



# "The natural medication for peridontal Disease ": A review

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## Abstract:-

A broad spectrum of inflammatory disorders known as periodontal diseases lead to the degeneration of the periodonum, which in turn affects all of the tooth's supporting tissues, including the cementum, gingiva, and alveolar bone, and is ultimately followed by tooth loss.

According to the WHO information sheet on "Oral health," 3.5 billion people worldwide are afflicted with oral disorders. In many nations, oral disorders resulting from inadequate dental hygiene are the cause of significant health costs that can last a lifetime, inflict excruciating pain, or even result in death. Oral cancer can also arise as a result of poor oral hygiene.

Furthermore, smoking and diabetes significantly raise the risk of dental illnesses. Certain phytoconstituents from plants that are referred to as herbal therapies have been shown to be far safer and more effective than synthetic or conventional medications. Herbal therapies with antibacterial, anti-inflammatory, and antioxidant qualities are preferable to antibiotics when treating periodontitis.

The disease's severity varies according to its chronological stages and risk factors. Maintaining dental hygiene on a daily basis leads to prevention. There are a number of surgical and non-surgical options available to manage the development of microbial biofilm.

## Keywords:-

periodontitis; herbal therapies; antibacterial; anti-inflammatory; antioxidant and anti microbial effect; traditional plant

## 1.Introduction:-

An infection of the periodontium is called periodontitis. Since "dont" denotes a tooth and "itis" denotes inflammation, the name "periodontitis" as a whole denotes chronic inflammation of the gingiva, periodontal ligaments, alveolar bone, and dental cementum. Meanwhile, the word "perio" refers to gingiva and other tissues surrounding teeth.<sup>[1]</sup> The teeth that are supported by bone and gums are referred to as periodontal disease. Poor dental hygiene affects these teeth, leading to inflammation and the development of bacterial plaque, which ultimately results in tooth loss. One of the mildest types is gingivitis.<sup>[2]</sup> Parts of plants or other plant components thought to have therapeutic effects are used as active ingredients in herbal medicines, which include herbs, herbal preparations, and completed herbal products. Grandmothers and other older ladies have long talked to us

about their homemade remedies for various illnesses.<sup>[3]</sup> In reality, About 80% of the worldwide population utilize herbal products for their fundamental health care (primary care) such as extracts, teas and other active principles, a market estimated at US\$ 50 billion each year.<sup>[4]</sup>

## 2.The pathophysiology:-

understanding The main cause of periodontitis is the buildup of bacterial plaque on teeth, which allows facultative and anaerobic bacteria to colonize subgingival regions *Treponema denticola*, *Tannerella forsythia*, and *Porphyromonas gingivalis* are important bacterial species that have been linked to the emergence of a dysbiotic microbial community. The overabundance of bacteria induces an immune-inflammatory reaction in the host, leading to the release of pro-inflammatory cytokines like matrix

metalloproteinases (MMPs), tumor necrosis factor-alpha (TNF- $\alpha$ ), and interleukins (IL-1 $\beta$ , IL-6). The deterioration of the periodontal ligament and bone resorption are brought on by these mediators.

It can be stopped in its tracks by practicing proper oral hygiene, but if plaque is not removed in a timely manner, tartar or calculus will form and will not go away with a toothbrush or floss. Bacteria begin attacking deeper tissues as a result of this tartar, which weakens the periodontal ligaments around teeth and causes alveolar bone resorption.<sup>[5]</sup> Periodontitis, often known as periodontal disease, is the primary term for the ailment that causes a space known as a "periodontal pocket" between the gingiva and the teeth. The development of microbial plaque determines the severity of this illness.<sup>[6]</sup>

Many techniques have been used for this disease's screening and assessment, leading to the determination of the periodontal ligament's degree of severity. There are numerous techniques available to diagnose periodontal disease, including tissue engineering, laser therapy, hematological screening, and radiography. Depending on the disease's chronology, a variety of therapeutic options—both surgical and non-surgical—are available to slow the disease's advancement.

