Introduction to oral Medicine

Dr Fatma Adnan Abdulkareem
BDS, MSc, PhD
Oral Medicine

Ashur University, College of Dentistry

Introduction to oral medicine

- Oral medicine is a dental specialty that bridges the traditional areas of health between dentistry and medicine.

- International descriptions reflect this and oral medicine is defined as "the dental specialty placed at the interface between medicine and dentistry and is concerned with the diagnosis and management of (non-dental) pathology affecting the oral and maxillofacial region.

Introduction to oral medicine

- Oral medicine specialists provide clinical care to patients with a wide variety of orofacial conditions including :

oral mucosal diseases, orofacial pain syndromes, salivary gland disorders, and oral manifestations of systemic diseases.

There is a growing need to implement this specialty globally: due to the rapid progress in both medicine and dentistry, in many countries, the adequate diagnosis and treatment of oral diseases will become even more complex in the future.

Introduction to oral medicine

- Oral medicine doctor is trained to diagnose and manage patients with disorders of the orofacial region, essentially as a "physician of the mouth."

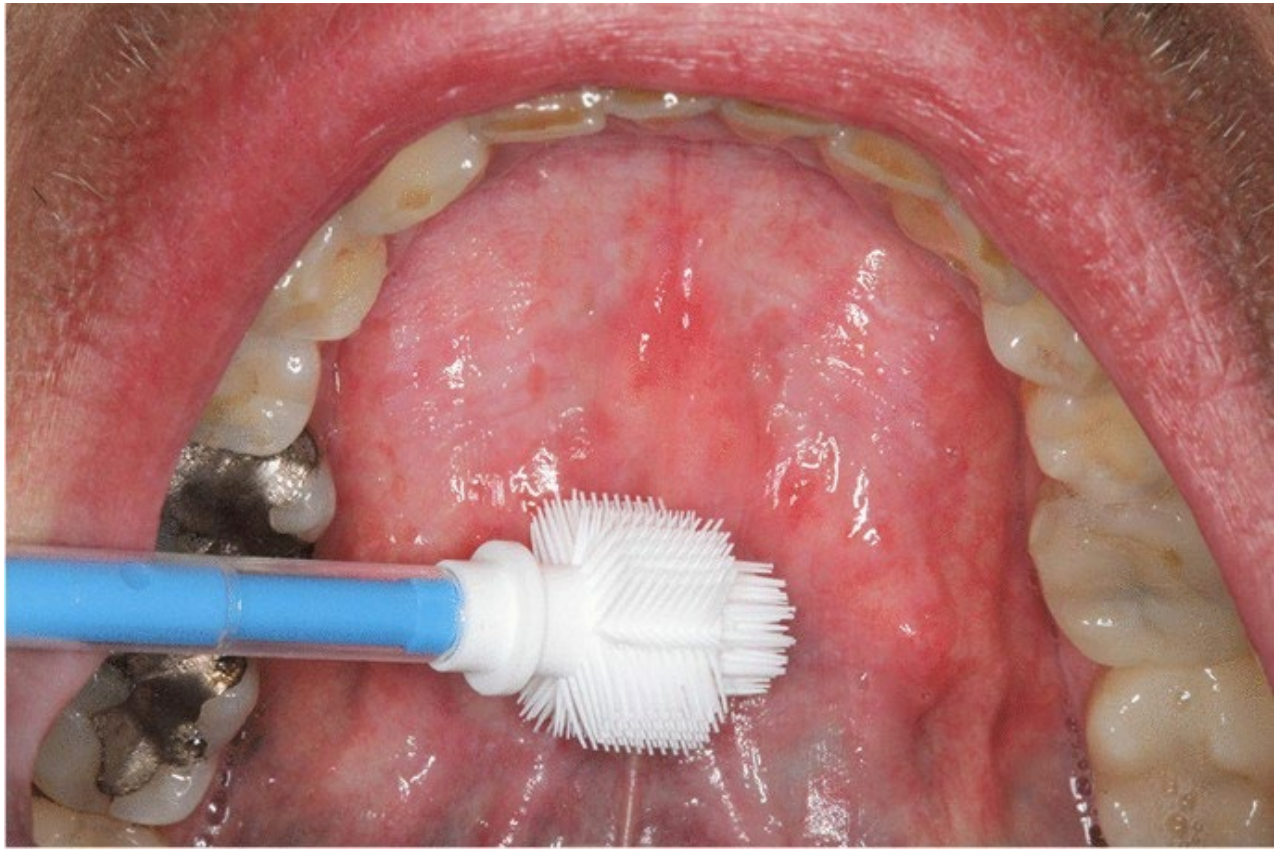
- An oral medicine doctor has received additional specialized training and experience in the diagnosis and management of oral mucosal abnormalities (**growths, ulcers, infection, allergies, immune-mediated and autoimmune disorders, cancers), taste and smell disorders; and recognition of the oral manifestations of systemic and infectious diseases**

Introduction to oral medicine

What are the practical aspects of the oral medicine ?

