

## **Gingivitis – A silent disease**

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Gum are pinkish brown coloured soft tissue holding the teeth in bony sockets by adhering them firmly through periodontal ligaments to periosteum . Gums are called basically gingiva and their inflammatory diseases are called gingivitis in general .Gum disease is an infection of the gum tissue that surrounds and supports the teeth. It is the major cause of tooth loss in later half of life as in adult as well as in elderly. In early stages it is called gingivitis and when gingivitis is not treated properly , it may advance to periodontitis because of nonspecific signs and symptoms to be noted by patients. Main reasons for ignorance about gum diseases in my opinion are following-

- Non-specific symptoms
- Economical
- Educational
- psycho-social
- ignorance
- self-medication
- Economical factors

Dental treatments and dental care is supposed to be costlier affair in a dental clinic as compared to medical services in general . in government sector dental facilities are less as compared to load of population as well as shortage of dental clinics in government sector.

### **Gingivitis**

Occurs mainly due to plaque accumulation and factors responsible for plaque formation and propagation are poor dental and oral hygiene .It is early and reversible disease. In this disease gum become red, swollen and bleed easily while provocation like touching , brushing or sometimes even spontaneous dental/gum bleeding happens . Gingivitis is a mild form of gum disease which can be reversible by daily brushing, flossing and regular cleaning by dentist ,this procedure is called scaling along with proper medication. In gingivitis there is no tissue or bone loss .So it is essential to treat gingivitis as early as possible so that we can prevent the Periodontitis [advanced gum disease].

### **Periodontitis**

When gingivitis is not treated, it can advance to Periodontitis. Periodontal disease is considered as one of the most prevalent disease in human. It is characterised by gingival inflammation, loss of gingival attachment and bone loss. In this gum pull away from the teeth and form spaces called pockets that become infected. Bacterial toxins and body's natural response to infection start to breakdown the bone and connective tissue that hold teeth in place. If not treated, the bone, gums and tissue that support the teeth are destroyed and eventually the teeth become loose and have to be removed.

### **Factors Which Increases/Causes Gum Disease-**

- Poor oral hygiene
- Smoking or Chewing tobacco
- Genetic
- Patient having chronic medical condition like diabetes, epilepsy, leukemia etc.
- Person taking high physical and emotional stresses.
- Occur by hormonal changes like pregnancy, puberty, menopause etc.
- Vitamin C deficiency
- Faulty dentistry
- Mouth breather
- Toothbrush trauma
- Clenching and grinding of teeth

- Medication includes steroids and certain types of anti-epileptic drugs, cancer therapy, calcium channel blockers and oral contraceptives.

#### **Warning sign that can signal gum problems:-**

- Gum that bleed easily
- Red ,swollen, tender gums
- Gum that have pulled from the teeth
- Permanent teeth that are loose or separating
- Any change in the way your teeth fit together when you bite

#### **Poor Oral Hygiene:-**

Poor oral hygiene, such as not brushing teeth properly or regularly can cause plaque to build up in your teeth. If plaque is not removed it can harden form a substance called tartar [calculus]. Tartar sticks much firmly on the teeth than plaque and usually only be removed by dentists. The non-mineralised plaque on calculus surface is principal irritants but the underlying calcified portion may be a significant contributing factor. It does not irritate the gingival directly, but it provides a fixed nusus for the continued accumulation of the irritating surface plaque and holds the plaque against gingival. Calculus is a significant pathogenic factor in periodontal disease. Bacteria in plaque will irritate gums, making them inflamed and sore. If gum disease is not treated and plaque and tartar continues to build which develops periodontal can cause teeth loose and eventually falling out.

#### **Smoking and chewing tobacco-**

Smoking and chewing tobacco is a risk factor for gum disease because chemical inhaled interfere with the body's ability to repair damaged tissue. Smoking cut down on the blood supply because it is vasoconstrictive. It limits the flow of oxygen and nutrients to the tissue. It is also known that nicotine is toxic to the cells called fibroblasts which are responsible for manufacture new connective tissue. The less fibroblast work, the more rapid progression of gum disease.

#### **GENETIC-**

Genetic factor may play the critical role in half the cases of periodontal disease. Up to 30% of the population may have some genetic susceptibility to periodontal disease. Some people with severe periodontal disease have genetic factor that effect .the immune factor interleukin-1, a cytokine involved in the inflammatory response. Such individual are up to 20 times more likely to develop advanced Periodontitis than those without these genetic factor.

#### **PERSON HAVING CHRONIC MEDICAL CONDITIONS:-**

##### **Diabetes-**

It is estimated that 1 in 3 diabetic suffer from Periodontitis at some stage of their diseases. When diabetes is poorly managed it can lead to Periodontitis in both children and adults. When a body is suffering from diabetes, the structure of the blood vessels is altered. This may affect the efficiency of blood flow, and in turn may weaken the bone and the gums leaving them more prone to infection. Furthermore, if diabetes is not strictly managed, there may be higher than usual level of glucose in the mouth fluid which encourages the growth of gum disease- causing bacteria.

##### **Hiv-**

HIV gingivitis is also called linear gingival erythema ,brightly inflamed marginal gingivitis gingival can be painful and bleed easily and there may be rapid tissue destruction .In HIV gingivitis organism are primarily gram negative anaerobes , enteric strains and yeast that are not found in routine cases of gingivitis. Treatment consists of debrishment plus antibiotic administration. Antifungal rinses as well as Antibacterial rinses are also required.

