

**\*Academic Year 3\***

# **Diagnosis in oral surgery**



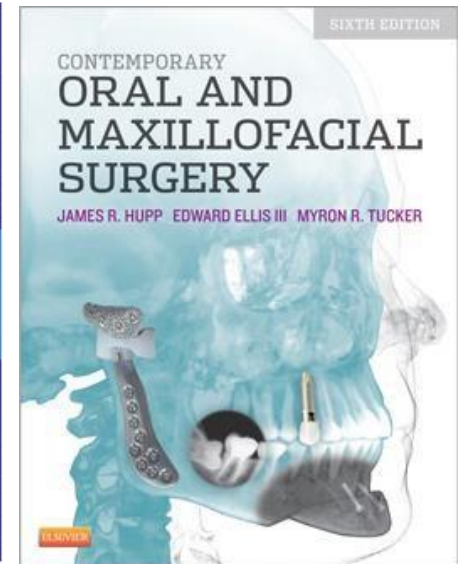
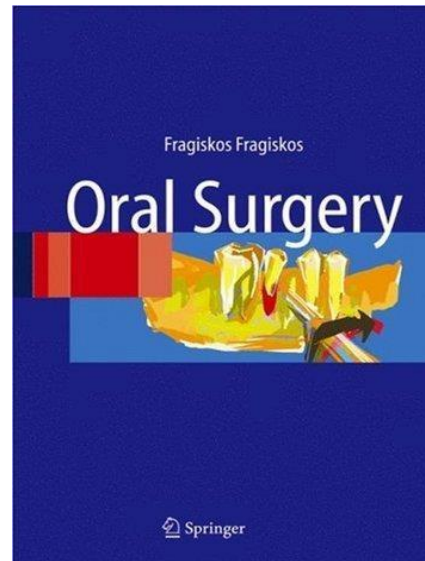
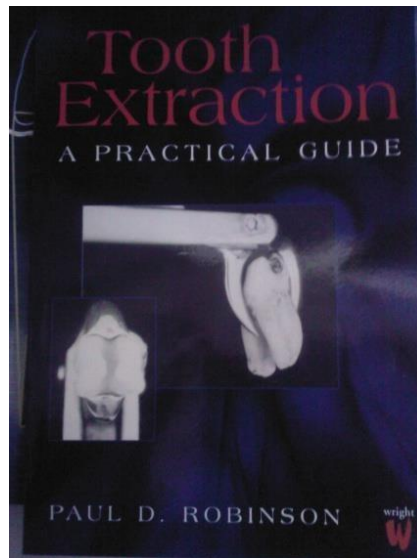
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**Ph.D in Oral & Maxillofacial Surgery**



## Objectives:

- 1- To establish a positive professional relationship-patient assessment , evaluation and diagnosis.
- 2- To provide the clinician with information concerning the patient's past dental, medical and personal history.
- 3- To provide the clinician with the information that may be necessary for making a diagnosis.
- 4- To provide information that aids the clinician in making decisions concerning the treatment of the patient.



### Further reading

Fragiskos D. Fragiskos (2007): Oral Surgery. Springer

Robinson (2007): Tooth Extraction- A Practical Guide. Wright

Hupp (2013), Contemporary Oral and Maxillofacial Surgery. Elsevier

# INTRODUCTION

**To provide best treatment and patient satisfaction, thorough clinical history, examination and diagnostic aids are required**

**Since dental problems are not same in two patients, so thorough examination, evaluation and diagnosis of an individual patient guides the effective treatment plan**



# Diagnosis



## WHAT IS DIAGNOSIS?

- **Diagnosis is defined as utilization of scientific knowledge for identifying a diseased process and to differentiate it from other disease process**
- **In other words, literal meaning of diagnosis is determination and judgment of variations from the normal**



# Patient Evaluation

The diagnostic process actually consists of four steps;

