



ISSN 2456-3110

Vol 5 · Issue 5

Sept-Oct 2020

Journal of
**Ayurveda and Integrated
Medical Sciences**

www.jaims.in

JAIMS

An International Journal for Researches in Ayurveda and Allied Sciences



Charaka
Publications

Indexed

An overview of *Shitada* vis-à-vis Gingivitis

N.S. Abegunasekara¹, K.P.P. Peiris²

¹Lecturer (Probationary), Dept. of Ayurveda Basic Principles, ²Senior Lecturer, Dept. of Shalya Shalakyas, Gampaha Wickramarachchi Ayurveda Institute, University of Kelaniya, Sri Lanka, INDIA.

ABSTRACT

The structures which hold the tooth in proper position are called as "Periodontium" comprising of gingiva, periodontal ligament, cementum and alveolar bone. It is like the stem of the tree or bony skeleton of a human; because it bears the responsibilities of giving full support to the tooth. The disease conditions like *Shitada*-Gingivitis will lead to tooth mortality by altering the contour and position of it. The general prevalence of Gingivitis (Inflammation of Gingiva) is 50% and incidence in Indian population is 45%. *Shitada* is an early stage of periodontal disease. It is caused by vitiated *Kapha* and *Rakta* which produces spontaneous bleeding from dark, slimy and soft gums with offensive odour and gum recession. In this study an effort is made to understand the concept of *Shitada* mentioned in Ayurveda with special reference to Gingivitis.

Key words: *Gingivitis, Periodontium, Shitada.*

INTRODUCTION

In developing countries, the diseases related with Periodontium (*Dantamula*) are a major oral health problem as well as major cause for tooth mortality. It occurs widely in most populations including both children and adults. The high general prevalence of gingivitis is 50% and this may be due to deficient oral health care, awareness at home and at school and various habits and injuries to the gums.

Periodontal diseases are mentioned in Ayurveda and that *Shitada* appears to correspond to the condition known today as gingivitis. The disease "*Shitada*" is the primary or early stage or disease condition of

Dantamulagata Roga which affects the *Dantavestha* (Gums). Ayurveda discuss about healthy gums as well as diseases that affect the gums. *Acharya Kashyapa* has described qualities of healthy gums (*Dantabandhana Sampata*) such as, *Sampata* (Evenness); *Raktata* (Coral Pink); *Snigdhatta* (Smooth); *Ghanamulata* (Dense); *Bruhanmulata* (Strong) and *Sthiramulata* (Steady).^[1]

The disease *Shitada* and Gingivitis both affect on Gingiva (*Dantavestha*). Their early diagnoses with proper management give better prognosis. While considering the symptomatology of *Shitada* like *Akasmata Rakta Srava* (Sudden bleeding from gums), *Mukhadaurgandhyata* (Halitosis), *Mridutata* (Sponginess), *Krishnata* (Discoloration), *Prakledata* (Moistness) and *Shiryamanata* (Gingival recession) can be correlated with Gingivitis. So the problem has been selected.

ETYMOLOGY

The word "*Shitada*" is composed of two words "*Shit*" and "*Aad*". The word "*Sheeta*" means cold and "*Aad*" means to eat. *Shitada* means eaten by cold or bitten by cold. The disease in which *Kapha* and *Rakta* gets vitiated and specially etiology is of *Kaphaprakopa* then disease is coined to be *Shitada*.^[2]

Address for correspondence:

Dr. N.S. Abegunasekara

Lecturer (Probationary), Dept. of Ayurveda Basic Principles, Gampaha Wickramarachchi Ayurveda Institute, University of Kelaniya, Sri Lanka, INDIA.

E-mail: nadeeabegunasekara@gmail.com

Submission Date: 11/09/2020 Accepted Date: 02/10/2020

Access this article online

Quick Response Code



Website: www.jaims.in

Published by Maharshi Charaka Ayurveda Organization, Vijayapur, Karnataka (Regd) under the license CC-by-NC-SA

Shitada is a disease caused by vitiated *Kapha* and *Rakta*, produces spontaneous bleeding from the gums, in which foul smelling, black, soft and sodden gums along with gum wasting.^[3]

“Gingiva” means gums, “itis” means inflammation. So, Gum inflammation is known as “Gingivitis”. Symptoms like *Mriduta* (Sponginess), *Krishnata* (Discoloration) occur due to inflammatory process.

