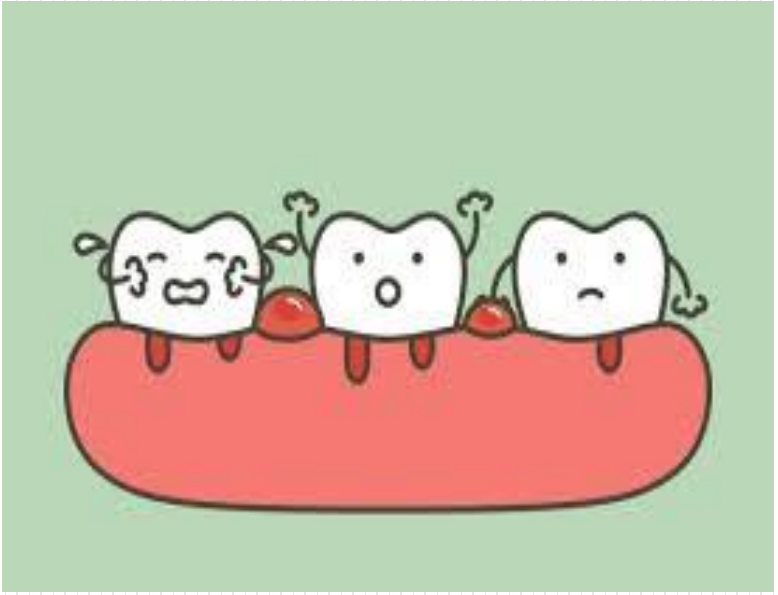
Lec 1

EXAMINATION OF PATIENT WITH PERIODONTAL DISEASE



First Visit

1)Medical History

*Most of the medical history is obtained at the first visit

The medical history should include reference to the following

1. If the patient is under the care of a physician,
2. Details regarding hospitalizations and operation
3. A list of all medications being taken
4. All medical problems (e g cardiovascular, hematologic, endocrine).
5. The patient's allergy history should be taken

What is the relevance of a patient's medical history to his or her periodontal care?

*Medical problems can increase susceptibility to periodontal diseases (e.g.,diabetes and HIV).
*Medical problems can have periodontal and other oral manifestations (e.g.,leukaemia and mucocutaneous disorders)

*medications can have oral and periodontal side effects (e.g., phenytoin).

2)Dental History

1 Visits to the dentist should be listed

2 The patient's oral hygiene regimen should be described, including tooth brushing frequency, time of day, method, type of toothbrush and dentifrice, and interval at which brushes are replaced

3 Any orthodontic treatment

4. .Does the patient have implants to replace any of the missing teeth

5 Note the presence of any gingival bleeding, including when it first occurred whether it occurs spontaneously, on brushing or eating

6 I f the patient has any difficulty chewing, and whether there is any tooth mobility

7 Note the patient's general dental habits, such as grinding or clenching of the teeth, nail biting or biting on foreign objects

3)Casts

used to study –

Position of gingival margin.

-Inclination of teeth

-Contact relationship

-Food impaction area

Visual aids in discussion.

4)Intraoral Radiographic Survey

Panoramic radiographs are helpful for the detection of developmental anomalies, pathologic lesions of the teeth and jaws, and fractures and severity of bone destruction with periodontal disease

Radiographs **do not -Show**
periodontal pockets -Distinguish between successfully treated and untreated cases -Show structures on buccal, lingual, and labial aspect of tooth –
Record tooth mobility

5)Clinical Photographs

Color photographs are useful for recording the appearance of the tissue before and after treatment

6)social history

1. details of habits such as tobacco smoking and alcohol consumption

2. A social history may also give information about the patient's occupation that can provide information about the patient's ability to attend appointments regularly

Oral Examination

1)Oral Hygiene

*The amount of plaque detected, however, is not necessarily related to the severity of the disease present for example, aggressive periodontitis is a destructive type of periodontitis in which plaque is minimal

2)Oral Malodor.

Oral malodor , which is also termed halitosis ,

may be due to

ANUG, Food impaction, caries, dehydration, smoking, dentures, diabetes ,Infections and alcohol

3)Examination of the Oral Cavity

*The entire oral cavity should be carefully examined

* The examination should include the lips, the floor of the mouth, the tongue and the palate

* The dentist should detect all pathologic changes that are present in the mouth

4)Examination of the Lymph Nodes.