- **Biopsies**. Surgical removal of tissue or bone specimen for analysis to obtain a diagnosis.
- **Ordering and interpretation of tests**. Such tests include imaging studies (x-rays, CT scans, MRIs), salivary and blood tests and microbiological investigations.
- **Medical management**. Treating with topical and systemic medications to treat a wide range of conditions.
- **Specialized injections**. Injections in the mouth or face for diagnostic purposes, or for administration of medication for pain relief, anesthesia, or inflammation

Brush Biopsy

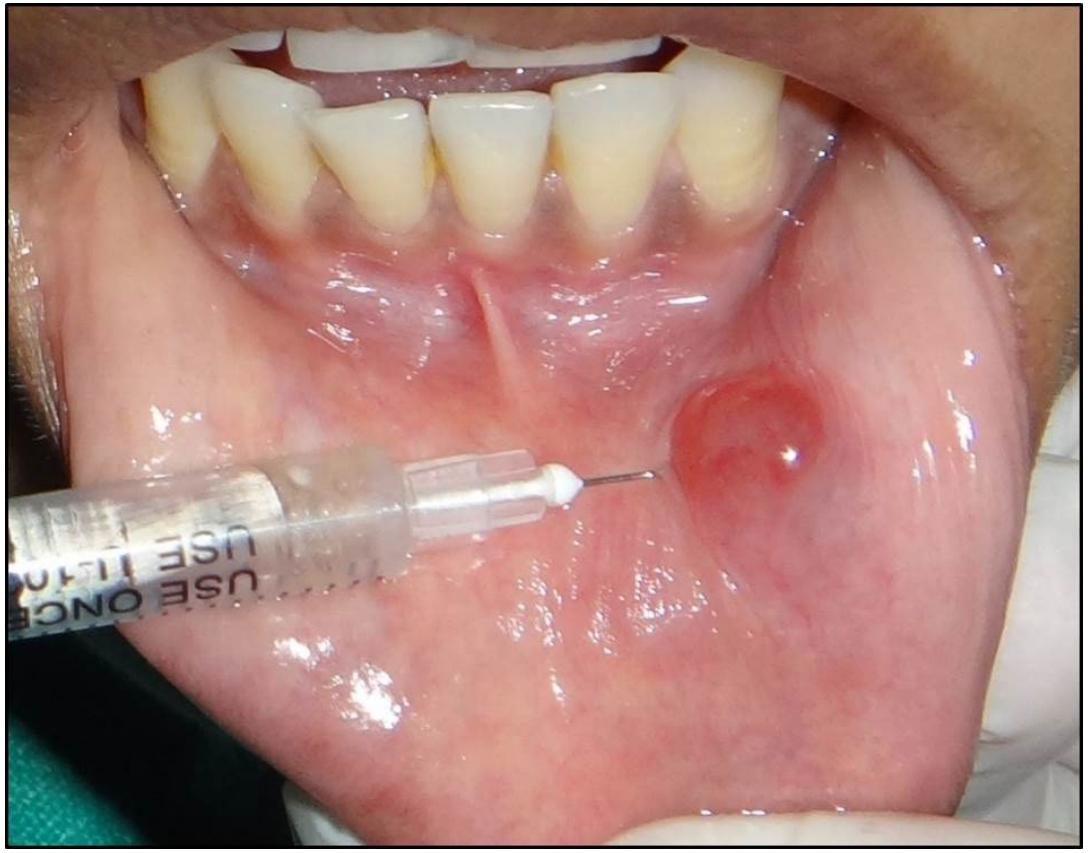


Surgical Biopsy , Aspiration biopsy





Intralesional injection(Mucocele)



Many systemic diseases have signs or symptoms that manifest in the orofacial region. Pathologically, the mouth may be afflicted by many cutaneous and gastrointestinal ,hematological and many other systemic diseases . There is also the unique situation of hard tissues penetrating the epithelial continuity (hair and nails are intra-epithelial tissues).