1. First step: assemble all the available facts gathered from chief complaints, medical and dental history, diagnostic test and investigations
2. Second step : analyze and interpret assembled clues each and the tentative or provisional diagnosis
3. Third step :make differential diagnosis of all possible diseases which are consistent with signs, symptoms and test results gathered
4. Fourth step : select the closest possible choice

## **DEVELOPING A SURGICAL DIAGNOSIS**

**-Most of the important decisions concerning a surgical procedure should be made long before the administration of anesthesia. The decision to perform surgery should be the culmination of several diagnostic steps. *The surgeon first identifies;***

**1- the various signs and symptoms**

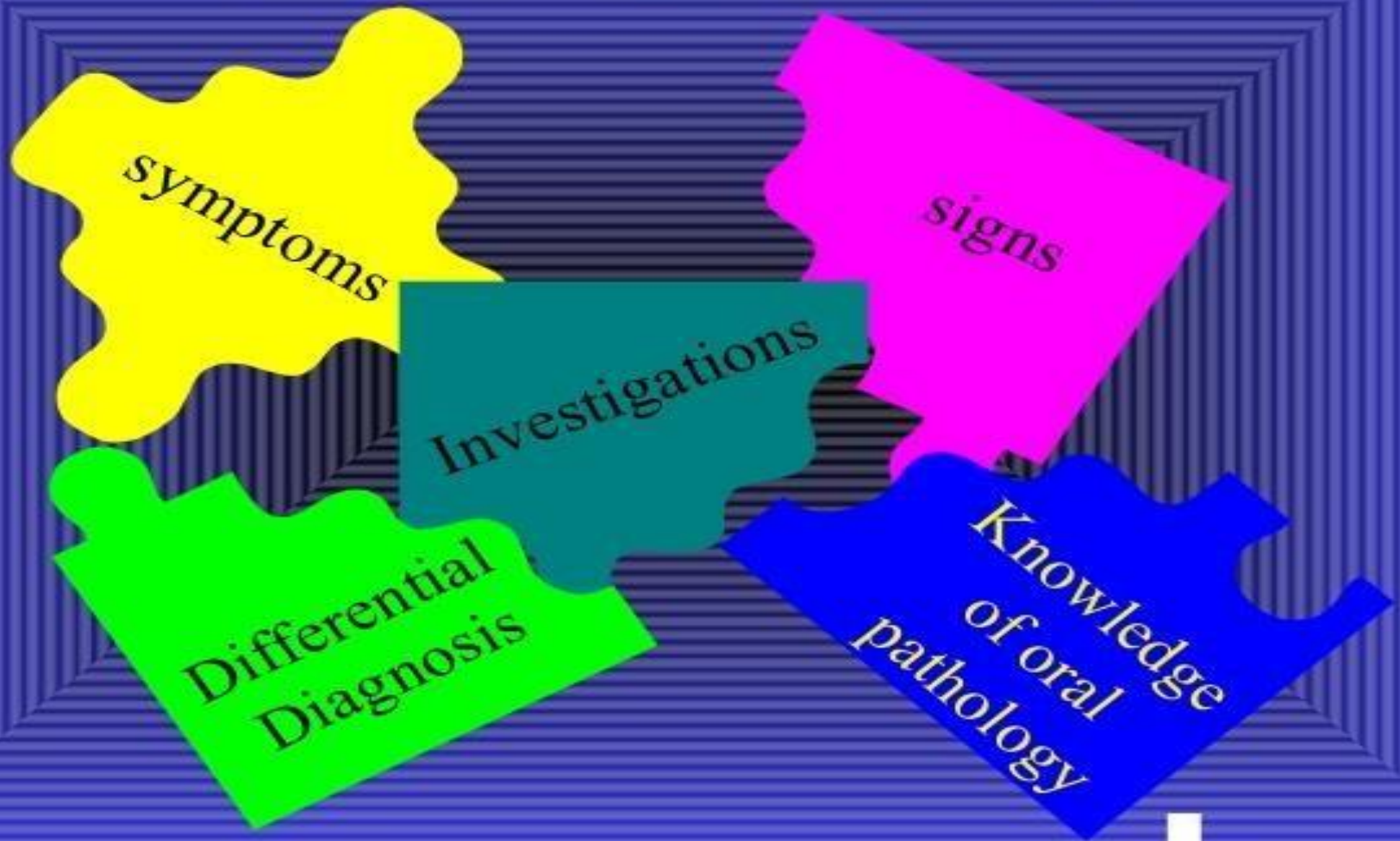
**2- and relevant historical information; then,**

