EPIDEMIOLOGY OF PERIODONTAL DISEASES

ETIOLOGY OF PERIODONTAL DISEASES

LOCAL FACTORS:

A) DEPOSITS:

SUPRA AND SUBGINGIVAL CALCULUS

MATERIA ALBA

FOOD DEBRIS AND DENTAL STAINS

B) HABITS:

1) CLENCHING, BRUXISM & ABNORMAL BITING HABITS

2) ABNORMAL ANATOMY (MALOCCLUSION)

3) IRRITANTS (MECHANICAL OR CHEMICAL)

SYSTEMIC FACTORS:

1) MALNUTRITION:

NUTRITION AND PERIODONTITIS

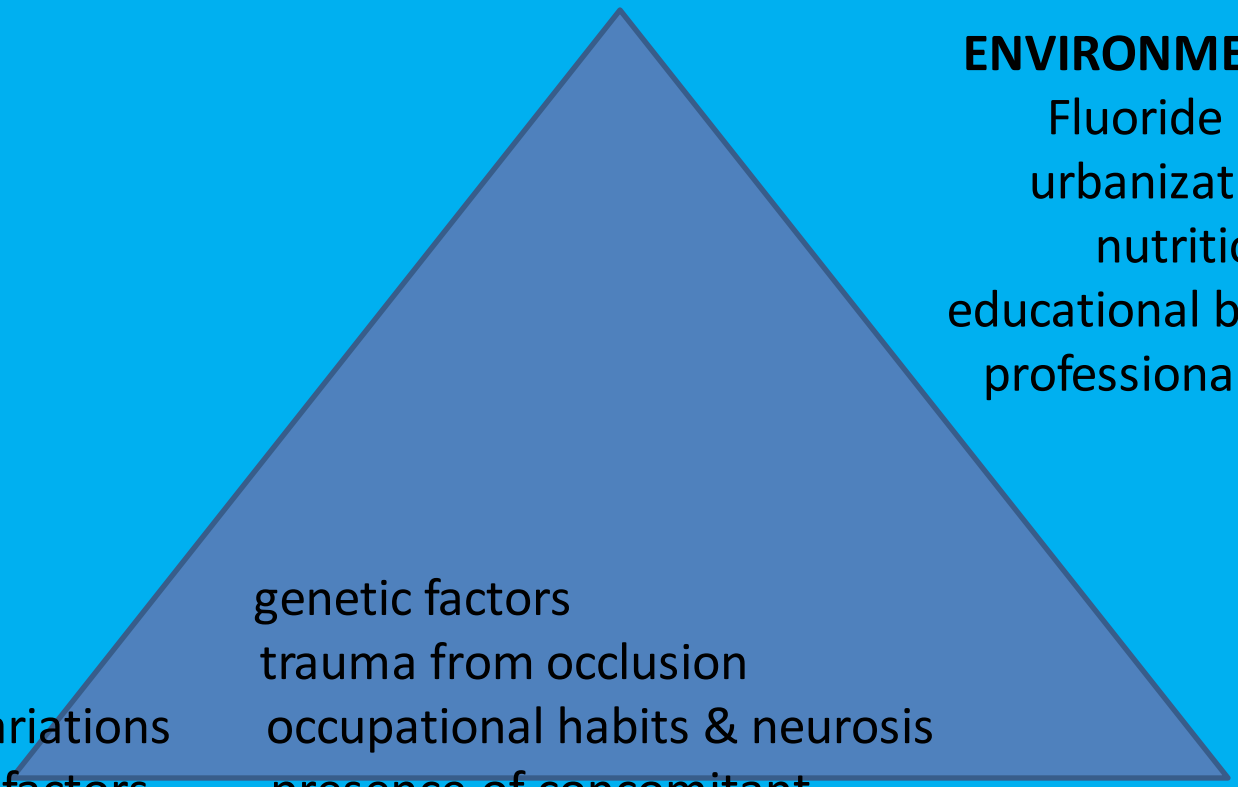
2) ENDOCRINE DYSFUNCTIONS:

DIABETES

FEMALE HARMONAL ALTERATIONS

3) BLOOD DYSCRASIAS
4) MEDICATION
5) IMMUNE SYSTEM DISORDERS
6) MISCELLANOUS

EPIDEMILOGICAL FACTORS



ENVIRONMENT
Fluoride
urbanization
nutrition
educational background
professional background

HOST
Age
Sex
Race
Intraoral variations
Endocrinal factors
diseases
Epidemiological disturbances

genetic factors
trauma from occlusion
occupational habits & neurosis
presence of concomitant

