

A REVIEW ON *GANDUSHA*: AN AYURVEDIC THERAPEUTIC PROCEDURE FOR ORAL DISORDERS

R B Hosamani

M.D(Ay), Associate Professor, Dept.of Swasthavritta and Yoga,
B.V.V.Sangha's Ayurved Medical College and Hospital, Bagalkot- 587 101, Karnataka, India

Email: ayush.dr.ravi@gmail.com

Published online: September, 2017

© International Ayurvedic Medical Journal, India 2017

ABSTRACT

Oral cavity is constantly exposed to external environmental toxins which cause bacterial invasion in the oral cavity and leads to increase risk of oral diseases. Hence to avoid the chances of bacterial invasion, it is very important to maintain a good oral hygiene. Ayurveda recommends *Gand sha* as a specialized therapy for good oral hygiene. It will maintain and promote the oral hygiene by exerting the cleansing action and by increasing the defence mechanism in the oral cavity. *Gand sha* is used for both prevention and treatment of oral diseases. The present review article highlights how the *Gand sha* therapy will act as a basic tool for good oral hygiene.

Keywords: *Gand sha*, *Mukhagatarogas*, Oral hygiene, Oral disease

INTRODUCTION

Oral cavity is such a part of the body which is constantly exposed to many risk factors in day-to-day life. The external environmental pollutants in the form of endogenous toxins (*mavisha*) and exogenous toxins (*garavisha*) enter the body through contaminated foods-drinks-air, junk food habits and addictions like tobacco-guthaka chewing, smoking, alcohol intake, soft drinks, irregular food habits, mental stress etc. Gradually they result in accumulation

of toxins in the oral cavity and cause bacterial invasion leading to bad oral hygiene. Therefore, the problems regarding bad oral hygiene are progressively increased and finally lead to increased risk of oral disorders. Hence in order to avoid the chances of bacterial invasion, it is very important to remove such toxins from the mouth to maintain good oral hygiene. Ayurveda recommends the use of *Gand sha* to remove such accumulated toxins safely from the

oral cavity. Regular practice of *Gand sha* will help to regain good oral hygiene.

In *Ayurveda*, *Gand sha* is explained as one of the routine procedure under the context of daily regimens (*dinacharya*)^{1,2} for the maintenance of good oral health. It can be done in both healthy and diseased persons. In a healthy person it can be done by using plain sesame oil (*tila taila*). For a diseased person it can be done by using different medicated liquids or decoctions depending upon the condition of the disease and desired therapeutic effects. *Gand sha* will maintain and promote the oral hygiene by exerting the cleansing action and by increasing the defence mechanism in the oral cavity.

DEFINITION:

Gand sha is the process of “holding any medicated liquid in the mouth to its full

capacity for a specific time without allowing any movement inside the mouth”.^{3,4,5,6}

Gand sha is done with the unctuous substances or fats (*sneha*) like oils (*taila*) or ghee (*grita*) etc., milk (*Kshira/paya*), honey (*kshoudra*), honey-water (*madh daka*), meat soup (*mmsarasa*), wine (*madhya*), urine of animals (*mtra*), sour liquids (*mla*), wash of grains fermented by keeping overnight (*dhanyamla*), herbal decoctions (*kashya*) or warm water (*ushnodaka*) etc. according to the *dosh* s^{7,8}

TYPES:

Depending upon the *doshic* vitiation (*doshagnat*) and the therapeutic effect (*krumat*), the classical text books of *Ayurveda* have mentioned four types of *Gand sha* as mentioned in below.