*Periodontal and periapical lesions can result in inflammatory lymph nodes

5) Examination of the Teeth and Implants

*The teeth are examined for caries, poor restorations, developmental defects anomalies of tooth form, wasting

Wasting Disease of the Teeth.

Wasting is defined as any gradual loss of tooth substance, which is characterized by the formation of smooth, polished surfaces without regard to the possible mechanism of this loss.

Erosion ,

is a sharply defined wedge-shaped depression in the cervical area of the facial tooth surface.

*The etiology of erosion is not known . Decalcification by acidic beverages or citrus fruits in combination with the effect of acid salivary secretion are suggested causes.

Abrasion

refers to the loss of tooth substance that is induced by mechanical wear other than that of mastication. Abrasion starts on the exposed cementum surfaces rather than on the enamel

Attrition

is occlusal wear that results from functional contacts with opposing teetht

Dental Stains

Dental stains are pigmented deposits on the teeth . They should be carefully examined to determine their origin

Hypersensitivity.

Root surfaces exposed by gingival recession may be hypersensitive to thermal changes or tactile stimulation

Tooth Mobility.

* All teeth have a slight degree of **physiologic mobility** , which varies for different teeth and at different times of the day.
* It is greatest when arising in the morning, and it progressively decreases

The increased mobility in the morning is attributed to slight extrusion of the tooth as a result of limited occlusal contact during sleep. During the waking hours, mobility is reduced by chewing and swallowing forces, which intrude the teeth in the sockets.

*These 24 hour variations are less marked in persons with a healthy periodontium than in those with occlusal habits such as bruxism and clenching.

* Single rooted teeth have more mobility than multi rooted teeth, with incisors having the most mobility

1. Loss of tooth support (bone loss) can result in mobility.

2 . Trauma from occlusion (i e injury produced by excessive occlusal forces or as a result of abnormal occlusal habits such as bruxism and clenching) is a common cause of tooth mobility

3. Extension of inflammation from the gingiva into the periodontal ligament results in changes that increase mobility

4 . Periodontal surgery temporarily increases tooth mobility immediately after the intervention and for a short period

5. Tooth mobility is increased during pregnancy.

6. Pathologic processes of the jaws that destroy the alveolar bone or the roots of the teeth can also result in mobility

Examination of the Periodontium

The periodontal examination should be systematic, starting in the molar region in either the maxilla or the mandibel and proceeding around the arch. It is important to detect the earliest signs of gingival and periodontal disease

Causes of Periodontal Diseases

Dental plaque is the major factor in causing periodontal disease.
Dental calculus provides a surface for plaque to attach.

Risk Factors for Periodontal Disease

- Smoking - Diabetes -Poor Oral Hygiene - Osteoporosis - HIV/AIDS - Medications - Stress

Gingivitis

is inflammation of the gingival tissue.

Gingivitis is characterized by areas of redness and swelling, and there is a tendency for the gingiva to bleed easily.

Gingivitis is limited to the epithelium and gingival connective tissues. there is no tissue recession or loss of connective tissue or bone

Periodontitis

is means inflammation of the supporting tissues of the teeth. Periodontitis is the extension of the inflammatory process from the gingiva into the connective tissue and alveolar bone that supports the teeth. The progression of periodontitis involves the destruction of connective tissue attachment at the most apical portion of a periodontal pocket

Amount of Attached Gingiva.

It is important to establish the relationship between the bottom of the pocket and the mucogingival line.

The width of the attached gingiva is the distance between the mucogingival junction and the projection on the external surface of the bottom of the gingival sulcus or the periodontal pocket

The width of the attached gingiva is determined by subtracting the sulcus or pocket depth from the total width of the gingiva (i.e., the gingival margin to the mucogingival line). This is done by

- stretching the lip or cheek to demarcate the mucogingival line while the pocket is being probed .
- The amount of attached gingiva is generally considered to be insufficient when the stretching of the lip or cheek induces the movement of the free gingival margin.

Degree of Gingival Recession.

During periodontal examination, it is necessary to record the data regarding the amount of gingival recession. This measurement is taken with a periodontal probe from the CEJ to the gingival crest, and it is drawn on the patient's chart.