Maintaining proper dental hygiene and receiving intensive treatment are the two ways in which this disease is maintain.<sup>[7,8]</sup>

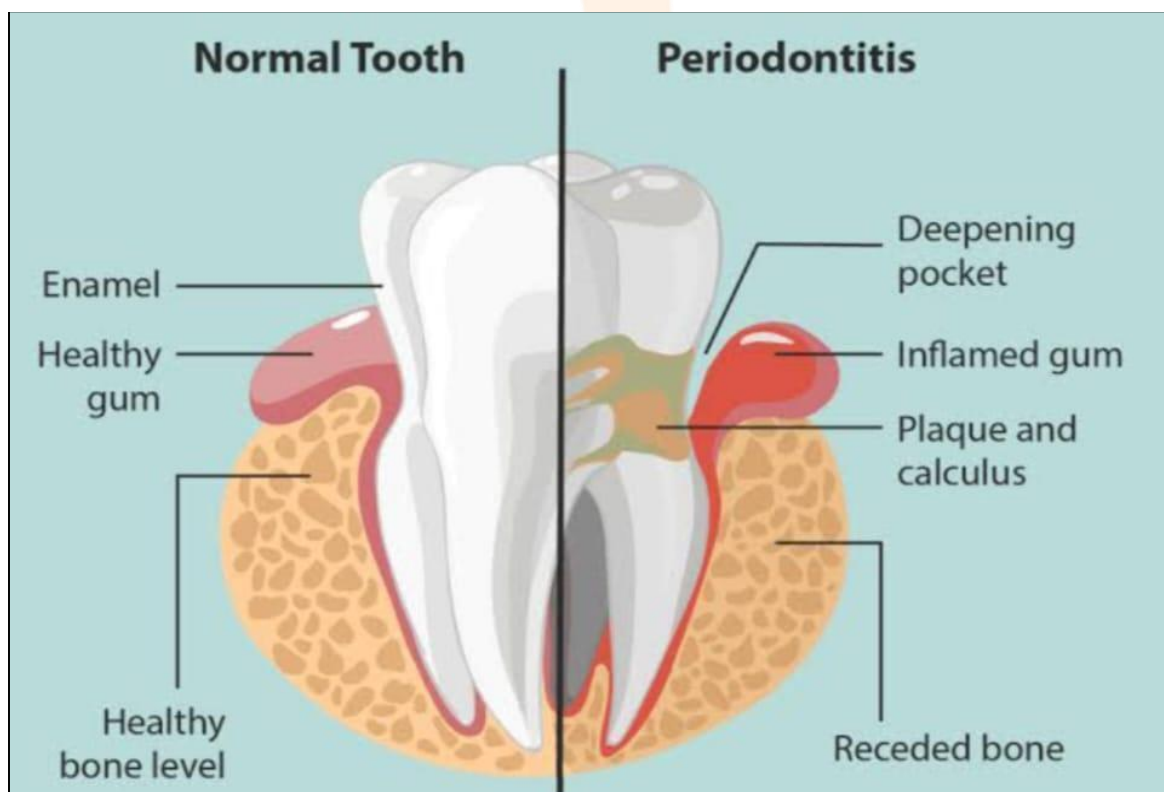


fig .no 1 comparison between healthy teeth and peridontal teeth

Other complications also observed due to the periodontitis disease which is below