Table 1: Types of *Gand sha* according to different *Ayurvedic charyas*

Sushruta ⁹	VridhdhV gbhata ¹⁰	V gbhata ¹¹	Sh rangadhara ¹²
<i>Snehana</i> (oleating)	<i>Snigdha</i> (oleating)	<i>Snehika</i> (oleating)	<i>Snigdha</i> (oleating)
<i>Prasdana</i> (palliating)	<i>Shamana</i> (palliating)	<i>Shamana</i> (palliating)	<i>Prasdana</i> (palliating)
<i>Shodhana</i> (purificatory)	<i>Shodhana</i> (purificatory)	<i>Shodhana</i> (purificatory)	<i>Samshodhana</i> (purificatory)
<i>Ropana</i> (healing)	<i>Ropana</i> (healing)	<i>Ropana</i> (healing)	<i>Ropana</i> (healing)

Snigdha Gand sha: It is *oleating* type of *Gand sha*. In this, unctuous substances (*sneha*) like oil (*taila*) or ghee (*grita*) are processed with herbs which have the properties like sweet taste (*madhura rasa*), sour taste (*mla rasa*) and salt taste (*lavanasarasa*) and hot potency (*ushnavirya*)^{12,13}. This type of *Gand sha* is effective in correcting the imbalance of the *Vta dosha* in the mouth. So, it is useful in *Vtaja diseases* of the mouth (*vtajamukharoga*) i.e. diseases associated with dryness and roughness in the mouth¹². A paste of sesame with water

(*tilakalkodakam*) or milk (*kshira*) or oil (*sneha*) is ideal for *Snehika Gand sha*¹⁰.

Shamana Gand sha: It is *palliative* type of *Gand sha*. Here, the decoction (*kashya*) is prepared from the herbal drugs which are having the taste (*rasa*) of bitter (*tikta*), astringent (*kashya*) and sweet (*madhura*) and cool potency (*shatavirya*)^{12,13}. This type of *Gand sha* is beneficial for the alleviation of morbid *Pitta dosha* in the buccal cavity. As the name itself suggests, this type of *Gand sha* reduces the irritation due to *Pitta dosha* and has soothing effect in

the buccal cavity and hence called *Shamana Gand sha*. So, it is useful in *Pittaja diseases* of the mouth¹² (*pittaja mukha roga*) i.e. diseases associated with burning sensation in the mouth.

Shodhana Gand sha: It is purificatory type of *Gand sha*. Here, the decoction (*kash ya*) is prepared from the herbal drugs which are having the taste (*rasa*) of pungent (*katu*), sour (*mla*) and salt (*lavana*) and hot potency (*ushna virya*) drugs of *Shirovirechana gana*^{12,13}. This type of *Gand sha* induces excessive oro-pharyngeal secretions. It is capable of eliminating the morbid *Kapha dosha* along with the oro-pharyngeal secretions in the oral cavity and hence the name *Shodhana Gand sha*. So, it is useful in *Kaphaja diseases* of the mouth¹² (*kaphaja mukha roga*) i.e. diseases associated with excessive salivation and stickiness in the mouth.

Ropana Gand sha: It is healing type of *Gand sha*. Here, the decoction (*kash ya*) is prepared from the herbal drugs which are having the taste (*rasa*) like astringent (*kash ya*), bitter (*tikta*) and sweet (*madhura*) and cool potency (*sh ta virya*)^{12,13}. Since the drugs are used here are capable of healing ulcers (*vrun s*) and hence the name *Ropana Gand sha*. This type of *Gand sha* promotes healing of ulcers in the mouth and hence useful in case of mouth ulcers¹² (*mukha vran s*).

Kash ya Gand sha contains mainly water-soluble ingredients which will remove all water soluble toxins from the mouth. Sugar molecules remain in the mouth are the main source of food for the growth of oral bacteria. They cause inflammation in the oral cavity and produce oral problems. The western science also agrees that the oral

bacteria contribute tooth decay, gingivitis and other oral cavity diseases. Sugar molecules which remain in the mouth are water soluble. The ingredients of *Kash ya Gand sha* neutralize sugar residues immediately and it stops food supply to the bacteria's survival and growth. In this way it will help to remove bacterial load from the oral cavity and regain of oral health.

Sneha Gand sha contains mainly lipid-soluble ingredients which will remove all the lipid-based toxins from the mouth. The bacteria, viruses, fungi and other parasites, toxins and other debris produce oral health issues like gum disease, teeth problems etc. *Sneha Gand sha* has a powerful detoxifying effect. The oil acts like a cleanser. It removes such toxins from the oral cavity. Plaque is also one of the major contributing factors for oral health problems. It is fat-soluble toxins. *Sneha Gand sha* helps to reduce plaque and oral bacterial load from the mouth and regain of oral health.