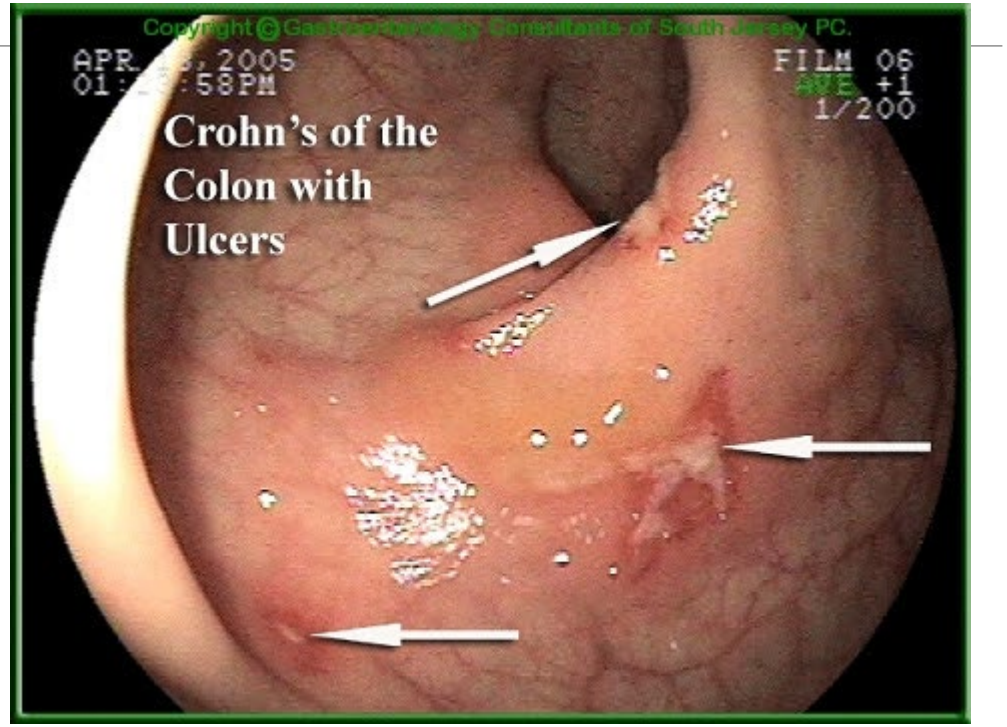
Mucocutenous Lichen Planus





Crohn's disease



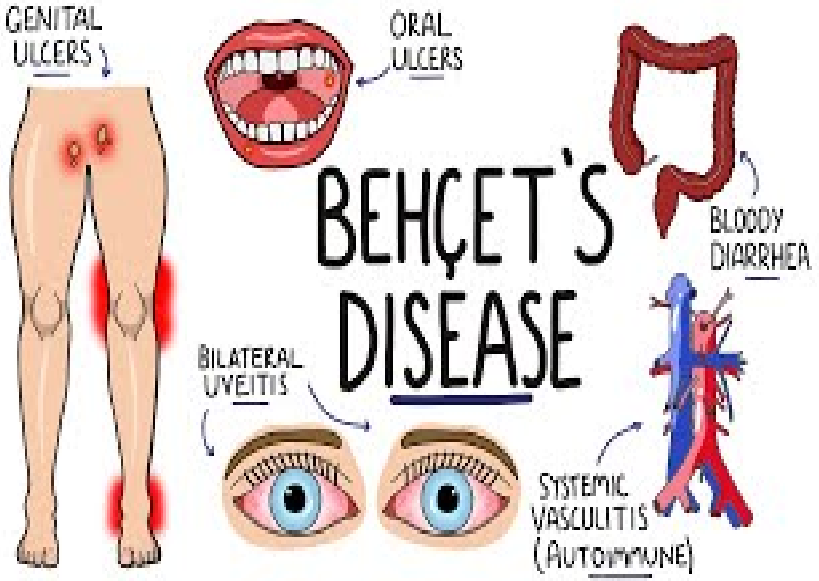


Example conditions that oral medicine is concerned with are:

