



TOPIC: A REVIEW OF LITERATURE ON DANTAVESHTAK (PERIODONTITIS)- DANTAMULGAT VYADHI.

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INTRODUCTION

Shalakyatantra is a specialized branch of *Ashtanga Ayurveda* deals with the causes, diagnosis, and curative procedures of the diseases about the head, ear, nose, eye, orodental and throat. The name of the branch is so called because of its excessive use of 'Shalaka' for treatment.^[1]

The Mukha i.e. oral cavity works as a reflector of the body health by acting as a gateway of the alimentary canal & in that way it is considered to be one of the most important parts of the Urdhwajatru.

In *Sutrasthana*, *Charaka* & *Sushruta* have given guidelines for daily care of the oral cavity under the heading *Dincharya*. Negligence of oral care may give rise to different oral diseases.

In *Nidan Sthana*, *Sushruta* has described the 65 *Mukha Rogas*. Diseases of the oral cavity are found to attack seven different locations viz, lips, gums, teeth, tongue, palate, throat & entire oral cavity. Teeth & gums are an important part of the oral cavity. *Acharya Sushruta* has mentioned 15 *Dantmulgat Rogas* & *Dantaveshtak* is one of them.^[2]

In *Dantaveshtak* – Bleeding/pus in gum, movable teeth these clinical features are seen.^[3]

DANTAVESHTAK

While describing the disease, *Sushruta* has told that vitiated *Rakta* gets accumulated in *Dantaveshtak* (gums) and give rise to *Raktamishrita Puyastrava* (Bloody & purulent discharge) from gums & loosening of teeth.^[4]

Nidana Panchaka of Dantaveshtak

The General causative factor of *Mukharogas* like *Kaphaprakopak* & *Raktaprakop* can be considered as the causes of "Dantaveshtak."

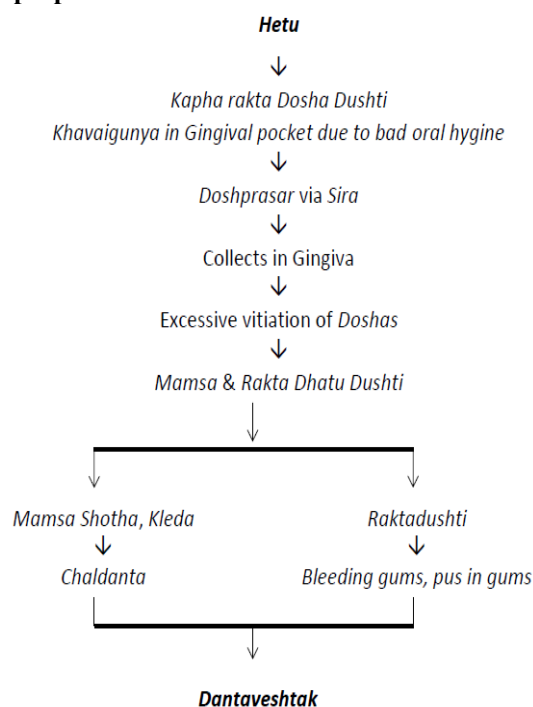
Similar to *Acharya Sushruta*, *Vagbhata*, *Acharya Madhava*, *Bhavamishra* & *Yogratnakar* have the same description of *Dantaveshtak*.

Dosh Dushti - According to *Sushruta* –*Kapha* and *Rakta dushti*. Similar to *Acharya Sushruta*, *Vagbhata*, *Acharya*

Madhava, *Bhavamishra* & *Yogratnakar* have the same description of *Dantaveshtak*.

Dushya - *Mamsa* and *Rakta*.

Samprapti of Dantaveshtak



Rupa

While describing the disease, *Sushruta* has told that vitiated *Rakta* gets accumulated in *Dantaveshtak* (gums) and give rise to *Raktamishrita Puyastrava* (Bloody & purulent discharge) from gums & loosening of teeth.^[5]

Chikitsa

Different treatment modalities like *Raktavistravan*, *Nasya*, *Pratisaran* & *Gandush* have been described for the management of *Dantaveshtak*.^[6]

Disease Review (Modern)