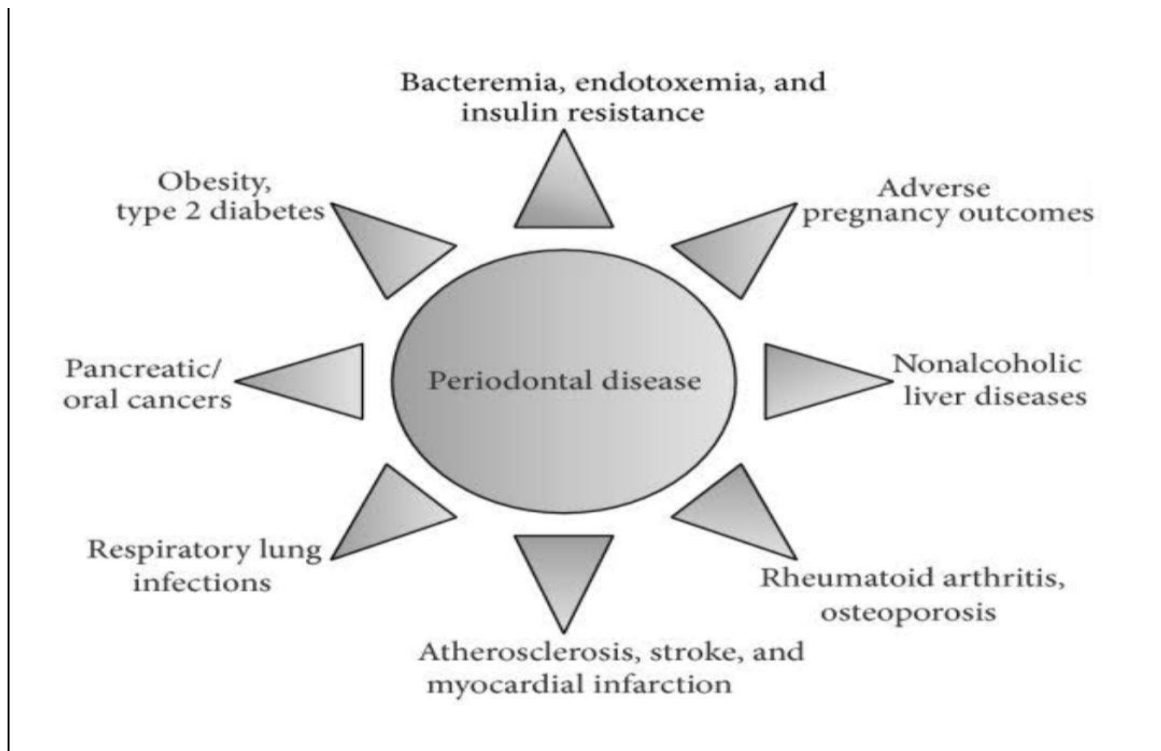


Fig no . 2 periodontal Disease leads to other complications

## 2. Phases:-

Periodontal disorders mostly occur in four stages, each of which has distinct clinical signs and symptoms as well as radiological screening. These stages are shown below. <sup>[9-11]</sup>

### 2.1. The gingivitis -

Periodontitis can only be reversed at this point. Plaque starts to build around teeth. At this point, the most common non-painful symptoms include foul breath, swollen, reddish gums, and bleeding when brushing and flossing. Regular exams and proper oral hygiene can help reverse it. Typically, there is a clinical attachment loss of 1-2 mm, less than 15% of bone loss surrounding the root, and a probing depth of 4 mm or less.

### 2.2 Early stage -

It is the periodontal disease's second stage. While not reversible, it is tolerable with good dental hygiene. At this point, the infection begins to spread and weaken the surrounding tissues. At this point, the patient has bleeding when brushing or flossing, extreme bad breath, gum irritation, and steadily increasing tooth space. Here, there is a clinical attachment loss of 3-4 mm, less than 15-33% of bone loss surrounding the root, and a probing depth of 5 mm or less.

### 2.3 The moderate stage -

Moderate stage cannot be reverted, just like second stage. The symptoms are the same as in the moderate stage, but there are more noticeable gum recessions and spaces between teeth. At this point, procedures including scaling, flap surgery, and extensive cleaning can be performed. clinical attachment loss of five millimeters or more, 33% of tooth loss of four teeth or less, and complex problems such Class II-III furcations, substantial ridge defects, and/or probing depths of six millimeters or more.

### 2.4 Advanced stage -

50-90% of periodontal tissues are lost during the last stage of the illness. Additional symptoms include pus-filled, swollen gums, loosening of the teeth, sensitivity to cold, excruciating chewing, and severe halitosis. Untreated

cases can result in worsening health issues such as gum recession, patient-needed dentures, and increased spaces or gaps between teeth and gums. Treatment includes regular exams, cleaning and maintaining good oral hygiene can help halt the progression of Periodontitis. Less than twenty teeth remain (10 opposing pairs), secondary occlusal injuries, significant ridge abnormalities, bite collapse, and pathologic migration of teeth.