Hence in a nut shell it can be said that, the *Gand sha* can be either water-soluble (*Kash ya Gand sha*) or lipid-soluble (*Sneha Gand sha*) based on its primary contents and different effects.

PROCEDURE:^{9,14,15,16}

The individual should be made to sit comfortably in erect posture in devoid of breeze in sunlight. His shoulders, throat, cheeks and forehead should be massaged and fomented. He should be asked to hold the medicated liquid in his mouth without doing any movement inside with concentrated mind and face slightly lifted up. He should be advised not to drink the liquid and hold it until the mouth gets filled with oro-pharyngeal secretions (*kapha*) and watery discharge (*jalasr va*) appears from the nose (*n sa*) and the eyes (*netra*). Then it

should be spat out and relaxes. After that next *Gand sha* should be done.

In this way at a stretch, three, five or seven times *Gand sha dh rana* can be done to get rid of the *dosh s* till the appearance of signs and symptoms of proper (*Samyak-lakshanas*) of *Gand sha* therapy. The person is advised to do gargle (*kavala*) with warm water, spit out and relaxes.

DOSAGE: The quantity or dosage for *Gand sha* differs as individuals oral cavity capacity differs. Hence it is difficult to fix the exact dose. According to *Sh rangadhara* , a mouth full of liquid is dose of *Gand sha*. And further, he states that one *kola* (6gm) by measure is the dose of either a liquid (decoction) or a powder for *Gand sha*.¹⁷ *V gbhata* states that a liquid is filled the mouth about ½ of capacity of the oral cavity (is *pravara m tr*), or 1/3rd of capacity of oral the cavity (is *madhyama m tr*) or ¼ of capacity of the oral cavity (is *avara m tr*)¹⁵. Among the above said dosages, *Sh rangadhara*'s dosage holds good as per the definition *Gand sha*.

DURATION:^{9,15,16} The medicated oil has to keep in the mouth till the person develops following symptoms: Once the person develops these symptoms, he can spit out the oil. If required the procedure may be repeated.

- Filling the throat by oro-pharyngeal secretions (*kapha purnasyat*)
- Watery discharge from the nose (*khantha sr va*)
- Watering of the eyes (*akshi sr va*)

ASSESSMENT OF PROCEDURE OF GAND SHA: When the person is treated with *Gand sha*, physician or therapist should assess the therapeutic effect of the

Gand sha in every case in following manner.^{18,19}

Symptoms indicative of proper effects: (Shuddha Gand sha Lakshana): A proper *Gand sha* therapy brings about following symptoms if performed systematically and correctly.

1. Alleviation of illness or disease (*vy dherapachayah*)
2. Freshness of the mouth or feeling of contentment (*tushtih*)
3. Clarity of the oral cavity (*vaishdyam*)
4. Feeling of lightness in the mouth (*vaktral ghavam*)
5. Clarity or normal functioning of the sense organs (*indriyapras da*)

Symptoms indicative of inadequate effects: (Heena Yoga Gand sha Lakshana)

1. Stiffness of the mouth (*j dyah*)
2. Excessive Salivation (*kaphotklesha*)
3. Inability of the tongue to perceive taste properly(*arasajn nah*)

Symptoms indicative of Excessive effects: (Ati Yoga Gand sha Lakshana)

1. Ulceration in the mouth (*mukhap ka*)
2. Dryness of the buccal cavity (*shosha*)
3. Feeling thirsty(*trushn*)
4. Tastelessness in the mouth (*aruchi*)
5. Sense of Exhaustion(*klama*)

Chikitsa:

Yog tiyoga laxanas should be treated appropriately. In case of *shodhanaatiyoga*, *snehana gand sha* should be done and in *snehanaatiyoga*, *shodhana gand sha* is to be done. *Shamana* and *ropana gand sha* should be continued until the disease (*roga*) is cured.

