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Assessing Patients – Part I

In order to provide a safe and accurate treatment to our patients, the dental professional needs to assess every single patient for any history of medical problems as well as, any condition that affects the wellbeing of oral and maxillofacial region.

Requirement of successful patient assessment:

1. It needs to be tailored for every specific patient.
2. It must be systematic to avoid missing any important information.
3. The question needs to be "Opened" rather than "Closed".
4. Record the patients' words, rather than paraphrasing what they said.
5. Whenever possible, avoid leading the patient.

The process of patient assessment should cover the following:

1. Biographic data.
2. Chief complaint
3. History of complaint (History of present illness).
4. Past dental history.
5. Medical history.
6. Social and family histories.
7. Extra and Intra-oral examination.
8. Laboratory and imaging results.

1. Biographic data:

This is the first information taken from patients and includes patient's full name, home address, age, gender and occupation. This can help dentist to formulate a general impression about the patient as a "human being" rather than a merit collection of symptoms. In addition, this part can assess the patient's reliability and intelligence to give an accurate medical history. A contact phone number can also be taken at this point.

2. The chief complaint:

In dental office, most patients have complaint, for which they seek dental treatment. The complaint is usually one, but may be multiple, therefore a list may be made with the principle problem first.

Having the patient stating the chief complaint helps the clinician to establish priorities in history taking and in formulating the treatment plan.

3. History of complaint (History of present illness):

In this part a detailed descriptions of the complaint is investigated. This includes the date of first episode of the complaint, the duration, the effect of surrounding factors on it and any other associated symptoms. For instance, if the patient is experiencing pain, the history of current complains should include: Characteristic of pain, severity, date of onset, duration, location, spread of pain, aggravating factors, relieving factors and any associated sign or symptoms.

For example: Sever, throbbing pain 2 days ago in upper right jaw, last for 5 minutes, aggravated by cold stimuli and cannot be relieved by medications. Associated symptoms may involve fever, swelling, discharge, malaise … etc.

4. Past dental history:

The dentist must identify if the patients is regular or irregular attender to the dentist and any previous experience with any dental treatments. For example any previous extraction, any complications associated with the extraction either intra-operatively (e.g. syncope) or post-operatively (e.g. prolonged bleeding, infections).

5. Medical History:

It's important for the dental practitioner to direct some question about patients' health. This is important as some systematic condition might have oral manifestations, while others might affect the delivery of treatment.

The most important sections that require inquiry prior to oral surgical procedure are:

- Cardiovascular: Chest discomfort on exertion or at rest; palpitations; fainting; ankle edema; shortness of breath (dyspnea) on exertion; dyspnea on assuming supine position (orthopnea or paroxysmal nocturnal dyspnea); postural hypotension; fatigue; leg muscle cramping.
- Respiratory System: Dyspnea with exertion, wheezing, coughing, excessive sputum production, coughing up blood (haemoptysis).
- Central Nervous system: Fits, faints, epilepsy.
- Allergy: Any known allergy (e.g. Penicillin allergy, Latex allergy)
- Current Medical treatment: Ask question about when and why patients visited the physician last time?
- Drug history: Ask if the patient is on any medication which might affect the delivery of treatment (e.g. Antithrombotic medication, Immunosuppressive…etc.). The dental practitioner should also establish patients' previous medication which might have life-long side effects (e.g. Bisphosphonates).
- Previous hospitalization: Any previous admission for emergency department, any previous surgery.
- Bleeding Disorders
- History of infectious diseases: Including hepatitis, AIDS, Tuberculosis … etc.
- Pregnancy and Breastfeeding: When needed and at appropriate age group, the dentist should ask these questions to determine the best timing for delivery of dental treatment. In addition, some commonly used medication in dentistry can cross placenta to developing foetus, with potential harmful side effect. Other medication can be absorbed and subsequently expressed with milk to nursing infants.

6. Social and family histories:

In this section of history taking, the health care provider can obtain information about marital status and occupation, if these were not taken earlier as part of the biographic data. Furthermore, the dentist should make notes about smoking status of the patient and alcohol consumption.