**Fig no.3 change in Healthy to periodontal teeth**

### 3.Periodontitis types :-

Types of periodontitis are given below [12-15]

#### 3.1 Gingivitis -

Gingivitis, as previously mentioned, is an inflammation of the gums and is curable with good oral care.

#### 3.2. Prolonged gingivitis -

This kind of periodontal disease can cause severe bad breath, bleeding when brushing or flossing, and gum inflammation that lasts for a long time. loss of ligaments, bone, and epithelium that cannot be reversed.

#### 3.3. Severe periodontitis -

Both localized and widespread types of this early-onset chronic periodontal inflammatory disease often appear between puberty and the beginning of the third decade of life. Similar symptoms to chronic periodontitis are present.

#### 3.4. Necrotizing ulcerative gingivitis -

People with HIV, immune suppressants, and malnutrition are the main populations affected. Necrosis is the term for a living tissue or cell's death. It mostly happens as a result of a lack of nutrition, which humans require to stay healthy.

##### 3.4.1 peri implant mucosites -

It is linked to soft tissue inflammation around dental implants without any evidence of bone loss. Red or sore gums around implants and bleeding when brushing were among the symptoms.

##### 3.5 chronic systemic periodontitis -

Patients with systemic condition are susceptible to this kind of persistent periodontal disease. Gum inflammation can be brought on by systemic illnesses like diabetes, heart disease, respiratory conditions, etc. for Incidence & Outbreak

### 4. Signs of periodontal disease:-

4.1 One of the most common early indicators of periodontal disease is swollen or puffy gums.

4.2 Gums that are unhealthy may turn bright red, darkish, or purplish.

4.3 Touching sensitive gums causes the gum tissue to become more sensitive.

4.4 Gum bleeding occurs Particularly during or following tooth brushing and flossing.

4.5 Gums that are receding begin to separate from the teeth, exposing more of the tooth or its base.

4.6 Halitosis, or foul breath, is an enduring condition brought on by bacterial buildup.

4.7 Teeth that are loose or that shift in how your teeth fit together when you bite - A weakening of the tooth support structures.

4.8 Deep pockets form between your gums and teeth - Gum disease that has progressed leaves behind places that can harbor infection

4.9 Chewing pain is frequently caused by gum inflammation or jawbone injury. 4.10 Pus between the gums and teeth: This suggests an infection

## 5. side effects :-

5.1 Dental loss — As gum disease worsens, the tissues and bone that support teeth may begin to erode.

5.2 loss of bone in the jaw- The teeth-supporting bone is destroyed.

5.3 Increased risk of systemic illnesses-  
Diabetes, heart disease, and respiratory disorders have all been related to untreated periodontitis.

5.4 Gum abscesses -An infection-related collection of pus in the gums.

5.5 Misaligned teeth -Teeth may move in their natural position when they become loose.

5.6 Dental work difficulties include a higher chance of implant failure and issues with crowns and bridges.

5.7 Elevated bodily inflammations -  
May be a factor in other long-term health problems.

## 5. Frequently Used Herbs for peridontal Disease :-

Herbal remedies are highly advised in dentistry because of their anti-inflammatory and anti-plaque qualities.<sup>[16]</sup> Additionally, some of them take preventative measures, which aid in preventing its emergence. The drawbacks of synthetic medications used to treat infections are antimicrobial resistance and serious adverse effects.<sup>[17]</sup>

Phytoconstituents are a safe substitute for them in the control of infections.

Periodontitis is still a difficult condition for dentists to treat because of its complex disease process and multiple etiology.<sup>[18]</sup> Consequently, efforts have been made to obtain antibacterial, antioxidant, antiseptic, anti-inflammatory, and anti-collagenase properties with herbal therapies. Periodontal disease onset is a complex multifactorial process. Despite the fact that oxidative stress is known to be a significant contributor to cell damage and is linked to the start and development of numerous chronic disorders<sup>[19-21]</sup>

The imbalance between pro-oxidants and antioxidants, which can lead to possible tissue damage, is known as oxidative stress. Anaerobic bacterial growth is facilitated by plaque accumulation and ultimately results in neutrophil recruitment and activation.