NIDANA (ETIOLOGY)

The exact aetiology of *Shitada* is not mentioned in the classics, but general causative factors of the *Mukharogas* can be taken as the causative factors of *Shitada*.^[4] In addition to this the general causes of inflammation can be considered as the aetiological factors of *Shitada*.^[5] One of the important symptom of *Shitada* i.e. “*Shiryamanata*” (Gum Recession) of *Dantaveshta* (Gingiva) is mentioned as one of the complication of poisonous *Datuna* (Natural Tooth Brush),^[6] and also improper administration of *Vamana* (Emesis Therapy), *Virecana* (Purgation Therapy), *Dhumapana* (Medicated smoke), *Siravedha* (Blood Letting) etc. are considered as iatrogenic causes of *Kapha* and *Raktaprakopa*. *Shotha* (Oedema) can also occur when a person does not take care of personal oral hygiene. So, inadequate oral hygiene can be considered as a prime cause in *Shitada*. As *Samanya Nidana* (general cuses) like *Matsya* (fish), *Mamsa* (meat), *Guru* (Heavy), *Madhura* (sweet), *Shita* (cold), *Ruksha* (rough) food intake, *Atishitambu* (very cold water) intake etc. will lead to vitiation of *Kaphadosha* and similarly produce “*Ama*” (Undigested Food). This *Ama* formation precipitates to form *Dantamala* (Bacterial Plaque). And consumption of *Atikatu* (Pungent), *Amla* (Sour), *Lavana* (Saline), *Kshara* (alkaline) intake leads to vitiate the *Pitta Dosha* ultimately leads to cause *Raktadushti* (vitiation of blood). As *Shitada* is *Kapha Rakta Pradhanavyadhi* through *Rasa* and *Raktadhatu Ama* circulates through all over the body and mean time because of *Avakshaiya* (sleeping with head low position), *Avritamukhashayana* (sleeping with head covered by pillow), *Dantadhavanadvesha* (avoiding tooth brushing) as well as intake of sticky and more sugar

containing foods will leads to accumulate food debris in interdental areas and finally produces bacterial plaques and calculus with poor oral hygiene able to produce obstruction of channels helps to produce the disease like *Shitada*.

Further *Vagbhata* has explained that vitiated *Kapha* and *Rakta* is responsible for producing all *Dantamulagata Rogas*.^[7] On the basis of above description *Kapha*, *Pitta* vitiating factors can be considered as the aetiological factors for *Dantamulagata Rogas*. In the above view the aetiological factors can be classified as *Aharaja* (Dietary), *Viharaja* (Lifestyle) and *Manasika* (Mental).

The common etiological factors of *Dantamulagata Roga* listed in classics are.^[8,9]

Aharaja	Viharaja	Manasika
<i>Matsya Sevana</i> (Intake of fish)	<i>Avakshaiya</i> (sleeping with head low position)	<i>Krodha, Bhaya, Shoka</i> (feelings like temper, scared, sorrow)
<i>Ati Mamsa Sevana</i> (Excessive intake of meat)	<i>Ati Parshwa Shayana</i> (excessive sleeping on lateral position)	<i>Dantadhavanadvesha</i> (avoiding tooth brushing)
<i>Ati Katu, Amla, Lavana, Kshara sevana, Ikshu, Sukta, Phanitasevana</i> (excessive intake of pungent, acidic, saline, alkaline taste foods)	<i>Anuchita Dhuma</i> (unsuitable foam), <i>Chardhana</i> (vomiting), <i>Siravedha</i> (bloodletting)	<i>Vegavidharana</i> (retention of <i>vega</i>)
<i>Balamulaka, Masha, Dadhi, Kshira Sevana</i>	<i>Avrita Mukha Shayana</i> (sleeping with head covered by pillow)	
<i>Ati Shitambu Sevana</i> (use of very		

cold water)		
<i>Ati Tikshna, Ushna, Vidahi, Ahara Sevana</i>		
<i>Guru, Madhura, Shita, Ruksha Ahara Sevana, Mandagni (poor appetite)</i>		