**3- using available patient and scientific data**

**4- and logical reasoning based on experience, the surgeon establishes the relationship between the individual problems.**



# THE DIAGNOSTIC PROCESS



For a good analysis, data must be organized into a form that allows for hypothesis testing; that is, the dentist should be able to consider a list of possible diseases and eliminate those unsupported by the patient data or



## **BASIC NECESSITIES FOR SURGERY**

-Little difference exists between the basic necessities required for oral surgery and those required for the proper performance of other aspects of dentistry. The two principal requirements are;

- (1) adequate visibility and
- (2) assistance

-Although visibility may seem too obvious to mention as a requirement for performing surgery, clinicians often underestimate its importance, especially when the unexpected occurs. Adequate visibility depends on the following three factors:

- (1) adequate access,
- (2) adequate light, and
- (3) a surgical field free of excess blood and other fluids.

## THE DIAGNOSTIC PROCESS



Adequate access not only requires the patient's ability to open the mouth widely but also may require surgically created exposure. Retraction of tissues away from the operative field provides much of the necessary access. (Proper retraction also protects tissues being retracted from being accidentally injured, for example, by cutting instruments.) Improved access is gained by the creation of surgical flaps.

- ❖ Adequate light is another obvious necessity for surgery. However, clinicians often forget that many surgical procedures place the surgeon or assistant in positions that block chair-based light sources. To correct this problem, the light source must continually be repositioned, or the surgeon or assistant must avoid obstructing the light, use more than one overhead light, or use a headlight.
- ❖ A surgical field free of fluids is also necessary for adequate visibility. High-volume suctioning with a relatively small tip can quickly remove blood and other fluids from the field.
- ❖ As in other types of dentistry, a properly trained assistant provides invaluable help during oral surgery. The assistant should be sufficiently familiar with the procedures being performed to anticipate the surgeon's needs. Performance of good surgery is extremely difficult with no or poor assistance.

## **PRESURGICAL MEDICAL ASSESSMENT**

- ❖ It is critical that the surgeon examine the patient's medical status. patients can have a variety of health problems that require treatment modification or medical management before the surgery can be safely performed. Special measures may be needed to control bleeding, lessen the chance of infection, or prevent a medical emergency.

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## **Case Sheet-of-History**

## **Definition:**

Case history is defined as; planned, professional conversation between the patient and the clinician in which the patient reveals his/her symptoms fears, or feelings to the clinician so that the nature of the real or suspected illness and mental attitude to it may be determined

## **•Purpose:**

1. To discover whether patient has any general or local condition that might alter the normal course of treatment
2. comprehensive medical and previous dental history should be recorded. In addition, a description of the patient's symptoms in his or her own words should be noted
3. The purpose of recording patients history and conducting a clinical examination is to arrive at a logical diagnosis to the patients chief complaint and to institute a suitable treatment plan





# Personal data

*Patient name :*

*Age:*

*Sex:*

*Marital status:*

*Occupation :*

*Address*

## What is Personal Data?



## ***Patient name :***

***Better Communication***

***Documentation***

## ***Age:***

***Related diseases ( Herpetic gingivostomatitis,Bohn nodule LP, Malignancy)***

***Dose of the drugs***

## ***Sex:***

***Mixed names***

***Related diseases***

## ***Marital status:***

***SeX transmitted disease***

***Pregnancy ( G.enlargment, gingivitis)***

***Lactation***

## ***Occupation :***

***Work related hazards ( Gloss blower, Carpenters )***

## ***Address***

***Idea about social background***

***Endemic disease ( florosis )***

***industrial hazarrds***

# Chief Complain

**Patient's own words**

**Do not use complicated medical terminology**

**Pain, Bleeding, Swelling, Esthetic problems, etc**

**Regular check up**

- ✓ **It is the description of the problems for which the patient seeks treatment**
- ✓ **It should be recorded in patients own words and should not be recorded in medical terminology**