Pro-inflammatory cytokines are further upregulated as a result, and neutrophilic enzymes and reactive oxygen species (ROS) are released.<sup>[22]</sup>

Many kinds of herbs, including the following, are used to treat peridontitis

### 6.1 Miswak (Persica Salvadora)

Miswak, commonly referred to as a chewing stick, is a member of the Salvadoraceae family. Miswak has been utilized for dental hygiene <sup>[23]</sup>since ancient times. According to research, miswak contains more than ten naturally

occurring elements, such as fluoride, silica, benzyl isothiocyanate, essential oils, salvadorine, and salvaside, that are crucial for healthy oral, dental, and general health. 1,8-Cineole, myrcenol, isoterpinolene, piperidine, linalool, and sabiene.<sup>[16,24]</sup>

Regarding the medicinal element Benzyl isothiocyanate exhibited in a prominent volatile oils component of *Salvadora persica* which demonstrate bactericidal activity against numerous microorganisms.<sup>[25]</sup>

Miswak has been scientifically shown to be effective in preventing tooth decay, and the World Health Organization advises using it as a useful oral hygiene item. It is an exceptional dental stick that is affordable for the average person. When compared to regular toothbrush users, miswak users report less gingival bleeding, improved periodontal health, and interproximal bone loss<sup>[26,27]</sup>



**Fig.no 4 miswak**

## 6.2 curcuma longa (turmeric)

Turmeric is an easy way to get rid of gum disease-causing germs and reduce inflammation and pain. It also encourages dental health. A clinical and microbiological study titled "Comparative evaluation of turmeric and chlorhexidine gluconate mouthwash in prevention of plaque formation and gingivitis"<sup>[28]</sup> shown that in order to avoid plaque and gingivitis, mouthwash containing turmeric and chlorhexidine gluconate can be used as an effective supplement to mechanical plaque control techniques. One could argue that turmeric is a useful supplement to mechanical plaque management. To prove mouthwash with turmeric as an affordable way to prevent plaque, more research is needed.



**Fig.no 5 Turmeric**

### 6.3 Syzygium aromaticum (clove)

clove is Highly valued spices like clove have long been used in the food sector as preservatives and for a range of medicinal purposes. Extremely volatile oil (16–21%) probably contains phenols. Particularly significant components include eugenol at approximately (80–88%)%, acetyl eugenol (10–15%)%,  $\alpha$  and  $\beta$  -Caryophyllene, pyrogallolcallol tannins (10–13%)%, methyl and dimethyl furfural. The most popular uses for clove oil are in oral and dental care.

Because of its germicidal properties, the oil is excellent for treating toothaches, mouth ulcers, sore gums, and dental pain. The primary ingredient in clove oil is eugenol, which has been used in dentistry for a very long time. <sup>[29]</sup>



Fig no.6 Clove

### 6.4 triphala

Triphala is a well-known powdered preparation in ayurvedic medicine used since ancient time.

It consists of

equal parts of Amalaki (*Emblica officinalis*), Haritaki (*Terminalia chebula*) and Bahera (*Terminalia bellerica*).

Triphala has a strong antimicrobial, antioxidant and anti-collagenase properties.<sup>[30]</sup> The antioxidants present in Triphala reduce the oxidative burden and protect cells from the damage caused by free radicals. Bahera is the most active antioxidant followed by Amalaki and Haritaki. A clinical trial has shown that Triphala mouthwash is as efficacious as 0.2% chlorhexidine in antiplaque and anti-inflammatory activities <sup>[31]</sup>



**Fig No.7 Triphala**

### 6.5 Psidium guajava (guava )

it consists of Ascorbic acid, which makes up the majority of the guava's vitamin C content, is a great antioxidant. After collagen is formed, ascorbic acid affects the extracellular matrix, which in turn

modifies procollagen gene expression and fibroblast development. When combined with bioflavonoids, ascorbic acid aids in the healing process.<sup>[32]</sup>