- lichenplanus, Behçet's disease and pemphigus vulgaris. Moreover, it involves the diagnosis and follow-up of pre-malignant lesions of the oral cavity, such as leukoplakia or erythroplakia and chronic and acute pain conditions such as paroxysmal neuralgias, continuous neuralgias, myofascial pain, atypical facial pain, and migraines…ect
- Another aspect of the field is managing the dental and oral condition of medically compromised patients such as cancer patients suffering from related oral mucositis, bisphosphonate-related osteonecrosis of the jaws or oral pathology related to radiation therapy. Additionally, it is involved in the diagnosis and management of dry mouth conditions (such as Sjögren's syndrome) and non-dental chronic orofacial pain, such as burning mouth syndrome, trigeminal neuralgia and temporomandibular joint disorder .

Behçet's disease





History taking

- So in order to get an accurate diagnosis of the patient we have to take adequate history from the patient .

The first step in dealing with the patient is the history taking

- The basis of a true history is good communication between dentist and patient. Knowing the patient's problem, whether it has a medical diagnosis attached or not, needs to be identified.

- A good history is one which reveals the patient's ideas, concerns and expectations as well as any accompanying diagnosis.

History taking

- Often the history alone does reveal a diagnosis. Sometimes it is all that is required to make the diagnosis. A good example is with the complaint of headache where the diagnosis can be made from the description of the headache and perhaps some further questions. For example, in **cluster headache** the history is very characteristic and reveals the diagnosis without the need for examination or investigations.
- This takes practice, patience, understanding and concentration. The history is a sharing of experience between patient and dentist. A consultation can allow a patient to unburden himself or herself.

Cluster headaches

Symptoms of cluster headaches include:



Pain on one side of your head.



Watery eyes.



Eye redness.



A runny or stuffy nose.



Droopy eyelid.



Flushing or sweating.

Cleveland Clinic

Consultation skills

- The skills required to obtain the patient's true story can be learned and go beyond knowing what questions to ask. Indeed 'questions' may need to be avoided, as they limit the patient to 'answers'.
- Complete the history by reviewing what the patient has told you. Repeat back the important points so that the patient can correct you if there are any misunderstandings or errors.

Note

- During or after taking their history, the patient may have questions that they want to ask you. It is very important that don't give them any false information. As such, unless you are absolutely sure of the answer it is best to ask seniors about this or that you will go away and get them more information (e.g. leaflets) about what they are asking. (These questions aren't necessarily there to test the knowledge of the dentist.

The history include

- The current medical problem (or “reason for the visit”),
- the patient’s preexisting medical conditions,
- Current medications,
- Family history,
- Social and psychosocial circumstances.
- Discover whether other factors, environmental, familial, social, occupational, or personal habits.

What types of questions the dentist should ask the patient

1. Open questions

These are seen as the gold standard of historical inquiry. They do not suggest a 'right' answer to the patient and give them a chance to express what is on their mind. Examples include questions such as 'How are you?'. There are other similar open questions but it may be effective just to let the patient start speaking sometimes.