Family history can be relevant in some cases (e.g. haemophilia, Sickle cell anaemia, Amelogenesis imperfecta).

7. Extra and Intra-oral examination

A. Extra-oral examination:

Any physical examination can fall in one of 4 categories: Inspection, Palpation, Auscultation and Percussion. As a general rule, use eye first then hands.

During inspection, the operator should note hair distribution, facial asymmetry, facial proportions, eye movements, conjunctiva colour and nasal patency on each side. Any skin lesion and facial mass should also be noted.

Examination should cover:

- Temporomandibular joint and associated muscles.
- Lymph node of maxillofacial region.
- Thyroid gland.
- Salivary glands.

- ## Examination of TMJ:

The clinical examination of TMJ should include the joint itself and associated masticatory muscles.

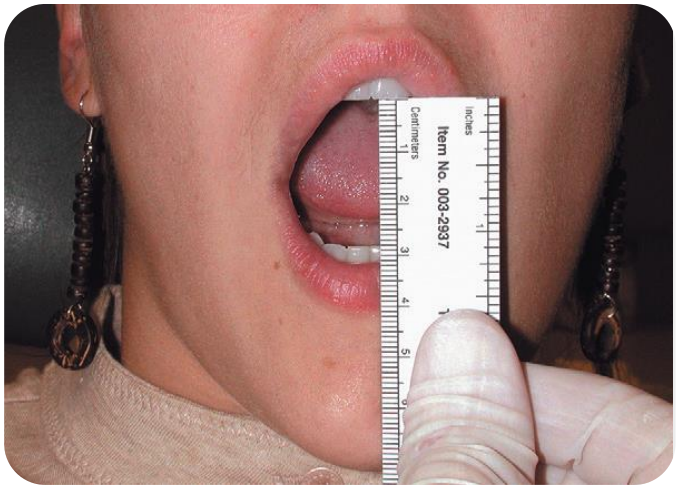

Figure 1 Measurements of maximum mouth opening

The joint examination involves the **inspection** of the range of movements and the maximum mouth opening. The maximum mouth opening is 35-40 mm measured between two opposite incisal edges. If the opening is reduced, the operator should establish whether the limiting factor is pain or obstruction (Fig.1). On protrusive or lateral extrusive movement, the distance is about 10mm (Fig.2).

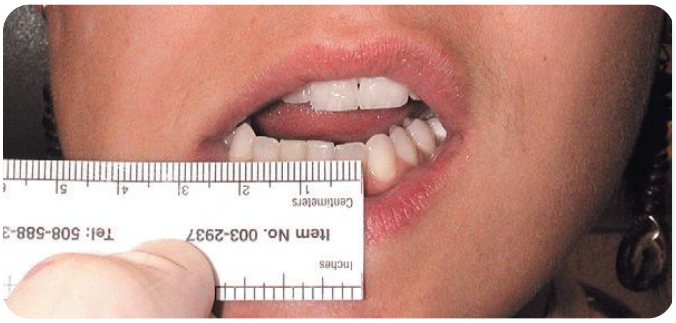

Figure 3 Measurements for range of movements (Lateral excursion)

The direction of opening should be straight and any deviation should be noted. The possible pathways for mandibular movements are normal opening, diagonal line for adhesion within the joint, vertical line with lasting lateral deviation which suggests a disc displacement without reduction and