The antioxidant activity of guava's phytoconstituents, such as carotenoids, quercetin, and polyphenols, is primarily responsible for their multifunctional benefits. Flavonoids, guajaverin, and quercetin are primarily responsible for guava's antibacterial properties. *Aggregatibacter actinomycetemcomitans* (Aa), *Porphyromonas gingivalis* (Pg), *Prevotella intermedia* (Pi), *Fusobacterium nucleatum*, and other periodontal pathogens have been shown to be susceptible to the good antimicrobial activity of one of the main flavanols, quercetin. This activity of quercetin is believed to be related to the formation of irreversible complexes that disrupt the membrane and inactivate extracellular proteins.

The second most significant ingredient is guajaverin, a potentially effective antiplaque agent that inhibits the growth of *S. aureus* and *S. mutans*. Guajaverin lowers the hydrophobicity of oral pathogenic bacteria, which is one of the most crucial components in their capacity to cling to the tooth surface. Guava extracts may have this effect by attaching to cell surface proteins and reducing the overall hydrophobicity of the cell. As a result, guava may be used as a natural antiplaque agent.

In vitro studies have demonstrated that guava extract inhibits the proliferation, adhesion, and co-aggregation of dental plaque bacteria. Guava leaf extracts may lessen the growth of plaque bacteria without changing the pH balance of the oral cavity.<sup>[33]</sup>



**Figno.8 Guava**

### 6.6 Camellia sinensis (green tea )

Leaves of *Camellia sinensis*, used to make green tea, are treated with little to no oxidation. It possesses the highest concentrations of polyphenols, also known as catechins and acting as natural antioxidants. Catechin, gallic acid, epicatechin, epigallocatechin, epicatechin gallate (ECg), and epigallocatechin gallate (EGCg) are the six main catechin components found in green tea. Of all the other compounds, EGCg has been studied extensively and is a particularly potent antioxidant when it comes to action. In addition to a range of phytochemical compounds, green tea contains tocopherols, selenium, carotenoids, ascorbic acid, chromium, and zinc. Green tea's catechins have shown promise as an antibacterial agent against periodontal diseases.

Anaerobic bacteria including *Porphyromonas gingivalis* and *Prevotella* spp. are the main causes of periodontitis. The in vitro study showed that *P. gingivalis* and *Prevotella nigrescens* cannot develop when these herbal medicinal ingredients are present. This further prevents *P. gingivalis* from sticking to the epithelial cells of the human buccal cavity.

<sup>[34]</sup>

The catechin from green tea exhibited a bactericidal action against black-pigmented Gram-negative anaerobic rods (BPR), and the combination of mechanical therapy and green tea catechin administration utilizing a local drug delivery method improved periodontal condition. The bactericidal and minimum inhibitory concentrations (MIC) of green tea catechin against BPR were evaluated.

The patients' tooth pockets were filled with the hydroxy propyl cellulose patches containing catechin as a slow-release local administration approach. dosage of roughly one dose every week for eight weeks. Investigations were done on the clinical, enzymatic, and microbiological effects of catechin. In the study, green tea catechin showed antibactericidal activity against *Porphyromonas gingivalis* and *Prevotella* spp.; an in-vitro approach yielded a minimum inhibitory concentration (MIC) of 1.0mg/ml.<sup>[35]</sup>

**Fig no. 9 Green tea**

### 6.7 Allium sativum(garlic )

The primary phytochemical component, allicin, possesses antibacterial properties against a range of Gram-positive and Gram-negative bacteria, such as *Escherichia coli*, *Mycobacterium tuberculosis*, pneumonia, *Lactobacilli*, *Helicobacter pylori*, *Pseudomonas aeruginosa*, and *Klebsiella*. Additionally, it exhibits antifungal properties, particularly against *Candida albicans*, and some antiparasitic and antiviral properties.<sup>[36]</sup>

Due to a primary ingredient known as diallyl thiosulfinate, or allicin. On the other hand, it is incredibly thermolabile, forming a range of disulfide compounds. The wide range of antibacterial activities of allicin can be explained by the numerous inhibitory effects it has on various thiol-dependent enzymatic systems. The main mechanism by which allicin exhibits antimicrobial activity is by its interaction with important enzymes that contain thiols. Specifically, it can interact with L-cysteine, a model thiol molecule, to generate S-allylmercaptocysteine, an S-thiolation product.<sup>[38]</sup>

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**Fig No.9 Garlic**

#### 6.8 Aloebarbadensis ( aloe vera)

Aloebarbadensis, is a plant that belongsto the Lily family.