According to the modern concept the main cause of gingivitis is bacterial plaque accumulation on the tooth surface. Plaque is a sticky gelatinous mass composed of bacteria and their byproducts in an extra cellular matrix, and also containing substances from the saliva, diet and serum. Its accumulation can be favored by a variety of local factors such as improper oral hygiene, calculus, food impaction, over hanging margins of restoration, overcrowding of teeth, decrease in dietary fiber content, increase in sugar consumption, more consumption of carbohydrate rich sticky foods and abnormal biting habits etc. which are causing physical injury to gums.^[10]

SAMPRAPTI (PATHOGENESIS)

Though the *Samprapti* of *Shitada* has not been explained directly in *Ayurvedic* classics, keeping in mind all the etiological factors explained under common etiology of *Mukharoga*. An attempt has been made here to formulate and explain the pathogenesis of *Shitada*. Even though factors responsible for vitiation of *Kapha* and *Rakta* are the main factors in the manifestation of *Shitada*, the etiological factors responsible for the vitiation of *Rasavaha* (Plasma), *Raktavaha* (Blood), *Mamsavaha* (Muscular tissues) *Srotas* (channels) and *Pitta Dosh*a play a definite role directly or indirectly in the pathogenesis of *Shitada*. Hence these factors should not be neglected.

Samprapti Ghataka of *Shitada*

- *Dosha* – *Kapha, Raktapradhana*
- *Dushya* – *Rasa, Rakta, Mamsa*
- *Srotas* – *Rasa Vaha, Raktavaha, Mamsavaha*

- *Srotodushti* – *Sanga, Atipravrti*
- *Agni* – *Jatharagnimandhya, Dhatwagnimandhya*
- *Rogamarga* – *Bahya*
- *Udbhavasthana* – *Amashaya*
- *Adhishtana* – *Dantaveshta*
- *Pratyatma Lakshana* – *Akasmat Raktasrava*
- *Sadhyasadhyata* – *Sadhya*.

Kapha and *Pitta* vitiation is the main culprit to initiate the pathology of *Shitada* (Gingivitis). Vitiation of these *Doshas* can take place due to the *Aharaja* (dietic) and *Viharaja* (lifestyle and environmental) factors. *Ashrayidhatu*s of *Kapha* and *Pitta* i.e. *Rasa, Mamsa* and *Rakta* will also get disturbed quantitatively and qualitatively due to instability of *Ashraya Doshas*. Vitiated *Rasa* and *Rakta* will cause the local manifestations like swelling (*Shopha*), black discoloration (*Krishnata*), sponginess (*Mriduta*) and moistness of gingiva (*Kledata*). Vitiated *Mamsa* and *Raktadhatu* will cause the instability of gingiva which will manifest as spontaneous bleeding (*Akasmatraktasrava*), gum recession (*Shiryamanata*) and moistness of gingiva (*Prakledata*).

Everyday a clear sticky film called plaque builds upon the surface of the tooth in the non-self-cleaning area of the teeth, particularly below the cervical convexity of the crown and in the cervical area. Many varieties of oral micro-organisms grow as a bio-film or plaque.

This is the first manifestation of gingival inflammation where vascular changes consisting essentially of dilatation of capillaries and increased blood flow. In most cases, a thorough professional cleaning and more attention to oral hygiene can reverse the inflammation and symptoms associated with gingivitis.

Toxins and enzymes liberated by bacteria contained in plaque food debris or calculus seen into the crevicular epithelium and underlying connective tissue and cause an irritation, break down of tissue constituents and inflammation. The soft tissue lesion in gingivitis characterized by three main types of reactions such as

vascular response, cellular response and immune response.^[11]

Due to vascular response, vessels become enlarged and proliferated and produce inflamed gingiva, further it enhanced by continuous migration of leukocytes in cellular phase and cells accumulates in the sulcular epithelium.