CONTRA-INDICATION²⁰:

Gand sha (*sukhoshnodaka*) should not be advised to a person who is poisoned (*visha*), unconsciousness (*murch*), weak or emaciation (*shoshi*), bleeding disorders (*raktapitta*) conjunctivitis (*kupit kshi*) and children less than five years of age. It should not be administered to persons suffering from rhinitis (*p nasa*), indigestion (*aj rna*), lack jaw (*hanugraha*), anorexia (*Aruchi*), who has received *Nasya* therapy, and in case of loss of sleep due to awakening (*j garana*). It is advocated after the age of five years. Patient having chronic or carcinogenic ulcers in oral cavity are also avoid.

BENEFITS OF TAILA GAND SHA:

Gand sha can be practiced daily to maintain good oral health. Regular practice of *Taila* (oil) *Gand sha* elaborates the following benefits:²¹

1. It strengthens the voice (*swarabalam*) by supporting and promoting the vocal chords. It lubricates, reduces toxic load and purifies the vocal chords. Voice becomes more effective and melodious.
2. It strengthens the jaws or mandible (*hanurbalam*) by lubricating and supporting.
3. It nourishes the mouth (*vadanopachaya*) and makes face healthy and beautiful by giving proper exercise to the muscles of cheeks, tongue, lips and soft palate. It also increases motor functions of these muscles.
4. It improves taste perception (*paramrasajnanamruchyam*) by honing the taste buds. It also preps the appetite, clearing any fogs covering the digestive fire of the stomach.
5. It prevents dryness of mouth and throat (*nachasyakanthashosha*) by balancing the pH of the oral cavity.

6. It prevents cracking of lips (*naoshthayohspathanadbhavam*) and supports the lips health.
7. It makes the teeth strong (*dridamuladanta*) and healthy by strengthening the roots of the teeth. It increases the stability of teeth and gums.
8. It prevents dental caries (*krimidanta*) and toothache (*nashulyante*) and dental hypersensitivity (*nahrishyante*) by nourishing the nerve tissue and nerve endings.
9. It also provides resistance against the oral disorders of oral cavity. It prevents the disorders of oral cavity (*doshaja* or *ganthujamukharogas*), head (*shirah*), throat (*kantha*), ear (*karna*), nose (*n sa*) and eye (*netra*). It also helps indirectly to improve immunity system (*vy dhikshamatwam*).

PROBABLE MODE OF ACTION OF GAND SHA^{22,23}:

The drug which is taken by the mouth is passed through the liver and then absorbed into the bloodstream (systemic circulation). But in other forms of drug administration, the drug by-passes the liver and directly entering the bloodstream and results in rapid onset of drug effect.

Gand sha is other form of drug administration into the oral cavity in which the active ingredients and chemical constituents of the drugs are absorbed through the buccal mucosa and reach the blood stream. It is having both in local and systemic action but generally more in local effect. The probable mode of action is explained in following actions:

Exerts increased mechanical pressure:

Gand sha increases mechanical pressure inside the oral cavity. The active ingredients and chemical constituents of the medi-

cated liquid stimulate the chemoreceptors and mechanoreceptors in the mouth to send signals to salivary nuclei in the brain stem. As a result, the parasympathetic nervous system activity increases and impulses sent via motor fibres in facial and glosso-pharyngeal nerves. They trigger a dramatically increased output of salivary secretion which predominantly watery (serous). The metabolic waste (toxins), food debris and depositions as well as superficial infective micro-organisms present in the oral cavity gets dislodged and mixed with retained medicated liquid and removed from the oral cavity. Thus, *Gand sha* will act as a good oral cleansing method and helps to improve or regain the oral hygiene.

Stimulates salivary gland:

Gand sha stimulates the salivary glands to secrete more saliva. Saliva contains a variety of host defence factors. The IgA, IgM antibodies and lysozyme (a bactericidal enzyme that inhibits bacterial growth in the mouth) present in the saliva provide protection against micro-organisms by acting as local antibiotic. Saliva also contains coagulation factors (factors VIII, IX & X) which protect wounds from bacterial invasion. Hence, *Gand sha* increases the local defence mechanism of the oral cavity and helps to regain oral hygiene.

