

The periodontium [perio = around, odontos = tooth) consist of the tissues which surround and support the teeth. Their function is to attach the tooth to the surrounding alveolar bone and to support the tooth during mastication. For descriptive purposes the periodontium can be divided into the gingivae and periodontal ligament.

### Periodontal Diseases

Periodontitis describes a group of inflammatory diseases that affect all the periodontal structures. It results in the destruction of the attachment apparatus and the development of a periodontal pocket

### Gingivitis

Plaque accumulation is greatest in the sheltered interdental region hence gingival inflammation tends to start in the interdental papilla and spreads from there around the neck of the tooth.

### Periodontitis

Continuous plaque irritation and inflammation damages the integrity of the junctional epithelium. There is degeneration and separation of epithelial cells and there is breakdown of their attachment to tooth surface.

### EPIDEMIOLOGY

Epidemiology can be studied under:

#### 1- Host factor

##### A) Age

There is a consensus that gingivitis increases in children with age.

##### B) Gender

Periodontal disease is more common in males. The reasons for these sex difference are not clear .but it is thought to be related to poorer oral hygiene level, which is usually observed among males.

##### C) Race

Blacks had more periodontal disease than Whites.

##### D) Ethnic/ethnic changes

#### E) Tooth Misalignment

Gingivitis is more common and more severe around misaligned teeth because they are harder to clean.

#### F) Restoration

A smooth and highly polished filling is easier to clean than a rough surface and hence there is lesser degree of plaque accumulation.

#### G) Traumatic Occlusion

Sharp cusp act as pl gers and are derogatory to periodontal health, leading to periodontitis.

#### II) Oral Hygiene

Poor oral hygiene is a major cause of gingivitis and periodontal disease.

#### I) Tobacco

Smoking and smokeless tobacco are associated with poor periodontal health.. They lower the tissue resistance and increase susceptibility to gingivitis and periodontal disease.

#### J) Occupational Habits

Habits like thread biting by tailors and holding of nails between teeth by carpenters cause trauma to the periodontium leading to periodontitis.

#### K) Systemic Factors

Uncontrolled diabetes and heavy metal poisoning predispose to gingivitis and periodontitis

-Acute monocytic leukemia may produce gingival enlargement and ulceration.

-AIDS and HIV increase susceptibility for destructive periodontal disease.

#### L) Socio-economic Status

High income group have lower periodontal disease rate than the lower income group, probably because they have the means and can afford dental treatment.

#### M) Psychosomatic Factors

Abnormal oral hygiene habits, clenching and bruxism (produce forces that are destructive to periodontium ), nutritional factors .destructive mechanical oral habits and other predisposing factors.

Stress is thought to manifest in the periodontium through behavioral changes , such as increase smoking and poor oral hygiene.

#### 2) AGENT FACTORS

Agent factors consists mainly of plaque and calculus.

#### A) Dental Plaque

Plaque is the soft .non mineralized, bacterial deposit which forms on teeth that are non adequately cleaned.

#### B) Calcium

Mineralization with plaque results in calculus formation.

### C) Stains

Stains are produced by the action of chromogenic bacteria on food substances such as tobacco, tea, coffee, etc. or by metallic particles. These pigments become absorbed by plaque or pellicle.

## 3) ENVIRONMENTAL FACTORS

### A) Food and Nutrition

The influence of nutrition on periodontal disease appears to be exerted mainly on 3 different levels:

1. On the metabolism of the gingival service- plaque flora.
2. On the repair process in the connective tissue at local site.
3. On the immunological response to the microbial antigens.

### B) Geographic Distribution

Certain geographic areas throughout the world are associated with more periodontal disease than others.

### C) Urbanization

Periodontal disease is seen less in urban than in rural population particularly at younger ages. This difference could be attributed more to educational background than to rural life.