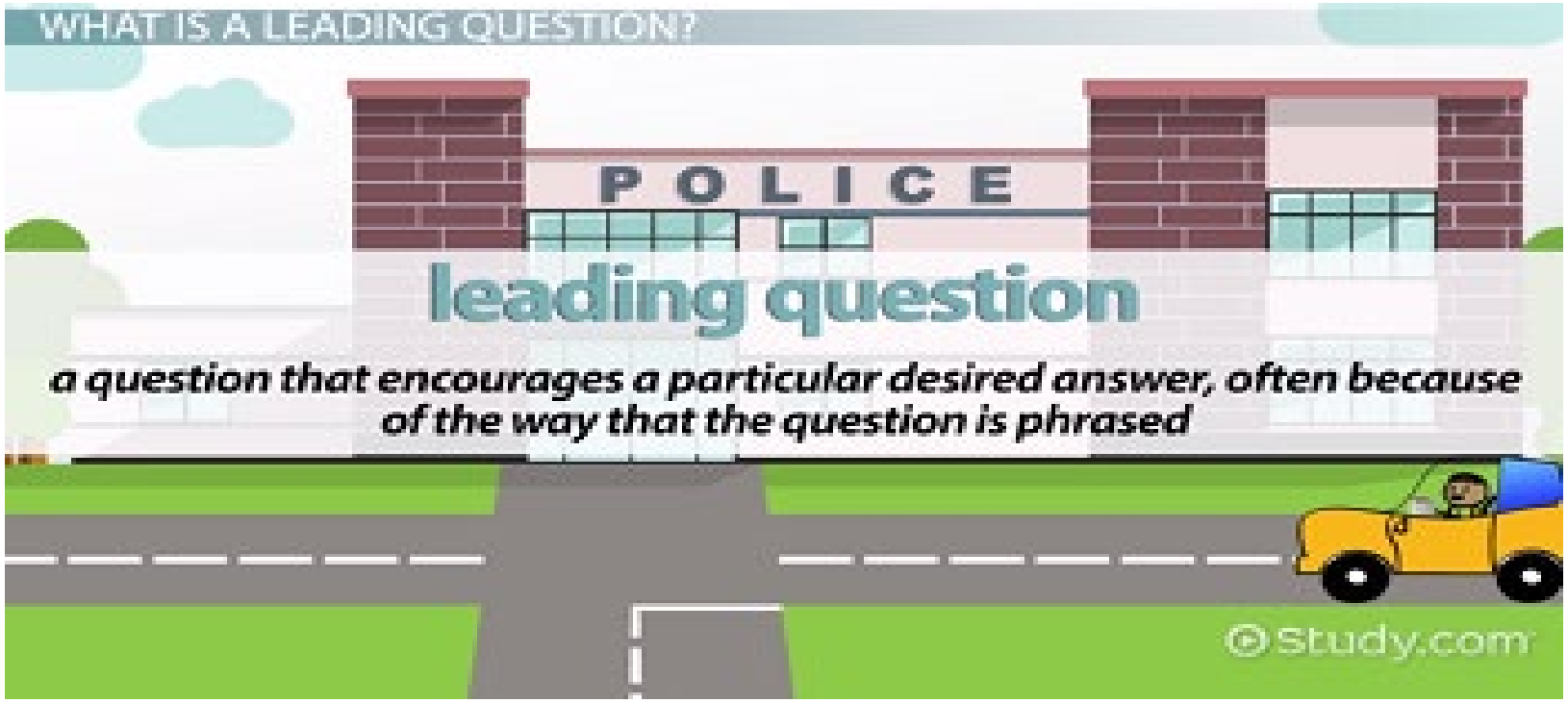
- Open questions can be used to obtain specific information about a particular symptom as well. For example:
- 'Tell me about your pain' or
- 'How are your works bothering you?

Open questions cannot always be used, as sometimes will need to delve deeper and obtain discriminating features about which the patient would not be aware. Open-ended questions, which allow patients to discuss their concerns freely, are widely considered an efficient method gathering medical information from patients during a medical interview.

Question types

- **Open questions** (*what*, *why*, *where*) allow patients to express themselves in their own words

- **Closed questions** (require *Yes*/*No* answers) do not allow patients to express themselves (only in specific situations)


WHAT IS A LEADING QUESTION?
POLICE
leading question
a question that encourages a particular desired answer, often because of the way that the question is phrased
© Study.com

What types of questions the dentist should ask the patient

- **2. Questions with options**

- Sometimes it is necessary to 'pin down' exactly what a patient means by a particular statement. In this case, if the information you are after cannot be obtained through open questioning then give the patient some options to indicate what information you need.

Technique must be used with care as there is a danger of getting the answer you wanted rather than what the patient meant. Try to avoid using specific medical terms such as:

What types of questions the dentist should ask the patient

- Burning type of pain If you can use an open question such as: what was the pain is similar to?', rather than suggesting options, it is more likely to give you a true picture of what the patient has experienced; however, sometimes questions suggesting possible answers cannot be avoided. therefore never describe the type of the pain to the patient who is complain from neurological type of pain by describe the electrical stimulation on the trigger area