Increases the vascular permeability:

Gand sha increases the vascular permeability in the oral cavity. It creates pressure over the oral mucosa. The active ingredi-

ents and chemical constituents of the warm medicated liquid irritate the oral mucosa and increase the vascular permeability. Therefore, the drugs get rapidly absorbed both locally and systemically. This can help to reduce inflammation and enhance the healing process of disease and thus cures the disease of oral cavity.

Maintains oral pH:

The main function of salivary buffer is to maintain pH at the mucosal epithelial cell surface and the tooth surface. Healthy mouth is a non-acidic or neutral. Unhealthy mouth is acidic and increases the risk of oral diseases. *Gand sha* is an immediate solution for mouth acidity and change the oral pH quickly into a safe zone. The active ingredients and chemical constituents of the medicated liquid of *Gand sha* regulate and balance the pH of the oral cavity and help to reduce bacterial growth in the mouth. Thus *Gand sha* cures the disease and helps to regain oral hygiene by maintaining a good pH balance in the mouth.

GAND SHA AS AN UPAKRAMA FOR MUKHAGATA ROGA:

Gand sha is also explained as a remedy (*upakrama*) for diseases of the oral cavity (*mukhagata rogas*). It is having both preventive and curative effect.

Gand sha is indicated in following diseases and it can be done by using different medicated liquids or decoctions depending upon the condition of the disease and desired therapeutic effects.

Table 2: Indication of *Gand sha* in different diseases

Diseases of the Head and Neck	<i>Pinasa</i> (Atrophic rhinitis), <i>Pratisy ya</i> (Rhinitis) ²⁴
Diseases of Oral cavity	<i>KaphajaOshtaprakopa</i> (Herpes labialis) ²⁵ ; <i>Dantaharsha</i> (tingling/hypersensitiveness of teeth) and <i>Dantachala</i> (Shakey teeth) ²⁶ ; <i>Krumidanta</i> (dental cavity) ^{27,28} ; <i>DantaSharkara</i> (Tartars) ²⁹ ; <i>Sheetada</i> (Bleeding Gums, Gum

Boil, Gingivitis)³⁰; *Dantaveshta*(Pyorrhoea alveolaris)³¹; *Saushira*(Apical abscess or Chronic Gingivitis)^{32,33}; *DantaVidarbha*(Allergic Gums)³⁴; *Dantan di* (Sinuses of Gums)³⁵; *Dushta Jihwaa*(Chronic Glossitis)³⁶; *Upajihw*³⁷; *Galashundi*³⁸; *Talusosha*(Atropy of Palate)³⁹; *V taja Kantharohini*(Painful Diphtheria)⁴⁰; *Gala Vidradhi* (Throat Abscess)⁴¹; *Mukhap ka* (Stomatitis)⁴²; *MukhaArbuda* (Tumours in Oral Cavity)⁴³; *Durbala Dwija* (weak Teeth)⁴⁴; *S dhya Rohini* (*Diphtheria*)⁴⁵; *Kaphaj Mukha Roga* (Oral diseases due to *Kapha*)⁴⁶

CLINICAL WORKS ON GAND SHA:

1. Evaluation of antiplaque and antigingivitis effect of herbal mouthwash in treatment of plaque induced gingivitis: A randomized, clinical trial.: Aspalli S, Shetty VS, Devarathnamma MV, Nagappa G, Archana D, Parab P. J Indian SocPeriodontol. 2014 Jan;18(1):48-52.PMID: 24744544
2. Triphala, a New Herbal Mouthwash for the Treatment of Gingivitis: A Randomized Controlled Clinical Trial.;Pradeep AR, Suke DK, Martande SS, Singh SP, Nagpal K, Naik SB.; J Periodontol. 2016 Nov; 87(11):1352-1359. Epub 2016 Jul 21.; PMID: 27442086
3. Clinical evaluation of *Krimidanta Pratishedha* (anti-caries) activity of *Triphaladi Gandushain* high risk dental caries patients; Achyuta G Atara: Dept. of Shalakyta Tantra, Institute for Post Graduate Teaching and Research in Ayurveda, Jamnagar, India (PMCID: PMC4213966)
4. Effect of Ayurvedic herbs on control of plaque and gingivitis: A randomized controlled trial: Kadam A, Prasad BS, Bagadia D, Hiremath VR. Ayu. 2011 Oct;32(4):532-5.; PMID: 22661849: PMC3361930
5. A Clinical Evaluation of *Shunty di Gandusha* in *Sit da* W.S.R to Gingivitis: P PundareekakshaRao: Asst. Prof., Dept. of ShalakytaTantra, Ayurveda College, Coimbatore, Tamil Nadu, India.