In immune response phase predominates with lymphocytes and plasma cells which generates mediators like cytokines and further enhanced inflammation and tissue damage.

Purvarupa of Shitada

No specific *Purvarupa* has been mentioned in *Shitada*. Hence, here slight appearance of manifestation can be taken as *Purvarupa* of *Shitada*, which includes excessive salivation, halitosis, altered taste sensation etc.

Rupa (Symptomatology)

The main symptoms of gingival inflammation are gingival bleeding, gingival inflammation associated with swelling, discoloration, moistness, sponginess, gingival recession and halitosis. Gingival bleeding is the main and earliest visual sign of gingivitis and it varies in severity and duration. Bleeding can be present suddenly, when probing or without any cause. It is provoked by mechanical trauma or by biting solid foods, tooth brushing, tooth picks and food impaction. Due to increased friability of the capillary walls it arises.

Acharya Sushruta and *Vagbhata* both have described the following *Lakshanas* (Features) of *Shitada*.^[12,13]

Akasmat Raktasrava

Due to certain *Nidana Sevanas* like *Atilavana*, *Kshara*, *Amla*, *Katu rasa*, *Ushna*, *Tikshna*, *Vidahi Ahara*, *Kulattha*, *Masha*, mental factors like indulge greatly in anger, sorrow, fear, excitement etc. vitiates the *Rasa* (Plasma) and in turn aggravate the *Pitta*, when this *Pitta* is further vitiates by indulgence in *Tikta* (Bitter), *Ushna* (Hot) etc. food items it further vitiates the blood.^[14] Therefore, quality of *Dravata* (Liquidity) in

Pitta and *Rakta* will affect more and later *Rakta* will become more *Tanu*.^[15]

Simultaneously, due to association of certain general causes of *Mukharoga Kaphadosha* also become vitiated, and accompanied with the vitiated *Pitta-Rakta* and it attains specific affinity towards *Urdhvajatru* to localize and manifest the disease.^[16]

Further, *Acharya Sushruta* has also mentioned that when *Rakta* get vitiated due to *Pitta*, the quality of *Skandana* (clotting property) in *Rakta* will be disturbed.^[17] Due to above reasons later spontaneous bleeding can occur.

Prakledata

Pitta is the only *Dosha* which is responsible for the feature of *Kledata* in *Dhatu*.^[18] On the principles of *Ashrayashryi Bhavas* *Pitta* can vitiate *Rakta* and directly produces *Kledata* in *Rakta*.^[19] It is evident that when vitiated *Pitta* gets localized in *Mamsa* (Muscular Tissue), the ultimate result is *Mamsa Kledata*^[20] i.e. *Kledatva* of *Mamsa*. Review of forty types of *Nanatmaja Viyadhis* of *Pitta*, shows *Shonita Kledata* and *Mamsa Kledata*. So the manifestation of *Kledata* in *Shitada* is due to the action of *Pitta dosha* in *Rakta* and *Mamsa Dhatu*.

Shiryamanata

According to *Kashyapa Samhita*, embryologically the gingiva is originated from *Rakta Dhatu*. *Kapha Dosha* is the responsible factor for maintaining the stability of all body tissues.^[21] So it is evident that normal *Rakta* and *Kapha* will maintain the normal color and contour of the gingiva.

It is clearly mentioned in classics that all the *Mukharogas* especially *Dantamulagata Rogas* are produced by the vitiated *Kapha* and *Rakta*. Instability of *Sthiraguna* (Immobility) will cause the *Shithilata* of *Sandhibandana* especially the gingival sulcus and interdental papillae will lead to the *shiryamanata* i.e. gum recession. It is specially found in chronic gingivitis.

Daurgandhyata

Pitta Dosha is responsible for the production of smell in the body. Naturally *Pitta* is having *Visragandha* i.e.