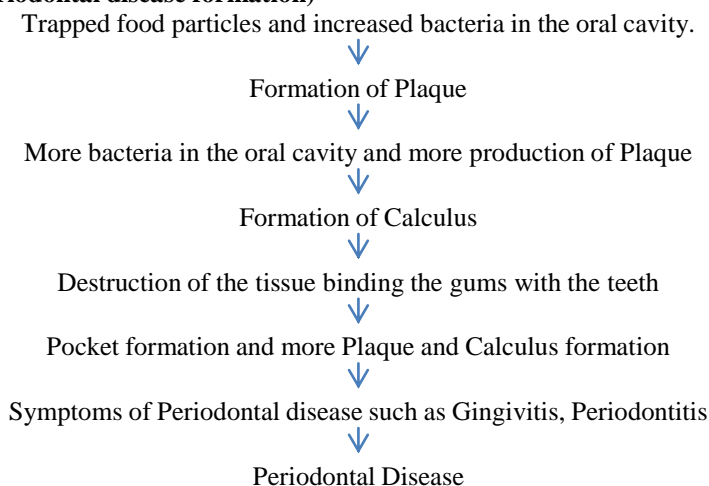
Periodontal disease, also known as gum disease, is a set of inflammatory conditions affecting the tissues surrounding the teeth. In its early stage, called gingivitis, the gums become swollen, red, and may bleed. In its more serious form, called periodontitis, the gums can pull away from the tooth, bone can be lost, and the teeth may loosen or fall out. Periodontal disease is generally due to bacteria in the mouth infecting the tissue around the teeth.

CAUSES OF PERIODONTAL DISEASE

The main causes of Periodontal disease are the Bacterial Plaque, a sticky colourless film that constantly forms on the teeth.

Following factors also affects the gum health

1. **Smoking and Tobacco use:** Smoking and tobacco

Pathology (Process of Periodontal disease formation)**PERIODONTITIS**

Periodontitis is often known as ‘Gum Disease’ and is a very common condition in which the gums and deeper periodontal structures become inflamed. This inflammation of the gums, which usually takes the form of redness, swelling and a tendency to bleed during tooth brushing, is the body’s response to certain bacteria that have been allowed to accumulate on the teeth. Although part of the body’s defense system, this inflammatory response can eventually cause serious damage. If left unchecked, the inflammation can spread down below the gums and along with the roots of the teeth, destroying the periodontal ligament and the supporting bone. This ultimately leads to the loosening and potential loss of the teeth.

Periodontitis is inflammation of the gums and supporting structures of the teeth. It is one of the most common

use are the most significant risk factors in the development of Periodontal disease.

2. **Genetic:** 30% of the population may be genetically susceptible to gum disease.
3. **Pregnancy and puberty:** In puberty, menopause and in pregnancy the body hormones change, which causes effects on many tissues including gums.
4. **Stress:** Stress is linked to serious conditions and is also a risk factor for Periodontal disease.
5. **Medication:** Some drugs such as oral contraceptives, antidepressants and certain heart medicines can also affect oral health.
6. **Diabetes:** Diabetes is at a higher risk for developing infections including Periodontal disease.
7. **Poor Nutrition:** Low nutrients can compromise the body’s immune system and harder to fight Periodontal infection. Periodontal infection is a serious infection.

human diseases. Periodontitis is caused by certain bacteria (known as periodontal bacteria) and by the local inflammation triggered by those bacteria. Although these periodontal bacteria are naturally present in the mouth, they are only harmful when the conditions are right for them to increase dramatically in numbers. This happens when a layer of bacteria and food debris, known as plaque, builds up and is left undisturbed on the teeth, commonly in hard to reach areas such as between the teeth.^[7]

The more dangerous bacteria can thrive and multiply, producing some harmful by-products that stimulate the body’s defensive progress, chronic inflammation causes the bone of the jaw to be destroyed and the teeth to be lost. In many people, this is a gradual process that takes place over many years and if detected and treated, can be halted. However, some young adults have a very active form of the disease which causes early loosening and

loss of the teeth.

Periodontitis always begins with inflammation of the gums, known as gingivitis. This is not always easy to recognize but one of the first signs that you may become aware of is bleeding from the gums when you brush your teeth. The gums may look red and swollen and you might notice a discoloured layer of bacterial plaque on the teeth.

Left untreated gingivitis may progress to periodontitis, often without any obvious sign to alert you. However, some changes that you might experience over time include increased bleeding from the gums, which may be provoked by brushing or eating, or even be spontaneous; bad breath; changes in the positioning of the teeth in the jaws, lengthening of the teeth (gum recession) and possibly pain. Bleeding from the gums may be less noticeable in smokers, because of the effect of nicotine on blood vessels and also so the disease process may be marked.

CAUSES

A healthy mouth is colonized by more than 700 different species of bacteria, most of which are completely harmless and live in harmony with their host. However, when tooth cleaning is not thorough enough, the bacterial deposits build up next to the gums, forming a plaque, and the conditions become suitable for more dangerous bacteria to flourish. The natural defenses of the body are also compromised.

In all cases, periodontitis is caused by the build-up of bacteria in the form of dental plaque. If the soft bacterial plaque is not removed by brushing, minerals are deposited within it over time and it becomes a hard deposit on the tooth called tartar. The presence of tartar encourages the growth of the bacterial plaque towards the tooth roots. As the inflammation progresses deeper the attachment of the gums to the root is disrupted and a gap or periodontal pocket is formed between them. This pocket is an ideal place for harmful bacteria to colonize and in which to multiply, therefore driving the disease process forward. In their new habitat, the bacteria release toxins as products of their metabolism, which further trigger the body's defense mechanism.