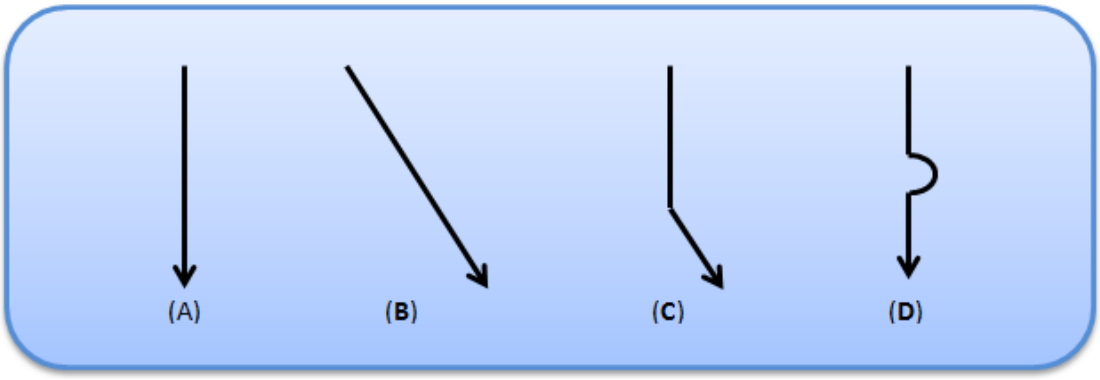

Figure 2 Possible pathways for mandibular movements. (A) Normal opening, (B) Diagonal line, (C) Vertical line with lasting lateral deviation, (D) Vertical line with transient lateral deviation.

vertical line with transient lateral deviation this indicates a disc displacement with reduction (Fig.3).

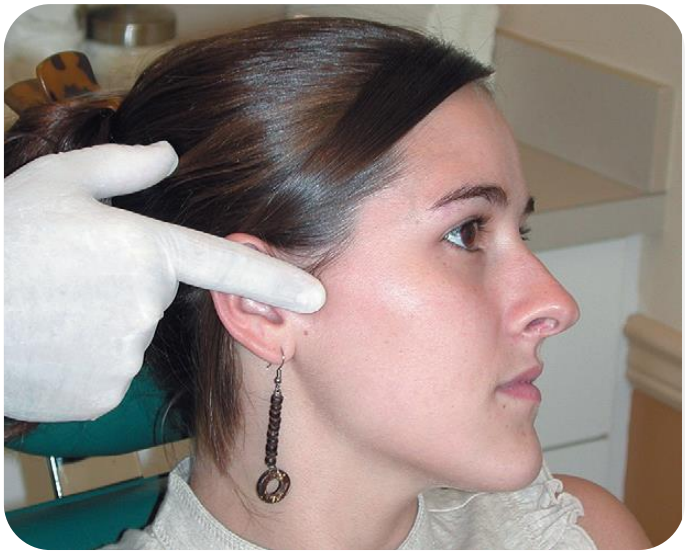

Figure 4 Direct palpation over the TMJ

Palpation on the joint includes direct palpation over the TMJ, which is just in front of the ear (Fig.4), and also palpation within the external auditory meatus with slight anterior pressure.

Auscultation can be done using stethoscope to detect clicking, even sometimes it's well audible without stethoscope, or crepitation. Clicking occur when an anteriorly displaced disk reduces into normal position. On the other hand, crepitus implies degenerative changes.

The associated muscles should be evaluated for tenderness and spasm. This can be done by either direct **palpation** which includes palpation over the area of masseter and temporalis muscles. The masseter muscle should be palpated bimanually on both sides intra and extra-orally at its origin at the anterior two-thirds of the zygomatic arch and at its insertion on the lateral aspect of the angle of the mandible (Fig.5).