Daurgandhyata (Foul odour) which is compensated by the amount of other *Doshas* to maintain the natural body odour. It is evident further prominently as bad smell in *Pitta Prakriti* persons where *Pitta* is dominating than other *Doshas*.

In *Shitada* vitiated *Amayukta Pitta* along with vitiated *Raktawill* play the role of production of *Daurgandhyata*. *Vagbhata* also mentioned that *Amayukta Pitta* is responsible for bad odour.^[22] The production of feature like *Nishwasa Vaigandhyata* in *Pittajajwara* can also be explained due to the involvement of *Ama* and *Pitta* in the pathology. Further, *Acharya Charaka* has also quoted that *Asyagandhyata* (Halitosis) is produced due to vitiated *Rakta*.^[23]

Mriduta and Krishnata

Maintenance of *Dehamardava* or softness of body tissues is the function of *Pitta*.^[24] During the analysis of *Shophasamprapti* (Pathogenesis of Inflammation) the main factors involved in the pathology are *Rasa*, *Rakta Dhatus* along with *Kapha Pitta Doshas*. Further the *Nidanas* mentioned for *Mukharogas* like *Amlasevana*, *Guru Ahara*, *Dadhi*, avoiding *Dehashuddhi* specially *Raktamokshana* etc. are also responsible for the production of *Shopha* (Inflammation) especially *Pittajashopha*. Due to the specified *Nidanas* this *Shopha* will manifest in gingiva and make the gingiva very soft, which is the characteristic feature of *Pittajashopha*.^[25] The other features of *Pittajashopha* also will manifest in the gingiva like *Raktabhasa* (severe redness), *Kledata*, *Sitakamita* (Desire of taking cold food items), bad smell (halitosis), *Sparshasahatwa* (intolerance to touch) and *Krishnata*.

Gingivitis is an inflammation of the gingival tissues, which is the most prominent soft tissue part of the tooth supporting structures. It may occur in an acute, sub-acute or chronic form. The severity of the gingivitis depends upon the symptomatology, duration and frequency of the local irritations and the resistance of the oral tissues. Chronic gingivitis is extremely common and in older dentulous patients is nearly universal in occurrence.^[26]

Periodontal disease begins as gingivitis, an inflammation of marginal gingiva, starts primarily with gingival bleeding, alteration of nature and color of gingiva followed by inflammatory signs such as discoloration, sponginess, moistness etc. This condition usually progresses, if untreated or treated improperly; it converts into destructive chronic periodontitis or advance gum disease which affects the other supporting structures (cementum, periodontal ligament and alveolar bone) of the tooth. Ultimately they lead to loss of teeth and consequent crippling of oral cavity, causing oral and general health problems.

Gingival inflammation produces changes in its color, contour, consistency, position and surface texture due to vascular and cellular responses. Due to immune response tissue damage may occur and produces gingival recession.

MANAGEMENT OF SHITADA

As general, *Dantaveshta* i.e. gums is an associated tissue of muscles, hence, in diseases like *Shitada*; *Ahara*, *Vihara*, *Dantyarasayana* (Dental tonic) and *Aushada* which acts on muscular tissue are useful i.e. *Patola* (*Trichosanthus cucumerina*), *Nimba* (*Azadirachta indica*), *Triphala* (*Terminalia chebula*, *Terminalia bellerica*, *Phyllanthus emblica*), *Musta* (*Cyperus rotundus*), *Kutaja* (*Holarrhena antidysenterica*), etc. should be given orally in the form of decoction or in medicated ghee form. Apart from this *Dantya Rasayana* i.e. dental tonics which includes *Bakula* (*Mimusops elengi*) fruits, *Kakoli*, *Haritaki* (*Terminalia chebula*), Black sesame seeds (*Sesamum indicum*), *Nyagrodha* (*Ficus bengalensis*), *Arjuna* (*Terminalia arjuna*) etc. should be administered to increase the strength and stability of the tooth supporting structures as curative measure in disease condition like *Shitada*. Its management can be broadly classified into local and systemic measures.