The severity and speed of progression of periodontitis depend upon the balance of several factors; the number and type of bacteria present how strong the individual's defense mechanisms are and the presence or absence of certain risk factor, for example, the more aggressive the bacteria and the weaker the immune response of the patient, the more active will be the disease. Added to that, some risk factors, such as smoking or diabetes, can further weaken the body's defenses and speed up the disease process. In the same way, certain drugs, such as antihypertensive or vasodilating agents and immunotherapy, affect the inflammatory response to plaque and make patients more susceptible to gingivitis. However, it is important to recognize that, without the

accumulation of bacterial plaque, periodontitis will not occur.

RISK FACTORS

Several factors increase your chance of developing periodontitis and make it more likely to progress. Well-known risk factors include stress, some systemic diseases such as diabetes, and most importantly smoking.

Smoking and periodontitis

Smokers are significantly more likely to develop periodontitis than non-smokers.

Periodontal treatments (such as gum/bone graft and implants) are less successful in smokers than nonsmokers due to poorer healing.

Periodontitis progresses much faster, with more rapid tooth loss in smokers.

Of cases of periodontitis which does not respond to treatment, about 90% are in smokers.

PREVENTION OF PERIODONTAL DISEASE

Periodontal inflammation is not inevitable. The development of gingivitis and periodontitis can be prevented by adopting thorough oral hygiene habits, alongside regular professional examinations and support.

The basic elements of a good oral hygiene regime are

Cleaning the chewing surfaces and sides of the teeth twice daily, with a toothbrush (of an appropriate size and in good condition) and toothpaste.

Cleaning the spaces between the teeth where the toothbrush bristles cannot reach, using either dental floss or an interdental brush, depending on the size of the space. This should be done once daily.

Dental floss should be used where the teeth are close together, with little or no space between them, while interdental brushes are suitable for larger gaps. Special care should be taken to clean thoroughly around crooked or crowded teeth, or around fillings, crowns and dentures, as plaque accumulates readily in these places and access might be limited.

Antibacterial mouthwashes are a useful supplement to brushing, as they inhibit bacterial growth and dampen inflammatory changes. They should be used after tooth brushing.

If, as a result of an inadequate cleaning technique, plaque deposits are left on the teeth, these will become mineralized and turn into hard, fixed deposits (calculus, commonly known as tartar) that cannot be removed with a toothbrush. Your dentist or periodontitis will identify these tartar deposits during your regular dental inspection and remove them as part of a professional clean. After the deposits are removed, the teeth are polished with special pastes and cups to create a smooth surface that is less likely to accumulate plaque.

TREATMENT

With careful assessment and treatment, it is usually possible to completely halt the progress of periodontitis. The key to success is to eliminate the bacterial plaque which is triggering the disease process and to establish excellent oral hygiene practices.

Oral hygiene instruction and advice

The oral hygiene phase of treatment aims to reduce the number of bacteria in the mouth and therefore reduce the level of inflammation. The most appropriate tooth brushing technique and the correct use of dental floss and interdental brushes.

Professional cleaning

All soft deposits will be removed from accessible areas of the teeth and the teeth polished and treated with fluoride. Depending on the improvement seen in plaque control and gum health, further instruction and cleaning may be carried out in subsequent visits. The next step would be for your practitioner to remove all bacterial deposits and tartar from the root surfaces and gingival pockets.

Antibiotic Therapy

In some cases, with or without microbiological evaluation, antibiotics are prescribed to deal with active or persistent gum infections, which have not responded to oral hygiene measures.

Reassessment

After several weeks, your dentist or periodontist will make a full assessment of your gums to check the progress of your treatment. A special instrument called a periodontal probe is used to record the depth of any periodontal pockets and check for bleeding from gums. If periodontal pockets still present, further treatment options may be suggested, including surgical corrective therapy.

Corrective (surgical) treatment

Sometimes, a surgical procedure is carried out to clean away plaque bacteria and deposits that are under the gum within periodontal pockets and on the root surfaces at the furcations (where the roots diverge). These areas are inaccessible to brushes and floss and inflammation will persist in these sites as long as bacteria are allowed to colonize them. Under local anesthesia, the gum is lifted away and the root surfaces are cleaned under direct vision to ensure that all bacteria are removed. Sometimes, it is possible to treat bone loss at the same time using a special regenerative treatment. At the end of the procedure, the gums are sutured back into the place around the teeth.

Aftercare-supportive periodontal therapy

The long term success of periodontal treatment depends both on your efforts with oral hygiene and those of the practice team who provide your regular care and ongoing assessment. After the first phase of treatment has been

completed, your dentist will need to review the condition of your gums at regular intervals to check that the inflammation has been halted. The frequency of your follow-up appointments will depend on the severity of the disease and your risk of disease progression. Usually, follow-up visits are scheduled every three to six months.^[8]

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