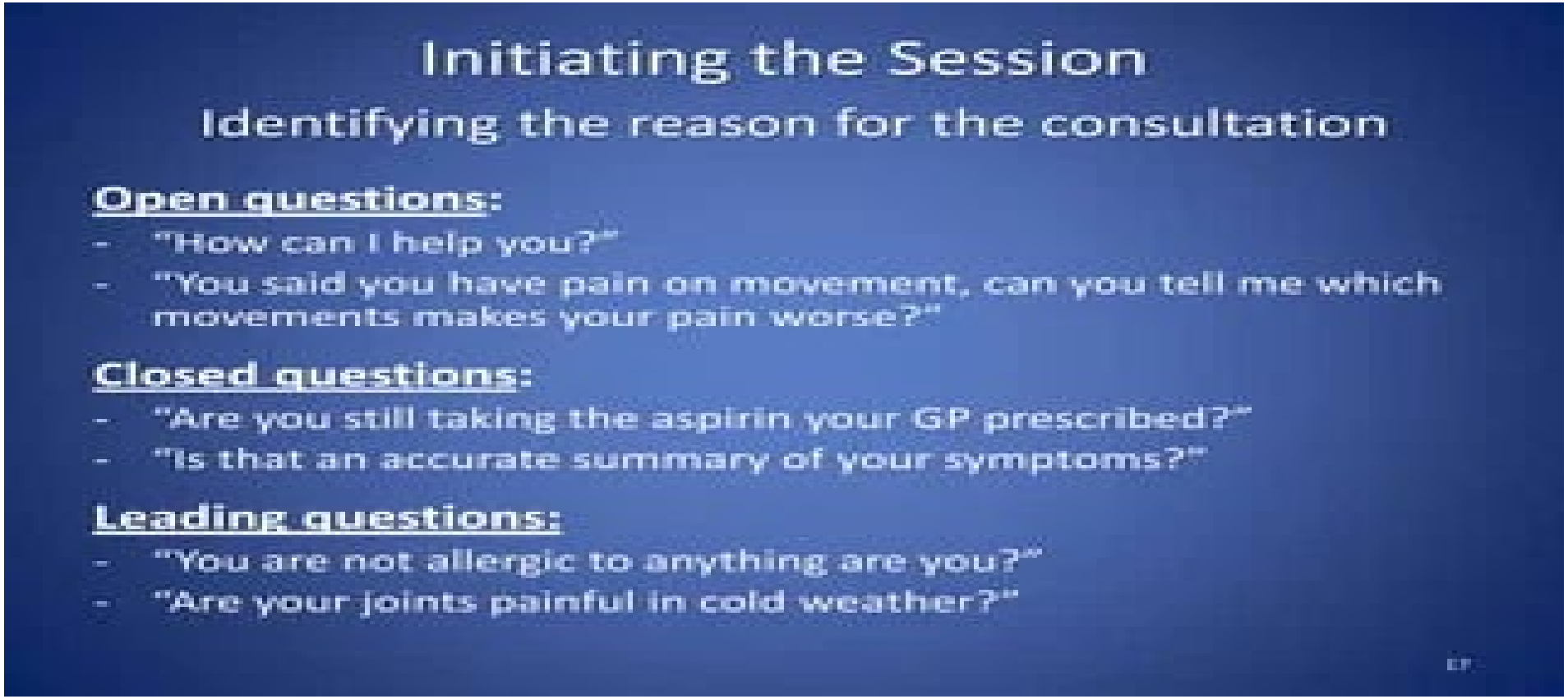
What types of questions the dentist should ask the patient

3-Leading questions

These are best avoided if at all possible. They tend to lead the patient down an avenue that is framed by dentist own assumptions.

➢For instance, a male patient presents with episodic chest pain, The dentist know he is a smoker so dentist start asking questions if pain worse while walking? It is much better to ask an open question such as: 'Have you noticed anything that makes your pain worse?'.

➢Have you noticed anything that makes your pain worse?' When the patient answers: 'Pork pies', you are on firmer ground in suspecting that this may be chest pain of gastrointestinal origin.


Initiating the Session
Identifying the reason for the consultation
Open questions:
- "How can I help you?"
- "You said you have pain on movement, can you tell me which movements makes your pain worse?"
Closed questions:
- "Are you still taking the aspirin your GP prescribed?"
- "Is that an accurate summary of your symptoms?"
Leading questions:
- "You are not allergic to anything are you?"
- "Are your joints painful in cold weather?"