## Importance:

Overall treatment plan revolves around the chief complaint. It consists of information which promoted patient to visit a clinician. The form of notation should be in patient's own words

Symptoms are phenomenon or signs of deviation from normal and are indicative of illness

## **HISTORY OF PRESENT ILLNESS**

**It is the detailed description of chief complaint**

**More descriptive analysis about this initial information**

Signs and symptoms

Duration, intensity of pain,

Relieving and exaggerating ( triggering )factors

**The most common toothache may arise either from pulp or from PDL**

**Mild to moderate type of pain can be of pulpal or periodontal origin.**

**If pain from PDL ,teeth will be sensitive to percussion Pulpal pain will be sharp and depends on the pulpal fibres involved**

## **History of present illness**

**Onset.**

**Duration.**

**Type ( Nature ) of pain.**

**Severity of pain.**

**Location and site.**

**Prior occurrence.**

**Exacerbating factors.**

**Relieving factors.**

**Associated phenomenon ( Fever, malaise, nausea, etc )**

**Previous medications.**

# Taking Pain History

<b>Site / Localization</b>	Where is the pain?
<b>Type ( Character )</b>	Dull, Throbbing, electrical like, stabbing
<b>Onset</b>	When did the pain start, and was it sudden or gradual? Include also whether if it is progressive or regressive.
<b>Duration</b>	Duration of pain or attack
<b>Severity</b>	How bad is the pain? Does it affect daily activity or affect sleep
<b>Exacerbating factors and relieving factors.</b>	Hot and cold
<b>Radiation / Associated phenomenon</b>	Does the pain radiate anywhere? Fever, vomiting



➤ **Chief complain of pain**

❖ **I have Pain in the lower right side**

❖ **I have pain on drinking cold water**

➤ **History of chief complain**

A patient presents with one week history of prolonged throbbing pain localized to the lower molar region . Pain is waken the patient from sleep, which is aggravating by cold drinks, and partially relived by taking an analgesic

# Taking History of bleeding

<b>Site / Localization</b>	Where is the bleeding?
<b>Onset</b>	When did the bleeding start ?
<b>Duration of bleeding</b>	Duration
<b>Spontaneous / on tooth brushing/ on eating</b>	Hot and cold
<b>How does it stop?</b>	After tooth brush

# Chief complain

- ⊗ “My gums are bleeding when I brush my teeth.”

## History of chief complain

- ⊗ A patient presents with **two weeks** history of gingival bleeding **localized** to the **lower anterior region**, which is **initiated by brushing**, and last for few minutes

# Past dental history

- ⊗ Frequency of visiting dentist
- ⊗ Past caries / restorative experience
- ⊗ L.A
- ⊗ Causes of loss teeth ( perio/ caries )

# Past dental history

- ⊗ *Complications*
- ✓ With L.A
- ✓ History of difficult extraction
- ✓ Any post op complications ( bleeding, Pain, delayed healing)
- ⊗ *Patient compliance*

# Past medical history

- ⊕ **Any medical problems**
  - ✓ Diseases/ drugs may complicate dental work
  - ✓ Dental work may adversely affect the disease
  - ✓ Drug interaction/ adjustment/ adverse reaction
  - ✓ Oral manifestation of systemic diseases or drugs
- ⊕ **Hospitalization ( Blood transfusion )**
- ⊕ **Allergy ( Drugs / food etc ) ( Anaphylactic shock )**