AGENT
Microorganisms
Smoking and alcohol
transmissibility

HOST ACTORS

AGE

- The prevalence of periodontal disease increases indirectly and steadily with increasing age.
- Mainly a reason for loss of teeth above 40 years
- Steady progression in alveolar bone loss with increasing age

GENDER

- Females have less periodontal disease than males although the difference is very slight, but juvenile periodontitis is higher among females

- gingivitis more prevalent in boys

- but during puberty, gingivitis is more common in girls

RACE

- Periodontitis greater in blacks than whites according to some studies
- reason may be genetic factor, food habits, socioeconomic status and educational background
- it is also more in Spanish-Americans than among whites and blacks

INTRA-ORAL VARIATIONS

- Upper molars and lower central incisors are the most frequently affected teeth followed by lower molars

- The least affected teeth are lower bicuspids and upper canines

ENDOCRINAL CHANGES

- Females show excessive gingivitis during menstruation and pregnancy
- An increase in gingivitis is noted in children as they approach puberty.
- Periodontitis is aggravated in hyperparathyroidism and hyperthyroidism

diabetes:

- Bone and attachment loss at earlier age
- Rate of advanced disease is three times higher
- Promoting ostopenia in the bone

GENETIC FACTORS

- In patients with cyclic neutropenia and hypophospatemia the prevalence of periodontal disease is more

- Some genetic relationship between prevalence of periodontal disease in fraternal twins

TRAUMA FROM OCCLUSION

- Improper contact points and improper restorations lead to food impaction leading to chronic gingivitis and destructive periodontitis.

- Disuse leads to supra eruption and loss of alveolar support.

OCCUPATIONAL HABITS AND NEUROSIS

- Holding nails in the mouth as carpenters

thread biting-tailors

- Pressure on mouth piece among musicians-
- All are predisposing factors in periodontal diseases
- Faulty tooth brushing –cervical abrasion, gingival recession and gingivitis, and finally periodontitis if not controlled.

PRESENCE OF CONCOMITANT DISEASE

- Diabetes (more in insulin dependent)
- Hiv infections-
- All do not cause periodontal disease themselves but acentuate or aggrevate the already existing disease.
- Gingival enlargement is noted in acute monocytic leukemic patients

EMOTIONAL DISTURBANCES

- Periodontal disease was more common in patients with mental diseases regardless of the frequency of tooth brushing as shown by the study conducted by benting and gupta.

- This might be due to changes associated with saliva as well as oral environment in such patients

AGENT FACTORS

BACTERIA, PLAQUE AND CALCULUS:

- Plaque must be present in order for bacteria to gain a lasting hold in the periodontal area.
- Calculus gives plaque a firmer hold defying action on brushing and flossing.
- Chemical and physical hazards like mercury, lead, thallium produce gingivitis and alveolar damage and loosening of teeth.

SMOKING AND ALCOHOL

- Tobacco smoking has a large number of noxious agents which may affect the tissue inflammatory and immunity responses.
- Smoking has a long term chronic effect impairing the vasculature of the periodontal tissues.
- It leads to more plaque and calculus formation
- Deep pockets between teeth and gums
- There is impaired tissue healing due to suppression of neutrophils, chemokinesis, chemotaxis and phagocytosis

- Effects of alcohol:
- Along with smoking results in dehydration of mucous membrane .
- Both have a synergistic effect.

Systemic diseases, blood dyscrasias and chemical agents

All these factors contribute in one or the other way in decreasing the local resistance of the periodontium and sometimes may have a direct impact on periodontium

Environmental factors

- Degree of urbanization: studies have shown that rural children suffer more from gingivitis than urban children.

- This could be on account of better education, availability of health services and increased awareness among urban population

NUTRITION

- Patients with vitamin C deficiency show acute periodontal disease and loosening of teeth.

- Niacin deficiency is manifested as severe type of necrotic gingivitis with peudomembrane formation and sloughing.

FLOURIDE

- Presence of flouride is inversely proportional to periodontal disease
- Then presence of fluoride decreases the pathogenic microbial colonization thereby decreasing the chances of development of gingivitis and periodontal disease.

EDUCATIONAL BACKGROUND

- Is inversely related to education
- This may be due to more systemic home care and dental maintenance care found among the well-to-do and the educated.

PROFESSIONAL DENTAL CARE

- The incidence and severity of periodontal disease is less among those who seek dental care regularly.

CONCLUSION

- *Periodontal disease affects on an average 80-90% of the Indian population*
- *It is a predisposing factor for CVDs, diabetes, pre-term birth and low birth weight.*
- *More clearer picture of the disease and its determinants and time trends yielding a clearer data would be greatly useful to assess the current scenario and plan for future preventive programmes.*