The first thing to be start with the history is the age

The age of the patient is important in the following major problem including chronic and recurrent condition from the earlier adult stages like:

- ✓Degeneration bone and joint disease that affected the TMJ
- ✓Chronic brain syndrome
- ✓Malnutrition, mental disorder,
- ✓Medication this because the old patients have a related changes in the pharmadynamic and pharmakinetic of the drugs also the drug to drug reaction, drug –food reaction all of these will alter the absorption, distribution, metabolism, exertion. Other changes include.
- ✓Bone and cortical trabecular bone decreased as a result it will be more potential for osteoporotic fractures

The age of the patient is important in the following major problem including chronic and recurrent condition from the earlier adult stages like:

✓Muscle. the number of the muscle fiber decreased atrophy as a result the flexion of the joint decreased which lead to slowly muscle regeneration

✓Increased auto immune diseases

Changes in the Joints include

1. Cartilage erosion
2. Calcium deposit increased
3. Water in cartilage decreased
4. Osteoarthritis increased

Other changes

Dentin decreased

Gingival retraction

Bone density lost

The papilla of the tongue decreased which lead to taste change

Taste threshold for salt and sugar increased

Salivary secretion decrease

Potential loss of the teeth

While other changes on the mucosal surface

-Increase in the potential infection on the mucosal surface

- Malignancy incidence

-Response to acute infection reduced

-Potential recurrence of latent herpes zoster also the immune system changes

The immunological changes

Secretary immunoglobulin IgA decline

Thymus gland involution

Thymopoietin decreased

Lymphoid tissue decreased

Antibody production impaired

T. Lymphocyte decreased

2. Gender

- ✓Malignant melanoma the incidence is increasing in male
- ✓Mucous membrane pemphigoid ,cicatrical pemphigoid more in female
- ✓ Epulis and pregnancy epulis occur in female because of the circulating estrogen are highest
- ✓ S.C.C more in males
- ✓ mucocele more in female

3. Presenting complaint (PC)

History of presenting complaint (HPC)

The dentist should gain as much information about the specific complaint.

Site: Where exactly is the pain?

Onset: When did it start, was it constant/intermittent, gradual/ sudden?

Character: What is the pain like e.g. sharp, burning, and tight?

Radiation: Does it radiate/move anywhere?

Associations: Is there anything else associated with the pain e.g. sweating, vomiting

Time course: Does it follow any time pattern, how long did it last?

Exacerbating/relieving factors: Does anything make it better or worse?

Severity: How severe is the pain, consider using the 1-10 scale?

5. past medical history (PMH)

Gather information about a patients with other medical problems

6. Medication history

find out if the patient has any allergies.

Immune suppression medication mainly used in oral medicine example

1. Cyclosporine (Read information about this medication)

2. Steroids

Examples: Prednisone, methylprednisolone, dexamethasone

Steroids stop the body from making cytokines that cause inflammation, deplete certain immune cells called T and B cells and eosinophils, and make it more difficult for immune cells to travel to spots of infection or injury though the body.

3. Colchicine

Cause diarrhea, nausea and vomiting.

May also cause liver, kidney or muscle damage can lead to low blood cell counts.

This medication may cause dangerous interactions with other medications, so a full medication check is necessary.

3. Azathioprine (Imuran)

Used in many other autoimmune diseases that have an oral manifestation may cause a rare type of lymphoma (cancer) of the liver, spleen, and bone marrow that can be fatal.

4. Dapsone may cause serious side effects including:

Yellowing of the skin or eyes (jaundice)

- Numbness or tinging in hands or feet
- Unusual thoughts or behavior
- New or worsening cough
- Fever
- Trouble breathing
- Swelling

7 .Family history (FH)

Medical family tree is a compilation of relevant information about medical conditions affecting a patient and his/her close family members.