# Systemic review

- ⊕ Signs and symptoms
- ⊕ To refer patient with undiagnosed diseases



# Systemic review

- ⊗ **CVS** ( Chest pain, difficulty in breathing, palpitation, clubbing finger )
- ⊗ **Respiratory** ( Cough, wheeze, difficulty in breathing )
- ⊗ **GIT** ( Diarrhea, constipation, difficulty in swallowing, vomiting, jaundice, bleeding )
- ⊗ **Endocrine system** ( Polyurea, thirst, polyphagia, weight loss, hair loss, heat intolerance)
- ⊗ **Genitourinary system** ( Burring on urination, blood with urination )
- ⊗ **Hematopietic system** ( Fatigue, brittle nail, eccyhmosis, bruising, gingival enlargment, )
- ⊗ **Central nervous system** ( Seizure, numbness, confused, disoriented)



# Social history / Habit

- ⊗ Smoke, Alcohol,
- ⊗ Teeth brushing
- ⊗ Other Para functional habit like thumb sucking, nail biting,

# Family history

- ⊗ Hereditary and familial disorders
- ⊗ Diabetes mellitus, HTN, Hemophilia, Allergy

# Clinical Examination

- A. Extra-oral examination
- B. Intra-oral examination

## Vital signs

- ⊗ Temperature
- ⊗ Pulse rate ( 60-100 beats per minute )
- ⊗ Respiratory rate ( 16- 18 breath per minute )
- ⊗ Blood pressure ( 120/ 80 mm hg )

# Extra-oral examination

- ⊗ Patient build/ Gait : ( general appearance )
- ⊗ Facial symmetry: ( infection, tumor )
- ⊗ Skin: ( pallor, jaundice, cyanotic )
- ⊗ Hair and Nail ( brittle nail, jaundice, clubbing finger )
- ⊗ Eyes: ( Yellowish color, Pallor, redness )
- ⊗ Nose: ( deviation, saddle nose )
- ⊗ Ears:

# Extra-oral examination

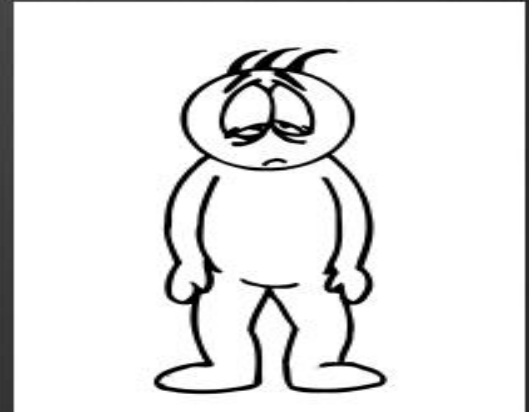
- ⊗ Lymph node
- ⊗ Cranial nerve ( 7<sup>th</sup> )
- ⊗ Salivary glands
- ⊗ T.M.J
- ⊗ Maxillary sinus

# General Appearance

- The patient's outward appearance and movement

Examples

Lethargic, dirty clothing and hair; body odors  
extreme thinness or obesity;  
bent posture; and difficulty  
breathing



## General Appearance

- **SKIN**

- ◆ Cyanosis indicate cardiac or pulmonary insufficiency,
- ◆ yellowing (jaundice) indicate liver disease,
- ◆ petechial or ecchymoses indicate bleeding disorder/ trauma.





# General Appearance

## □ Nail

- ◆ Clubbing seen in cardiopulmonary insufficiency
- ◆ Yellowish indicate jaundice
- ◆ splinter hemorrhages from infective endocarditis
- ◆ Pale nail bed indicate anemia

