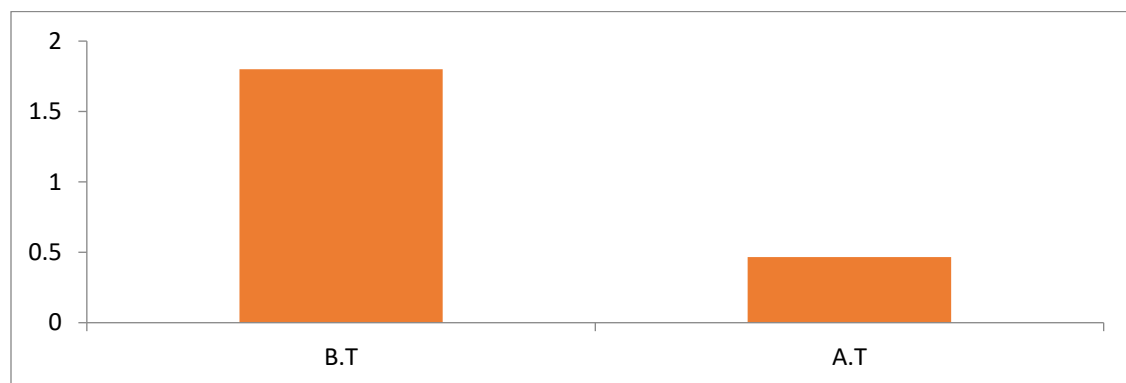
Effect on Halitosis Figure 7



ph of saliva Table No. 12

N	Mean		X	%	t	P
	B.T.	A.T				
30	1.800	0.467	1.333	74.05	7.983	<0.001

Effect on ph of saliva Figure 8



Complete effect of therapy Table No. 13

Results	Total no. of patients	%age of improved pts.
Marked improvement	12	40.00%
Moderate improvement	14	46.66%
Mild improvement	04	13.33%
Unchanged	00	00.00%