Because it is axerophyte type plant, it can storea significant amount of waterand adapt to decreased orvariable water availability. Someof the plant's naturally occurring anthraquinones with antimicrobial qualities are resistannol, anthranol, ethereal oil, chrysophanic acid, barbaloin, aloin, aloetic acid, isobarbaloin, and anthracine.

[16]

In a clinical research, aloe vera mouthwash was shown to be beneficial in reducing the development of gingivitis and plaque.<sup>[36]</sup>

Aloe vera polysaccharides have also been connected to direct bacterial activity through the stimulation of phagocytic leukocytes, which results in the death of bacteria.<sup>[26]</sup>



**Fig no.11 Alovera**

## 6.9 Tulsi

Ocimumsacrum mainly consist of Iron,zinc, vitamin C,calcium, andvitamin A Due mostly tothe presence of essential oilssuch as eugenol,ursolic acid and carvacrol,tulsi possessesstrongantibacterialcapabilities. Byconcentrating onPorphyromonas gingivalis and other bacteria linked to periodontitis, these substances aid in lowering the bacterial burden in the oral cavity

Gum and surrounding tissue inflammation is a hallmark of periodontitis. Owing to thepresence of bioactive substances such as flavonoids and polyphenols, tulsi has anti-inflammatory properties that help lessen gum inflammation and its accompanying symptoms, such as bleeding and swelling.



**Fig No.12**  
**Tulsi**

Tulsi has been proven to enhance tissue repair and wound healing, which helps support the regeneration of gum tissue following periodontal injury.

## 6.10 The Ginkgobiloba

Flavonoids andterpenoids, which are abundant inginkgo biloba, have beendemonstrated to haveanti-inflammatory effects. Theseanti-inflammatory properties canreduce gum swelling,bleeding, and the chronic inflammation-induced damage to periodontal tissues associated with periodontitis.

Then we well-known the vasodilatory effect of ginkgo biloba is believed to enhance blood flow. Improved microcirculation in the context of periodontitis can help healing and repair by improving waste elimination and nutrient delivery in the afflicted gum tissues.

Further Free radicals can be countered by the antioxidants in ginkgo biloba, such as flavonoids and polyphenols. This is significant because oxidative stress plays a major role in the degeneration of periodontal tissues in cases of periodontitis. Ginkgo may help delay the disease's course by lowering oxidative damage.



**Fig no.13 Ginkgo biloba**

### 6.11 cranberry

Antibacterial qualities can be found in cranberry juice. Many research have looked into the potential of cranberry juice or ingredients to stop oral infections from adhering to surfaces and associated processes such as glucan and fructan production and biofilm formation.<sup>[39]</sup>



**Fig no.14 cranberry**

### 6.12 Honey

The sweetness, honey's antibacterial qualities make it good for the peridontium. It offers the nutrients required to keep gums healthy and is also high in vitamins and minerals.

Monocyte activity was found to be impacted by exposure to a honey solution in vitro.

Propolis, which is found in bee products, was found to have antimicrobial activity against Streptococcus mutans in mouth washes<sup>[40]</sup>. This suggests that mouth washes containing propolis could be an alternate treatment for dental caries prevention, as well as for reducing plaque accumulation and polysaccharide synthesis.