The local measures^[27] of *Shitada* are *Raktamokshana*, *Pratisarana*, *Pralepa*, *Gandusha* and *Nasya*. Here it begins with *Raktamokshana* to relieve *Raktadushti*. It can be done with *Jalauka*, *Alabu* and *Shringa*. The main idea behind *Raktamokshana* is to remove

impure blood from the affected area, followed by local application of drugs by rubbing or *Pratisarana* of certain drugs like *Musta*, *Arjunatwak*, *Triphala* with honey or drugs like *Kasisa*, *Lodhra* (*Symplocos recemosa*), *Manahshila*, *Priyangu* etc. used in the form of paste or *Lepa*.

To reduce the *Shotha*, *Gandusha* and *Kavala* are beneficial such as *Babbula Twak Kwatha*, *Musta*, *Arjunatwak*, *Triphala*, *Priyangu*, *Rasanjana*, and *Shunti* (*Zingiber officinale*) *Kwatha* etc. In *Shitada* drugs like *Triphala*, *Yashtimadhu* (*Glycyrrhiza glabra*), *Utpala* etc. are useful in the form of *Ghrita* or *Taila* for *Nasya* for *Sirashudhi* because it is *Kapha* dominant disease therefore, to open the channels for better absorption of drugs.

As systemic measures, *Nidana Parivarjana* or avoidance of aetiological factors is very important for that avoiding the *Atisheeta*, *Atiushna*, *Atisnigdha Ahara* and *Vihara* like improper cleaning of the oral cavity, improper brushing methods which cause trauma to the oral cavity are also to be avoided and applying common line of treatment according to *Bala*, *Dosha*, and *Kala* can be taken as the common measures to treat *Shitada*. *Deepana* and *Pachana* should be the first line of treatment. If vitiated *Doshas* are excessive then *Vamana* and *Virechana* should be done.

In dentistry main emphasis in Gingivitis is control of inflammation, infection and local irritants like plaque and calculus. Scaling and polishing is a procedure can be performed to remove local irritants, other than that oral irrigation also useful. As additional measure anti-inflammatory medicaments as systemic or local measures can be applicable.^[28] But Ayurveda considers involve *Doshas*, status of *Agni*, *Srotas* and *Prakriti* of the patients etc. so that the root cause of disease is corrected.

CONCLUSION

So in nutshell, by considering the previous research works the local therapeutic *Yogas* like *Pratisarana* i.e. *Bhadramustadi Choorna*, *Dashana Samskara Choorna*, *Lodradi Choorna* etc. are much more effective for

complete cure of the disease *Shitada* - Gingivitis. By virtue of the *Katu*, *Kashaya*, *Tikta Rasa* and *Ushna* properties these recipes are useful to decrease the level of aggravated *Kapha* and *Pitta* in the gum tissues not only that but also all the drugs of above *Yogas* are proved by research for their anti-inflammatory, anti-bacterial and anti-microbial properties. As *Gandusha* like *Nagaradi Kwatha*, *Triphala + Sphatika Jala*, *Irmedadi Taila*, *Sahacharadi Taila* etc. are already proven formulations for the preservation of periodontal health. Because of the ingredients of *Gandusha* are *Mukhadaurgandyahara*, *Shothahara* hence by virtue of cleansing action and anti-inflammatory property. So it may act on microorganisms and might be helpful in alleviating the disease *Shitada* – Gingivitis. Although *Gandusha* increases the efficacy of *Pratisarana* and help to disintegrates the pathology of *Shitada*. From above descriptions and evidences it can be concluded that “*Shitada-Gingivitis*” is main disease problem effect on oral health. But due to lack of awareness among patients it is not showing as burning problem. However, Ayurvedic management is able to provide a holistic approach to this disease in all the aspects i.e. preventive and curative.

ACKNOWLEDGMENT

Authors convey their thanks to Prof.M.S.Baghel (Director) and Prof.R.R.Dviwedi (Dean), Dr.Rajagopala, (Prof. K.B. Dept.), Dr. M. Rajagopala (Prof. Shalakyia Dept.), I.P.G.T.&R.A. Gujarat Ayurved University, Jamnagar, India for their critical views and valuable suggestions on this manuscript.