Periodontal Pockets Examination

for periodontal pockets must include their presence and distribution on each tooth type of pocket)surface, the pocket depth, the level of attachment on the root, and the (i e suprabony or infrabony)

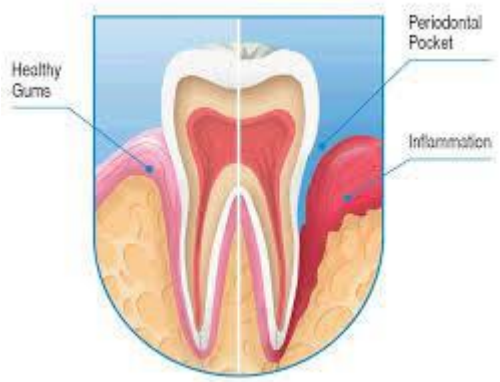
Signs and Symptoms

Although probing is the only reliable method of detecting pockets, clinical signs such as

1.color changes (i e a bluish red marginal gingiva that extends from the gingival margin to the attached gingiva)

2. an enlarged, edematous gingiva may suggest their presence.

3. bleeding suppuration, may also denote the presence of a pocket



Periodontal pockets are generally painless but they may give rise to symptoms such as

1 localized or sometimes radiating pain
2 the sensation of pressure after eating that gradually diminishes
3 foul taste in localized areas,
4 sensitivity to hot and cold,
5 and toothache in the absence of caries is also sometimes present

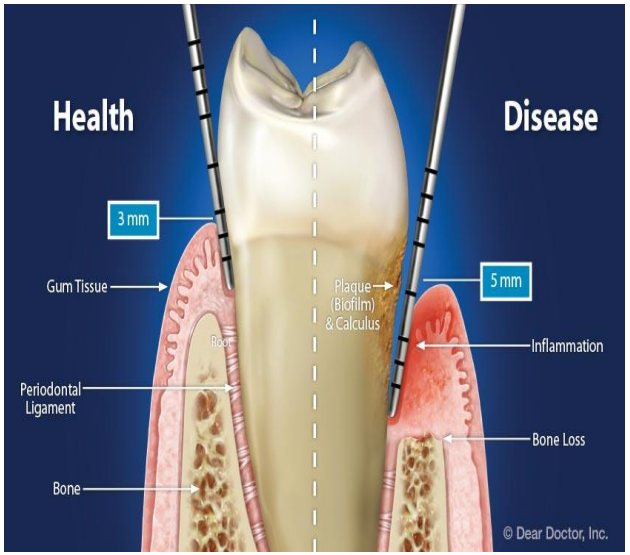
Detection of Pockets

The only accurate method of detecting and measuring periodontal pockets is careful exploration with a periodontal probe

* Pockets are not detected by radiographic examination The periodontal pocket is a soft tissue change Radiographs indicate areas of bone loss in which pockets may be suspected, but they do not show pocket presence or depth, and consequently they show no difference before and after pocket elimination unless bone has been modified

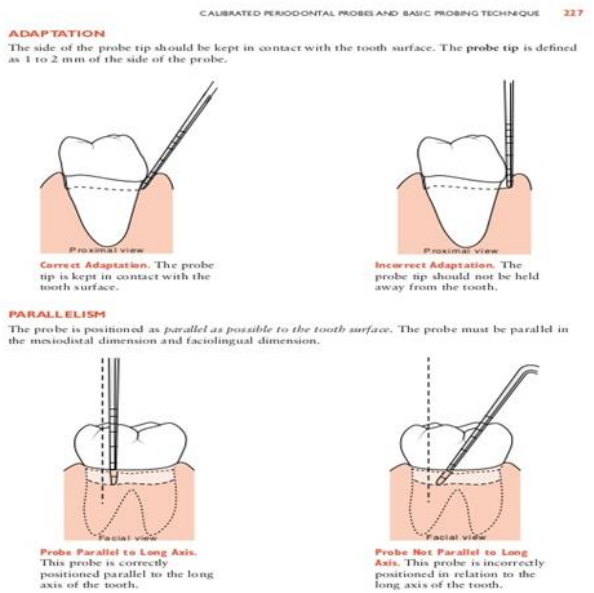
Pocket Probing

The probing depth is the distance to which a probe penetrates into the pocket.



Probe penetration can vary, depending on the

1) force of introduction,
2) the shape and size of the probe tip
3) the direction of penetration,
4) the resistance of the tissues
5) the convexity of the crown, and
6) the degree of tissue inflammation



Probing Technique

The probe should be **inserted** parallel to the vertical axis of the tooth and "walked" circumferentially around each surface of each tooth to detect the areas of deepest penetration

In addition, special attention should be directed to detecting the presence of furcation involvements

In multi-rooted teeth, the possibility of furcation involvement should be carefully explored. The use of specially designed probes (e.g., Nabers probes) allows for an easier and more accurate exploration of the horizontal component of furcation lesions

Level of Attachment Versus Pocket Depth

Pocket depth is the distance between the base of the pocket and the gingival margin , It may change from time to time, even in patients with untreated periodontal disease, as a result of changes in the position of the gingival margin Therefore, it may be unrelated to the existing attachment of the tooth.