6. Clinical Evaluation of *Pippalyadi Gandusha* And *Phalatrikadi kwatha* in the management of Tundikeri W.S. R to tonsillitis: Anubhajain, MS scholar, PG Department of ShalakytaTantra, NIA – Jaipur
7. Role of *Tilnilotpal Gandusha* in the Management of *Mukhapaka*; Vd.Vikas Dubey, Bharati Vidyapeeth, Deemed University, C.O.A., Pune, Mharashtra.
8. Clinical efficacy of “*BhadraMustadi Paste*” and “*Nagaradi Kwatha Gandusha*” in *Shitada* (Gingivitis); Rajshree Unadkat, Lecturer, Department of Shalakyta Tantra, International Centre for Ayurvedic Studies, Gujarat Ayurved University, Jamnagar, India

CONCLUSION

Ayurveda explained *Gand sha* as one of the daily routine procedure under the context of *dinacharya* for maintenance of oral hygiene. It is one among the important therapeutic procedures **as well as** an effective detoxifying measure in oral diseases. It will maintain and promote the oral hygiene by exerting the cleansing action and by increasing the defence mechanism in the oral cavity. It is having both preventive and curative effect if it is performed systematically. It is better to take an advice of an Ayurvedic physician before taking *Gand sha* therapy.

REFERENCES

1. VriddhaVagbhatt: Ashtanga Hrudaya with Commentaries of Sarvangasundara of Arunadatta & Ayurveda Rasayana of Hemadri edited by Pt. Hari Sadashiva Shastri Paradakara, Choukambha Sanskrit Samsthana, Varanashi, Re-print(2012); p.25,
2. Vagbhatt: Ashtanga Sangraha with Hindi Commentary, by Shri. Kaviraja Atrideva Gupta, Vol-1; Chowkhamba Krishnadasa Academy; Varanashi. Re-print(2002); p.25,
3. Sushruta: Sushruta Samhita of with the Nibhanhasangraha Commentary of Shri. Dalhanacharya; edited by Vaidya Yadvaji Trikamji Acharya; Choukambha Sanskrit Samsthana, Varanashi Re-print(2010); p.558
4. VriddhaVagbhatt: Ashtanga Hrudaya with Commentaries of Sarvangasundara of Arunadatta & Ayurveda Rasayana of Hemadri edited by Pt. Hari Sadashiva Shastri Paradakara, Choukambha Sanskrit Samsthana, Varanashi Re-print(2012); p.300
5. Vagbhatt: Ashtanga Sangraha with Hindi Commentary, by Shri. Kaviraja Atrideva Gupta, Vol-1; Chowkhamba Krishnadasa Academy; Varanashi. p.223
6. Sharangadhara: Sharangdhar Samhita of Pandita Sarangadhara with Commentaries of Adhamalla Dipika & Kashirama-Gudharth Dipika, edited by Pandita Parashuram Shastri, Vidyasagar, Chaukhamba Publication, New Delhi, Re-print (2013). p.352
7. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya Sutrasthana 22/3-4, p.299
8. Ibid. Sushruta: Sushruta Samhita, Chikitsasthana 40/64, p.558
9. Ibid. Sushruta: Sushruta Samhita, Chikitsasthana 40/63, p.558
10. Ibid. Vriddha Vagbhatt: Ashtanga Hrudaya, Sutrasthana 22/1-4, p.298-299
11. Ibid. Vagbhatt: Ashtanga Sangraha, Sutrasthana 31/3, p.223
12. Ibid. Sharangadhara: Sharangdhar Samhita, UttaraKhanda 10/2-3 , p.352
13. Ibid. Vagbhatt: Ashtanga Sangraha, Sutrasthana 31/4, p.223
14. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Sutrasthana 22/10-11, p.299-300
15. Ibid. Vagbhatt: Ashtanga Sangraha, Sutrasthana 31/10-12, p.224