REFERENCES

1. Tewari P.V., (2008); Kasyapa Samhita or Vrddhajivikiya Tantra (Text with English Translation and Commentary), Chaukhamba Visvabharati, Varanasi, Sutra Sthan 20.
2. Vaidya Dayal Parmar,(2004-05); Shalakyia Tantra, Saraswathi Pusthak Bhandar, Ahmedabad,pg.709
3. Dalhana on Sushruta, Sushruta Samhita, with the Nibandha sangraha Commentary of Sri Dalhanacharya, edited by Vaidya Yadavji Trikamji Acharya,(2008);

- Chaukhambha Orientalia, Varanasi, 4th Edition; Nidana Sthana 16/14-15.
4. Vagbhata-Ashtanga Hridayam with Commentaries Sarvangasundara of Arunadatta and Ayurvedarasayana of Hemadri, edited by Pt. Bhaisagacarya Harishastri Paradkar Vaidya,(2007), Krishnadas Academy, Varanasi, Uttarasthan 21/1-2.
 5. Agnivesha, Charaka Samhita, revised by Charaka and Dhridabala with the Ayurveda Dipika Commentary of Cakrapanidatta, edited by Vaidya Yadavji Trikamji Acharya,(2008); Chaukhambha Sanskrit Sansthan, Varanasi, 5th Edition, ChikitsaSthan 21/1-2.
 6. Agnivesha, Charaka Samhita, revised by Charaka and Dhridabala with the Ayurveda Dipika Commentary of Cakrapanidatta, edited by Vaidya Yadavji Trikamji Acharya,(2008); Chaukhambha Sanskrit Sansthan, Varanasi, 5th Edition, ChikitsaSthan 23/16-18.
 7. Vrddha Vagbhata – Ashtanga Samgraha with Commentary of Sasilekha by Indu, Edited by Dr. Shivprasad Sharma,(2006); Chowkhambha Sanskrit Series Office, Varanasi; UttaraTantra, 26/62.
 8. Vagbhata-Ashtanga Hridayam with Commentary of Nirmala, Edited by Dr. Brahmanand Tripathi, (2007); Chaukhambha Sanskrit Pratishthan, Delhi, UttaraSthan 21/20.
 9. Vrddha Vagbhata – Ashtanga Samgraha with commentary of Sasilekha by Indu, Edited by Dr. Shivprasad Sharma,(2006) Chowkhambha Sanskrit Series Office, Varanasi; Uttara Tantra, 25/2-3
 10. Shantipria Reddy,(2008) Essentials of Clinical Periodontology and Periodontics, Jaypee Brothers Medical Publishers (P) Ltd.; 2nd Edition;chapter 6,7 pg.57-75.
 11. VarmaB.R.R., NayakR.P.(2009),;Clinical Periodontology; Arya(Medi) Publishing House, New Delhi; 2nd Edition.
 12. Vagbhata- Ashtanga Hridayam with Commentary of Nirmala, Edited by Dr. Brahmanand Tripathi,(2007) Chaukhambha Sanskrit Pratishthan, Delhi, Uttara Sthana21/1-2.
 13. Vrddha Vagbhata – Ashtanga Samgraha with Commentary of Sasilekha by Indu, Edited by Dr. Shivaprasad Sharma,(2006), Chowkhambha Sanskrit Series Office, Varanasi, Uttara Tantra,25/24
 14. Dalhana on Sushruta, Sushruta Samhita,with the Nibandhasangraha Commentary of Sri Dalhanacharya, Edited by Vaidya Yadavji Trikamji Acharya,(2008) Chaukhambha Orientalia, Varanasi, 4th Edition, Nidana Sthan 16-14Niyaya Chandrika Commentary.
 15. Agnivesha, Charaka Samhita, revised by Charaka and Dhridabala with the Ayurveda Dipika Commentary of Cakrapanidatta, edited by Vaidya Yadavji Trikamji Acharya (2008), Chaukhambha Sanskrit Sansthan, Varanasi, 5th Edition; Sutra Sthan 24/20.
 16. Agnivesha, Charaka Samhita, revised by Charaka and Dhridabala with the Ayurveda Dipika Commentary of Cakrapanidatta, edited by Vaidya Yadavji Trikamji Acharya (2008), Chaukhambha Sanskrit Sansthan, Varanasi, 5th Edition; NidanaSthan 2/8.
 17. Dalhana on Sushruta, Sushruta Samhita, with the Nibandha sangraha Commentary of Sri Dalhanacharya, edited by Vaidya Yadavji Trikamji Acharya,(2008) Chaukhambha Orientalia, Varanasi, 4th Edition; Sutra Sthan - 14/21.
 18. Vrddha Vagbhata - Ashtanga Samgraha with Commentary of Sasilekha by Indu, Edited by Dr. Shivprasad Sharma,(2006); Chaukhambha Sanskrit Series Office,Varanasi, Sutra Sthan 20/21.
 19. Vrddha Vagbhata - Ashtanga Samgraha with Commentary of Sasilekha by Indu, Edited by Dr. Shivprasad Sharma,(2006); Chaukhambha Sanskrit Series Office,Varanasi, Sutra Sthan 19/13.
 20. Vrddha Vagbhata - Ashtanga Samgraha with Commentary of Sasilekha by Indu, Edited by Dr. Shivprasad Sharma,(2006); Chaukhambha Sanskrit Series Office,Varanasi, Sutra Sthan 20/16.
 21. Vagbhata-Ashtanga Hridayam with Commentary of Nirmala, Edited by Dr. Brahmanand Tripathi;(2007) Chaukhambha Sanskrit Pratishthan, Delhi, Sutra Sthan 1/12.
 22. Vrddha Vagbhata – Ashtanga Samgraha with commentary of Sasilekha by Indu, Edited by Dr. Shivprasad Sharma,(2006) Chowkhambha Sanskrit Series Office, Varanasi; SutraSthan 21/18
 23. Agnivesha, Charaka Samhita, revised by Charaka and Dhridabala with the Ayurveda Dipika Commentary of Cakrapanidatta, edited by Vaidya Yadavji Trikamji Acharya,(2008); Chaukhambha Sanskrit Sansthan, Varanasi, 5th Edition,; Sutra Sthana 24/11.