The level of attachment is the distance between the base of the pocket and a fixed point on the crown, such as the cementoenamel junction (Changes in the level of attachment can be the result of a gain or loss of attachment, and they can afford a better indication of the degree of periodontal destruction

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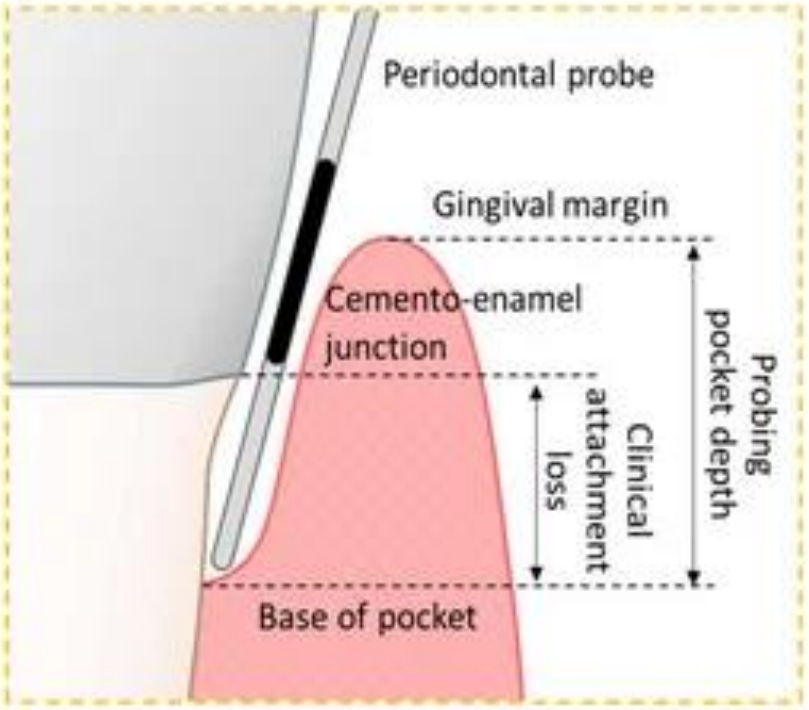

b

c

Probe	Scale [mm]	Color-coding [mm]	Tip diameter [mm]	Shape
Williams	1, 2, 3, 5, 7, 8, 9, 10	-	0.4 (modified) 1.0 (original)	Straight
WHO	3.5, 5.5, 8.5, 11.5	3.5–5.5	0.6	Straight with spherical end
UNC-15	1 to 15 at every mm	4–5, 9–10, 14–15	0.4–0.6	Straight
PCP-11	3, 6, 8, 11	3–6, 8–11	0.5	Straight
Nabers	3, 6, 9, 12	3–6, 9–12	0.4	Curved

Bleeding on Probing

The insertion of a probe to the bottom of the pocket elicits bleeding if the gingiva is inflamed and if the pocket epithelium is ulcerated.

Non inflamed sites rarely bleed . In most cases, bleeding on probing is an earlier sign of inflammation than gingival color changes

* If periodontal treatment is successful, bleeding on probing will cease

To test for bleeding after probing, the probe is carefully **introduced to the bottom of the pocket** and gently moved laterally along the pocket wall.

Sometimes bleeding appears immediately after the removal of the probe other times, it may be delayed for a few seconds Therefore, the clinician should recheck for bleeding 30 to 60 seconds after probing

Alveolar Bone Loss.

Alveolar bone levels are evaluated via both clinical and radiographic examination. Probing is helpful for determining the following:

(1) the height and contour of the facial and lingual bones, which are obscured on the radiograph by the roots

(2) the architecture of the interdental bone.

Transgingival probing, which is performed after the area is anesthetized, is a more accurate method of evaluation, and it provides additional information about bone architecture.

Is there a difference between horizontal And vertical bone loss?

*If the level of the bone is essentially equal interdentally, it is called horizontal bone loss

*Vertical/angular bone loss occurs when one tooth has lost more bone than the tooth next to it and is suggested when the bone crest is more apical to the CEJ adjacent to one tooth than to the other