# KING SAUD UNIVERSITY
## COLLEGE OF DENTISTRY



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**CLINICAL HANDBOOK**

## DEPARTMENT OF PERIODONTICS AND COMMUNITY DENTISTRY

## 313 PCS - CLINICAL PERIODONTOLOGY I

**Intra-Oral Examination and Periodontal Probing**
**Periodontal Examination and Charting Form**

## INTRA-ORAL EXAMINATION

The aim of the clinical examination is to identify signs of possible disease. The signs to look for include: color, shape, consistency and height of the gingiva and other oral structures such as the lips, mucosa, tongue, oropharynx, floor of the mouth, hard palate and soft palate.

It is important to examine both the general aspect of these structures and also any possible localized alteration.

## EXAMINATION OF THE PERIODONTAL TISSUES

Examination of the periodontal tissues is important in the diagnosis and treatment Planning.

### The Gingiva

Gingiva should be dried before examination as light reflection from moist gingiva may obscure details. Colour, size, contour, consistency, surface texture, position in relation to cementoenamel junction, cause of bleeding and pain if present should be carefully evaluated and recorded.

The gingiva is assessed on the basis of the following parameters:

| **PARAMETERS** | | **NORMAL** | **DISEASED** |
|---|---|---|---|
| ***Color*** | | Pink | Red-Violet<br>White - Black |
| ***Contours*** | *Papillary* | Flat | Swollen - Eroded |
| | *Marginal* | Festooned | Altered festonation |
| ***Consistency*** | | Hard - Elastic | Edematous - Fibrous<br>Fibroedematous |
| ***Texture*** | | Stippling | Flat - Glossy - Stippling disappears |
| ***Position*** | | At the cemento-enamel junction | More coronal - More apical |
| ***Height*** | | Adequate (≥3 mm.) | < 3mm |
| ***Size*** | | In the norm | Hyperplasia - Hypertrophy |

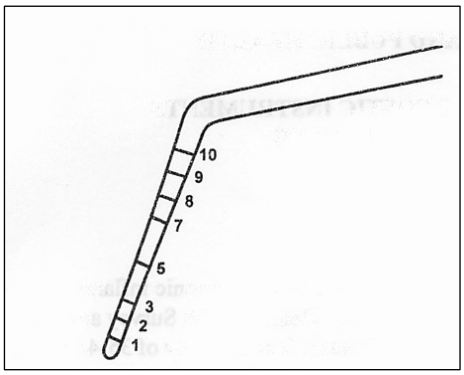
### Normal gingiva

The healthy gingiva is pink, the papillary contour is flat and the marginal contour is festooned. The gingival margin is located at the cemento-enamel junction. The interincisal papilla have a characteristic "stippled" appearance. Probing identifies the presence of a gingival sulcus about 1.5 mm deep.

**PERIODONTAL PROBING**

Periodontal pockets should be examined for their presence, type and disribution in relation to each tooth. This can be done by systematic and careful probing with Williams graduated probe.

The Williams periodontal probe is marked in millimeters at the following distances from the probe tip. **1, 2, 3, 5** then **7, 8, 9** and **10** millimeters. The spaces between the 3 and 5 millimeter marking and between the 5 and 7 millimeter marking are to avoid confusion in the reading of the measurement.




**Periodontal probing** is accomplished for all surfaces of every tooth in the dentition. During probing, a periodontal probe should be used with gentle pressure and it should be "walked" around the entire circumference of each tooth. Probing depth is recorded for all teeth on each of six locations (**buccal, lingual, mesio-buccal, mesio-lingual, disto-lingual, disto-buccal**).

The probe should be inserted **parallel to the long axis of the tooth** and walked around each surface of each tooth to detect the depth of pocket at each -surface. A probing force of **25 grams (0.75 Newtons)** have been found to be well tolerated and accurate.

**Clinical attachment level (CAL):** While probing, the level of cemento enamel junction should also be noted. The distance from the cemento enamel junction to the base of the pocket indicates the attachment loss. This is the distance from the cemento-enamel junction to the base of the pocket and represents the best measure of disease severity in terms of loss of support for the teeth. For more detailed records to allow the dentist to accurately monitor the progression of disease over time, clinical attachment level may be recorded at each of 6 locations as with probing depth.

**Bleeding upon probing** is recorded by using a bleeding index, which records the percentage of gingival units that bleed upon probing.

## Tooth mobility

**Mobility** is recorded by bidigital movement of the teeth in a bucco-lingual and occluso-apical direction. If there is slight mobility beyond that which is physiologic, it is scored a 1. If the mobility is somewhat more but the tooth cannot be depressed apically in the alveolus, it is scored a 2. If the mobility is advanced to the degree that the tooth may be depressed apically, it is graded as a 3. . It is assessed using the ends of two instruments.

| Grade | Description |
|---|---|
| Degree 0 | Absent |
| Degree 1 | Tooth mobility in a vestibular-lingual direction by up to 1 mm |
| Degree 2 | Tooth mobility in a vestibular-lingual direction by more than 1 mm 1 |
| Degree 3 | Tooth mobility in a vestibular-lingual direction by more than 1 mm 1 and/or depressibility in the alveolus. |

**Furcation Involvement**

Invasion of pockets into furcations is recorded on the basis of class I-III. Furcation probes such as the Nabers probe is used for determining extension of pockets into areas between roots.

| ***Degree*** | | ***Furcation involvement*** |
|---|---|---|
| *I* | | Horizontal loss of bone tissue not exceeding 2-3 mm of the depth of the furcation. |
| *II* | *TYPE* | *A:* Horizontal loss of bone tissue for less than half the furcation.<br>*B:* Horizontal loss of bone tissue for more than half the furcation.<br>*C:* Almost complete horizontal loss of bone tissue. A small diaphragm remains. |
| *III* | | Total loss of interradicular bone<br>(otherwise known as a through-and-through furcation). |

## Examination of Plaque

This examination for plaque is not part of the examination of the periodontal tissues themselves. However it can be considered a most useful introduction to the examination of the adjacent periodontal tissues, due to the inter-relationship between plaque to these tissues, and the inflammatory changes within the tissues.

Plaque can be detected. Clinically by the following ways:
**Visual detection -** Plaque can be seen as a white-creamy film on the tooth surface.

This is more readily visible if the tooth has been dried or if the plaque is of sufficient thickness.

**Use of instrument -** The use of a dental instrument such as a periodontal probe to check for the presence of plaque is a useful and convenient method of plaque detection. The probe is run along the tooth surface in the region of the gingival margin. The presence of plaque is recorded if plaque could be collected on the probe. This method has the advantage that plaque in the interproximal region could be more readily detected as well as in detecting plaque which is not of sufficient thickness to be immediately visible to an examiner.

In those situations when plaque is not immediately visible to the examiner, a periodontal probe is used to confirm the presence or absence of plaque. The probe is run along the tooth surface in the region of the gingival margin.

***Use of disclosing agents -*** These are dyes used to stain plaque making the detection of plaque more readily visible. As color changes in the tissues may be obscured by the dye, it is advisable to examine the periodontal tissues before using the dye.

*…….to be continued Week 4*