16. Ibid. Sharangadhara: Sharangdhar Samhita, UttaraKhanda 10/6-7, p.353
17. Ibid. Sharangadhara: Sharangdhar Samhita, UttaraKhanda 10/5 , p.352
18. Ibid. Sharangadhara: Sharangdhar Samhita, UttaraKhanda 10/19-20 , p.355
19. Ibid. Sushruta: Sushruta Samhita, Chikitsasthana 40/65-67, p.558
20. Yoga Ratnakara: Yogaratnakar Vidyitini Hindi commentary by Vaidya Lakshmi-pati Shastri, Edited by Bhisagratna Shri Brahmashankar Shastri, Reprinted, Chaukhamba Prakashana, Varanasi, (2013), p.58 [YR Nityapravrutti Prakarana 30-31]
Ibid. Vriddha Vagbhatt: Ashtanga Hrudaya, Sutrasthana 22/17, p.299-300
21. Agnivesh, Charaka Samhita, revised by Charaka and Dhridabala with the Ayurveda Dipika commentary of Chakrapanidatta, edited by Vaidya Yadvaji Trikamji Acharya, 5th edition, Chaukambha Sanskrit Sansthana, Varanashi (2001), p.42
22. Tripathi K.D; Essentials of Medical Pharmacology; Routines of Drug Administration, 4th edition Re-print; Jaypee Brothers Medical Publishers Pvt. Ltd. p.4-9
23. Marieb and Smiths: Essentials of Human Anatomy and Physiology, 10th edi-

- tion, Chapter 23, The Digestive System, page 840, 841
24. Ibid. Vriddha Vagbhatt: Ashtanga Hrudaya, Uttarasthana 20/1, p.846
 25. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/8, p.851
 26. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/13-14, p.851,852
 27. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/19,22, p.852
 28. Ibid. Sushruta: Sushruta Samhita, Chikitsasthana 22/38, p.483
 29. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/13, p.851
 30. Ibid. Sushruta: Sushruta Samhita, Chikitsasthana 22/11, p.482
 31. Ibid. Sushruta: Sushruta Samhita, Chikitsasthana 22/15, p.482
 32. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/35, p.853
 33. Ibid. Sushruta: Sushruta Samhita, Chikitsasthana 22/17, p.482
 34. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/39, p.853
 35. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/41, p.853
 36. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/43, p.853
 37. Ibid. Sushruta: Sushruta Samhita, Chikitsasthana 22/48, p.483
 38. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/46, p.853
 39. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/53, p.854
 40. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/59, p.854
 41. Ibid. VriddhaVagbhatt: AshtangaHrudaya, Uttarasthana 22/64, p.855
 42. Ibid. VriddhaVagbhatt: AshtangaHrudaya, Uttarasthana 22/73, p.855
 43. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/78, p.855
 44. Ibid. VriddhaVagbhatt: Ashtanga Hrudaya, Uttarasthana 22/107, p.858

45. Ibid. Sushruta: Sushruta Samhita, Chikitsasthana 22/60, p.483
46. Ibid. Sushruta: Sushruta Samhita, Chikitsasthana 22/73, p.484

Source of Support: Nil

Conflict Of Interest: None Declared

How to cite this URL: Dr. R B Hosamani: A Review On Gandusha: An Ayurvedic Therapeutic Procedure For Oral Disorders. International Ayurvedic Medical Journal {online} 2017 {cited September, 2017} Available from: http://www.iamj.in/posts/images/upload/746_754.pdf