##### **Leukemia-**

Particularly the monotypic type can cause gingival enlargement due to infiltration of gingival tissue. Gingival enlargement due to leukaemia is typically oedematous and haemorrhagic. Patient with gingival hypertrophy have difficulty in maintaining good oral hygiene due to gingival bleeding.

#### **Person taking high physical and emotional stresses-**

Stress elevates the level of stress hormone cortisol which affect the gums. Stress may make people more lax about their oral health. Individual with high stress level tend to increase their bad habits like use of nicotine, alcohol or drugs which can be harmful to periodontal health.

## **OCCUR BY HORMONAL CHANGES LIKE PREGNANCY, PUBERTY OR MENOPAUSE-**

### **Pregnancy:-**

The increase level of progesterone causes bacteria to grow as well as make gum tissues more sensitive to plaque causes gingivitis. Between second to eight months of pregnancy gingivitis ranges from redder looking gums that bleed while brushing to severe swelling and bleeding of gum tissues. To prevent gingivitis in pregnancy, professional dental cleaning, good oral hygiene like brushing twice, flossing once a day is important.

### **Puberty:-**

During puberty there is increased production of sex hormones which increase gum sensitivity and leads to greater irritation from plaque and food particles.

### **Menopause:-**

Lower level of estrogen hormone in menopause cause gum diseases. Tender bleeding gums can results from lower level of estrogens production. There may be loss of tissue leading to receding gums.\

## **VITAMIN C DEFICIENCY:-**

Vitamin C deficiency does not itself cause gingival inflammation but it does cause haemorrhage, collagen degeneration and enema of the gingival connective tissue. These changes cause inflammation. The combined effect of Vitamin C deficiency and inflammation produces the massive gingival enlargement. Gingival becomes bluish red, soft, friable and bleed on slight provocation.

## **MOUTH BREATHERS:-**

Mouth breathers have more severe gingival than non-moth breathers with similar plaque score. Its harmful effect is generally attributed to irritation from surface dehydration.

## **TOOTH BRUSH TRAUMA:-**

Alteration in gingival may results from aggressive brushing. Diffuse erythema and denudation of attached gingival may be due to overzealous brushing. Toothbrush bristle forcibly embedded and retained in gingival is a common cause of acute gingival abscess. Chronic tooth brush trauma result recession with denudation of the root surface.

## **Clenching and grinding of teeth:-**

Clenching and grinding if teeth can put excessive force on the supporting tissue of the teeth and could speed up the rate at which there periodontal tissue are destroyed. Using night guard is effective to save supporting tissue from excessive force.

## **Drug induced gingival growth:-**

- Gingival growth occur as a side effect of Phonation, Cuclosporin-A, and Nifedipine. Inicial enlargement occur in the interdental region and may appear lobular, it gradually proceeds to the gingival margin and then cover the crown of the teeth. The fibrous overgrowth that occurs is painless and firm with little tendency to bleed. Drug induced gingival overgrowth can cause delay or failure of tooth eruption if it occur before tooth eruption is complete.
- Calcium-Channel blocked can also cause serious gingival hyperplasia, gum inflammation with inadequate periodontal maintenance.
- Chemotherapy drugs make tissue dry and irritated or cause them to bleed. So brushing your teeth with soft bristled toothbrush after every meal, rinsing toothbrush well after each use and storing it in a dry place and also avoiding mouthwash that contains any amount of Alcohol is necessary.

## **FAULTY DENTISTRY:-**

Faulty restoration and prosthesis are common cause of gingival inflammation and periodontal destruction.

- Overhanging restoration provides plaque accumulation causing gingival disease.
- Over contoured crown and restoration tend to accumulate plaque causing gum disease
- Denture that worn out day and night induce plaque accumulation causing gum disease.
- Colusa disharmonies during restoration may be injurious to the supporting periodontal disease.
- Even high quality restoration, if placed sub gingival increase plaque accumulation which results inflammatory response.

## **Color changes in gums**

It may be dues to endogenous factor or exogenous factor.

### **Endogenous factor:-**

This may be due to metallic pigmentation or due to systemic factor.

**(I) Metallic Factor:-**

- Bismuth, Arsenic and mercury produce a black line on the contour of the margin of the gingival.
- Lead results in bluish-red linear pigmentation of the gum margins.
- Silver causes a violet marginal line.

**(II) Systemic Factor:-**

Diseases that increase melanin pigmentation are:-

- Addison's disease
- Perutz-Jagers syndrome
- Albert's syndrome
- Von-Recklinghausen's disease

**Exogenous Factor:-**

Colour changes on gingiva are due to:-

- Atmospheric irritants such as coal and metal dust.
- Colouring agents in food.
- Localised bluish-black pigment amalgam in contact with mucosa.

**Maintenance Of Healthy Gums:-**

- It is recommended to the patient that he/she should include tooth brushing twice daily, with a good brand toothpaste, flossing once daily, and mouth rinsing after every meal with a good brand mouthwash.
- The person should not have a habit of Pan Masada, Smoking, Alcohol, etc.
- Person should be free of stress or use night guard.
- Person should be medically fit and have regular check-up.
- Person should visit the dentist in every six months.
- Person should change the toothbrush in every 3 months.
- Take medicine which is only prescribed by doctors.

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