24. Vrddha Vagbhata – Ashtanga Samgraha with Commentary of Sasilekha by Indu, Edited by Dr. Shivprasad Sharma,(2006); Chaukhambha Sanskrit Series Office, Varanasi; Sutra Sthana 19/2.
25. Agnivesha, Charaka Samhita, revised by Charaka and Dhridabala with the Ayurveda Dipika Commentary of Cakrapanidatta, Edited by Vaidya Yadavji Trikamji Acharya,(2008); Chaukhambha Sanskrit Sansthan, Varanasi, 5th Edition,; Chikitsa Sthana 12/5.
26. Carrenza and Newman,(1996) Clinical Periodontology, Prism Books (Pvt.) Ltd., Banglore, 8th Edition.
27. Dalhana on Sushruta, Sushruta Samhita, with the Nibandha sangraha Commentary of Sri Dalhanacharya, edited by Vaidya Yadavji Trikamji Acharya,(2008),

Chaukhamba Orientalia, Varanasi, 4th edition; Chikitsa Sthana –22 / 10-12.

28. Carrenza and Newman,(1996) Clinical Periodontology, Prism Books (Pvt.) Ltd., Banglore, 8th Edition, Chapter 03 pg. 85-89.

How to cite this article: N.S. Abegunasekara, K.P.P.Peiris. An overview of Shitada vis-à-vis Gingivitis. J Ayurveda Integr Med Sci 2020;5:342-349.

Source of Support: Nil, **Conflict of Interest:** None declared.

Copyright © 2020 The Author(s); Published by Maharshi Charaka Ayurveda Organization, Vijayapur (Regd). This is an open-access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.