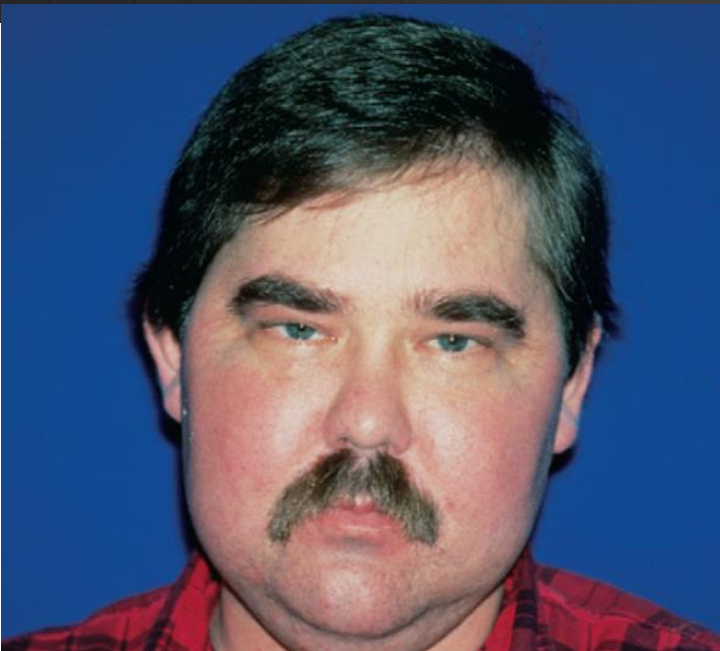




# General Appearance

## □ The face

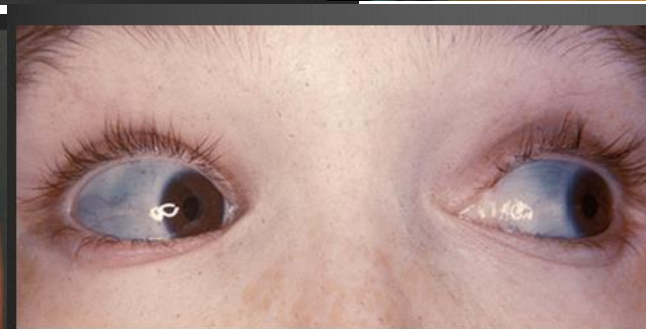
- ◆ Acromegaly
- ◆ Moon facies in Cushing syndrome
- ◆ Unilateral paralysis of Bell's palsy



# General Appearance

## □ The Eyes

- ◆ Exophthalmos indicate
- ◆ Yellow sclera may be caused by liver disease.
- ◆ Pale conjunctiva indicate Anemia
- ◆ Blue sclera indicate Osteogenesis imperfecta



# Intra-oral examination

✿ Oral hygiene:    Poor                                  Fair                                  Good                                  Excellen

## **A. Soft Tissue : ( Color, size, shape, texture )**

- ✿ Lips.
- ✿ Labial and Buccal mucosa.
- ✿ Palate.
- ✿ Gingiva.
- ✿ Floor of the mouth
- ✿ Tongue:

## B. Hard Tissue :

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8

- ❁ Differential Diagnosis:
- ❁ Special Investigation :
  - ✓ Vitality test
  - ✓ X-Ray:
  - ✓ Laboratory Investigation.
  - ✓ Biopsy:
- ❁ Final Diagnosis:
- ❁ Treatment :

# Complete examination of the oral cavity includes:

- Lips and Labial Mucosa
- Buccal Mucosa
- Mucobuccal Fold
- Hard Palate
- Soft Palate and Uvula
- Oropharynx & Nasopharynx
- Tongue
- Floor of Mouth
- Muscles of Mastication
- Periodontium
- Teeth