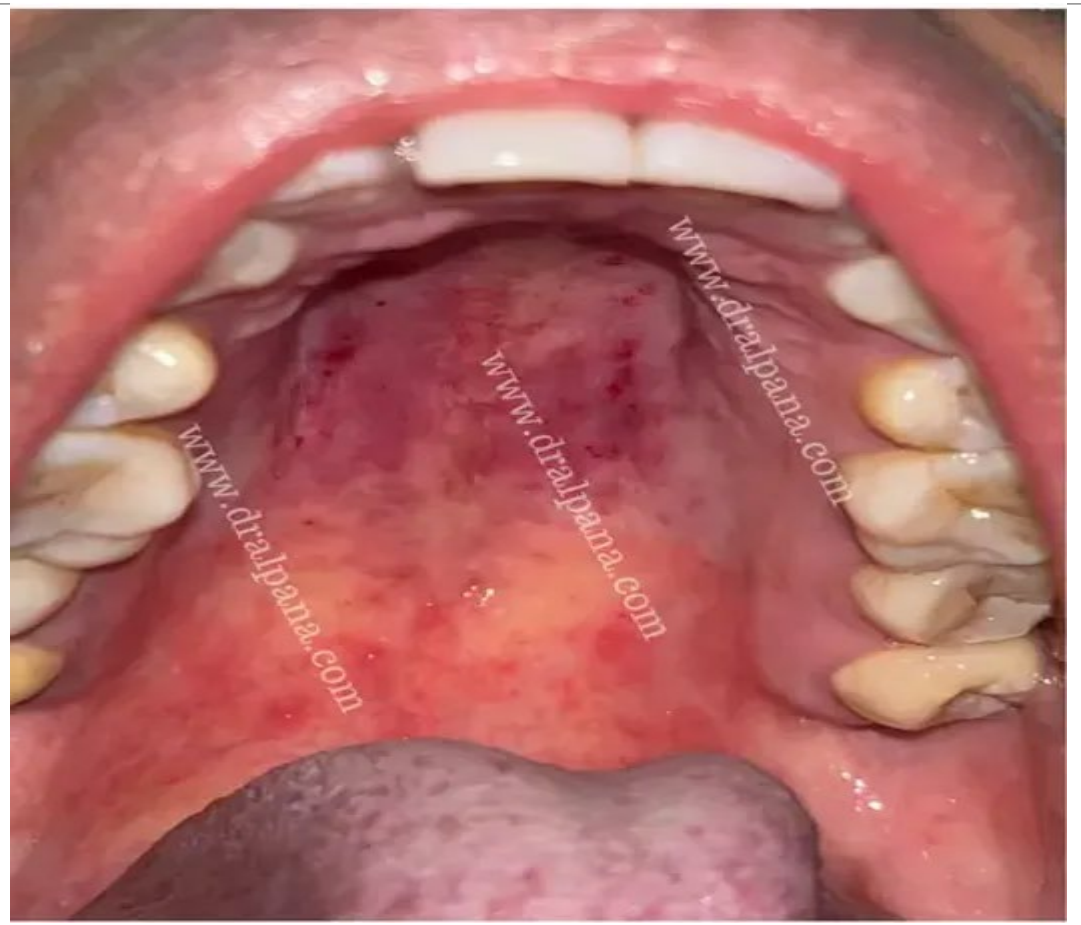
Two features that distinguishes a family health history from a patient's medical history are that a family history extends beyond enumeration of the patient's major health problems to identify those experienced by each member of that patient's immediate family and its indication of about the patient's family history, e.g diabetes or cardiac history.

Also genetic conditions within the family e.g. Polycystic kidney disease, hematological diseases like haemophilia a family history should go back at least 3 generation the nature of the relationships among family members **autosomal recessive** like sickle cell anemia, alpha thalassaemia **autosomal dominant** . neurofibromatosis ,myotonic dystrophy Huntingtons disease, cardiovascular disorders include hypertrophic cardiomyopathy (HCM), Marfan's syndrome (MFS), familial hypercholesterolemia.

Hematological disorder (oral petechiae)



Petechiae (Image from pocketdentistry.com)



Any child of an affected individual has a 50% chance of being affected by the inherited disease

8 .Social history (SH)

Social history: smoking, alcohol, recreational drugs, accommodation and living arrangements, marital status, baseline functioning, occupation, pets and hobbies.

Smoking: There are lesions related to the smoking like leukoplakia, nicotinic stomatitis

Alcohol history :the elevated of MCV mean corpuscular volume in the absence of vitamin B 12 or folate deficiency or unexplained abnormal liver function test

9. Review of systems (ROS)

Gather a short amount of information regarding the other systems in the body that are not covered in HPC. These are the main systems dentist should cover:

- CVS
- Respiratory
- GIT
- Neurology
- Genitourinary/renal system
- Musculoskeletal
- Psychiatry

Conclusion

- Try to let patients tell you their story freely.
- When you use questions, try to keep them as open as possible.
- Use all your senses to 'listen'.
- Check that what **you** think is wrong is what **your patient** thinks is wrong.
- Keep an open mind and always ask yourself if you're making assumptions.
- Be prepared to reconsider the causes of symptoms that you or a colleague have decided upon.

Summarizing

After taking the history, it's useful to give the patient a run-down of what they've told you as the dentist understand it

To understand the patient oral complain whether that related to the systemic condition of the patient.

Thank you