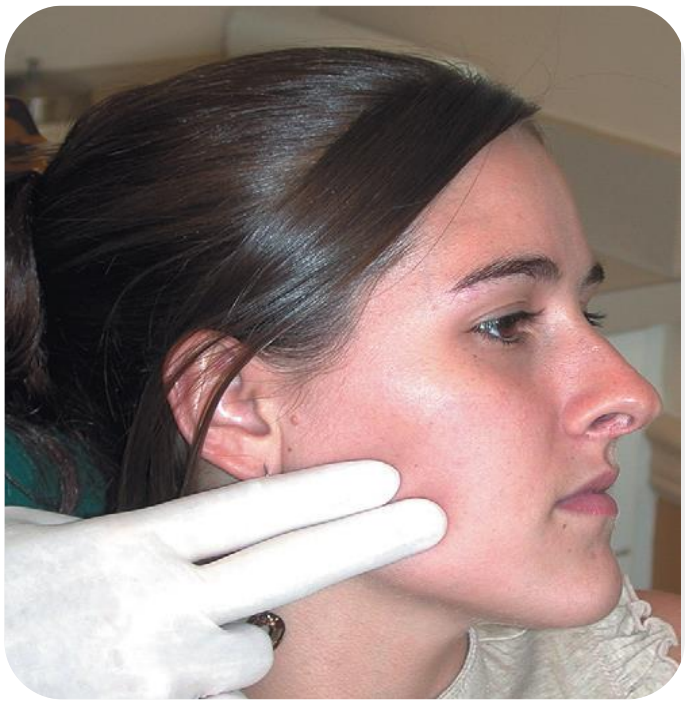

Figure 5 Extra-oral palpation of Massteric muscle

The origin of the temporalis muscle can be palpated extra-orally above the ear during clenching and the insertion can be palpated intra-orally by

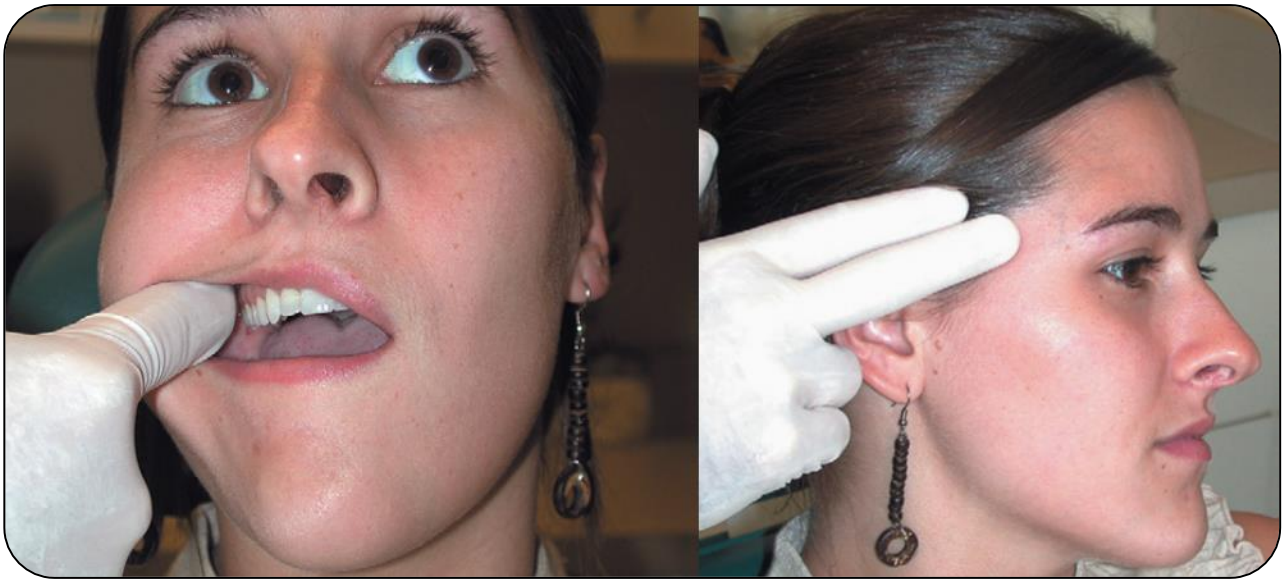

Figure 6 Examination of temporalis muscle, (Right) Extra-oral palpation of the origin. (Left) Intra-oral palpation of the insertion.

running the little finger upward on the anterior border of ramus (Fig.6). Finally, the lateral pterygoid cannot be directly palpated and can only be examined by asking the patient to open their mouth or perform lateral excursion movement against resistance. On the other hand, the intra-oral direct examination of this muscle can be uncomfortable to the patient and can elect pain by itself. This discomfort during lateral pterygoid direct examination can be mistakenly interpreted as spasm.

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