# THE DIAGNOSTIC PROCESS

## Examination of Oral Mucous Membrane



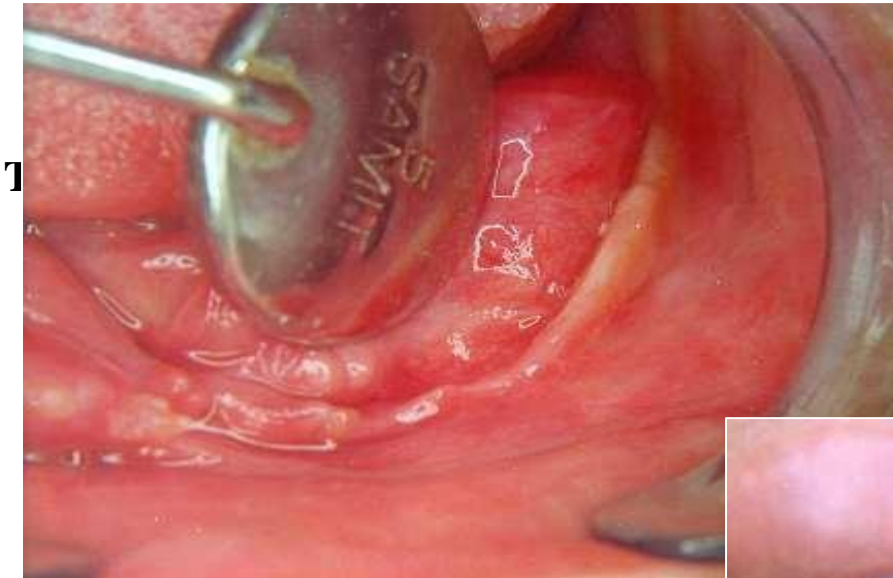
# THE DIAGNOSTIC PROCESS

## Examination of Oral Mucous Membrane



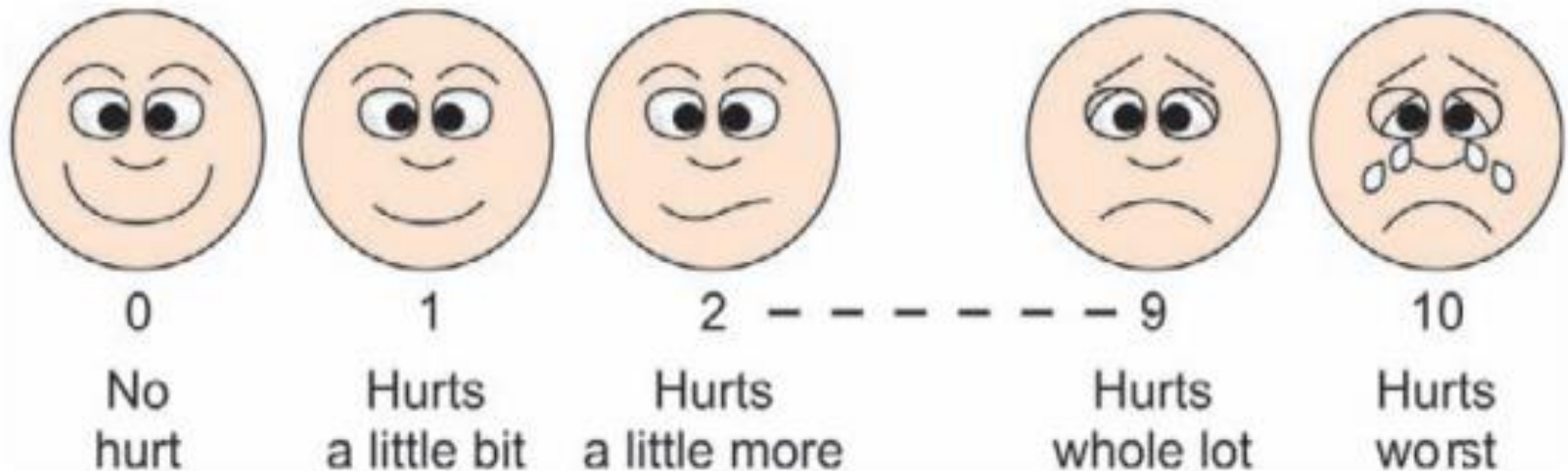
# THE DIAGNOSTIC PROCESS

## Examination of Oral Mucous Membrane





# Marking the intensity of pain



Patient is asked to mark the imaginary ruler with grading ranging from 0 to 10  
0-No pain 10-Most painful

- Mild to moderate pain can be of pulpal or periodontal origin but acute pain is commonly a reliable sign that pain is of pulpal origin.

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**Thank You**