**Fig no. 14 HONEY**

### 6.13 Neem

Southern Africa and Asia are the primary growing zones for neem trees, which have long been used by Asians for a number of medicinal purposes due to their unique properties. Among the chemical components are margolone, epicatechin, catechin, nimbolide, azadirachtin, nimbin, and gallic acid.<sup>[16]</sup>

In the literature, we located data from clinical studies demonstrating the benefits of neem. Fifty people with verified gingivitis were included in this study; forty of them exhibited noticeable bleeding and pustular discharges from their gums. After brushing twice a day for just three weeks with a paste containing neem leaf extracts, eight out of ten patients showed significant improvement. Along with the elimination of halitosis, the patients also saw a drop in bacterial populations—all without any unfavorable side effects.<sup>[23]</sup>

The aqueous extract of Neem inhibits the synthesis of insoluble glucan, which causes bacterial aggregation. As a result, streptococci's ability to colonize tooth surfaces and the oral cavity will be diminished. It has been suggested that teeth plaque be treated with it. Neem extract makes up the composition of the mucoadhesive dental gel. It was discovered to be more successful in lowering the bacterial count and plaque index when compared to mouthwash containing chlorhexidine gluconate.<sup>[41]</sup>

Water-soluble extracts from *Azadirachata indica* have an impact on some bacterial characteristics, which may change bacterial adherence and the capacity of streptococci to proliferate and colonize tooth surfaces. What matters most is that neem has a broad bacterial aggregating action against all of the oral streptococci that have been examined.<sup>[42]</sup>



**Fig no.16 Neem**

#### 6.14 *Acacia nilotica*( babool)

Strong antibacterial substances found in babool, in particular tannins, help prevent the growth of bacteria that cause periodontitis, including *Porphyromonas gingivalis* and *Aggregatibacter actinomycetemcomitans*. This aids in infection control by lowering the amount of bacteria in the oral cavity.

Traditionally, babool has been used to treat ulcers and wounds. Its restorative qualities help hasten recovery by promoting the regeneration and repair of damaged gum tissues in cases of periodontitis.

By limiting bacterial proliferation and acting as an astringent, babool may also help reduce the production of plaque, one of the primary causes of periodontal disease



**Fig no .17 Babool**

## 6.15 Gum acacia

The potential benefits of gum acacia, sometimes referred to as *Acacia senegal* or *Acacia arabica*, in the treatment of periodontal illnesses, such as periodontitis, have been investigated.

Compounds found in gum acacia may be able to lessen inflammation, a major aspect of periodontitis. It might assist in easing gum swelling, redness, and bleeding by lowering inflammation.

It has been demonstrated that acacia gum facilitates tissue regeneration, which aids in healing. When inflammation and infection are under control, it may facilitate the healing of injured gum tissue in the context of periodontitis.

There is some proof that gum acacia helps lessen the development of plaque. This may help maintain better oral hygiene and stop plaque from accumulating, which is a major cause of periodontitis.



**Fig No. 18 GUM ACACIA**

## 7. Advantages of herbs used in periodontal disease

1. Reduced risk of side effects
2. Effectiveness with chronic conditions
3. Lower cost
4. Widespread availability
5. Safety

## 8. Disadvantages of herbs used in periodontal disease

1. Lack of regulation
2. Patience needed for effects
3. Inappropriateness for many conditions
4. Lack of dosage instructions
5. Poison risk associated with wild herbs
6. Potential for medication interactions

## 9. Conclusion:-

The review highlights the diverse biological and medicinal properties of various traditional herbal remedies, including their antibacterial, antioxidant, and anti-inflammatory effects. These properties can be beneficial in the prevention or management of various dental diseases, such as periodontitis. Because herbal therapies are also referred to as traditional medicines, patients are more likely to embrace them.

illness such as periodontitis, are less well-known to the general public, and this ignorance can lead to a number of health issues. Painkillers and antibiotics are examples of synthetic pharmaceuticals that are better used after surgery, in an emergency, or for chronic diseases rather than being taken for extended periods of time. Therefore, it was discovered from the literature that a number of herbal treatments with strong medicinal components are helpful for the maintenance, treatment, and prevention of dental conditions including periodontitis. In a similar vein, this is a focus area for researchers looking to create innovative drug delivery systems that outperform synthetic medications by combining herbal ingredients or creating a combinatorial formulation.

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