Periodontal and oral surgery considerations in the elderly patients
Periodontal care and prevention

1. Periodontal problems in older patients

1. Periodontitis
   • Slowly progressive disease is generally related to the presence of dental plaque and poor standard of oral hygiene.
   • In the elderly, this can be exacerbated by:
     a) Progressive loss of manual dexterity.
     b) Eyesight.
     c) Changes in the salivary flow.

The destructive process is the same in all age groups, although aging induces changes in the defensive system, so there is a reduced number of circulating defensive cells including: neutrophils, granulocytes and T-lymphocytes.
2. Gingival recession

- It is a very characteristic sign for aging.
- These are prone to trapping debris and plaque because of their greater roughness and because of the gingival embrasures that are created by a loss of soft tissue.
- It has many drawbacks like:
  - Appearance.
  - Root dentine sensitivity.
  - Root caries: Exposed root surfaces are more irregular and porous and, therefore, more plaque-retentive than enamel. These surfaces are higher in organic content and more susceptible to dental decay. It is treated by topical fluoride.
3. Tooth drifting and migration

- With time and the progressive loss of bone support, teeth may drift and migrate under normal occlusal and muscular functional forces.

- It has many drawbacks like:
  - This rarely creates difficulty with eating, but may cause problems with access for plaque control.
  - Appearance.
4. Traumatic root fracture

It is due to the development of sclerotic dentine and thus a brittle root, favoring fracture by leverage at the bone crest.
II. Periodontal manifestations of systemic disease

There are some diseases that affect the periodontal condition specially in elderly patients as:

1. **Osteoporosis**: Whether types I (in older women) or type II (in older men).
2. **Epilepsy**: patients under Phenytoin (dilantin) which causes gingival hyperplasia.
3. **Some drugs**: as calcium channel blocker and antihypertensive drugs.
III. Prevention and management of periodontal problems
Primary preventive programmes must commence in the younger age groups and then be maintained throughout life.

IV. Periodontitis and the timing of tooth replacement
It may be more appropriate to extract compromised teeth early and thereby, hopefully, preserve most of the remaining alveolar bone, so in this way we can achieve 2 goals which are:
• Decrease progression of bone loss which compromises the success of partial and complete denture.
• Adaptation of wearing a prosthetic appliance is more easier in young age.
V. Periodontal surgery
Plaque control is more important to the maintenance of periodontal health than age, so in the old age, tissue response to surgical periodontics should be favorable but with slower wound healing.

Some patients resist extraction of teeth especially anterior teeth, even when marked mobility is present. It may be possible to improve bone support through curettage and root planning and the placement of hydroxyapatite granules.
Oral surgery considerations

1. Patient assessment
We have to check the patient’s degree of independence and the availability of help from family, neighbors and social services.

Medical history
All the data should be collected whether the diseases or drugs taken.

Oral problems and examination
- Inspection of skin, cervical lymph nodes and TMJ.
- Inspection of the oral mucous membrane: oro-pharynx should be looked at carefully, followed by a review of the natural dentition and any prosthesis present.
II. Treatment planning
The clinician should make a balance between benefits of the treatment against the problems associated with surgery.

General anaesthesia
- It presents a great risk to the elderly population.
- Operative and postoperative complications usually involve:
  - The cardiovascular system: with the possibility of deep vein thrombosis, myocardial infarction and heart failure.
  - Postoperative respiratory tract infection.
  - Postoperative urinary tract infection.
The preliminary investigations that should be done:
- Full blood count and haemoglobin examination.
- Chest radiograph.
- An electrocardiogram.

Local anaesthesia
- It avoids to a large extent the medical complications associated with general anaesthesia.
- The most commonly used agent is lignocaine 2% with 1 in 80,000 adrenalin.
III. Common concurrent medical problems

Anticoagulant medication
It is often prescribed for:
• Deep vein thrombosis.
• Poorly controlled atrial fibrillation.
• Patients with prosthetic heart valve.

The patient should be referred to his physician to adjust the dose.
Prophylaxis against infective endocarditis

• Patients with a history of valvular heart disease, previous infective endocarditis or prosthetic heart valves should receive antibiotic prophylaxis to prevent infective endocarditis following oral surgery procedures.

• Amoxicillin is the choice, in case of allergy, erythromycin or clindamycin are alternatives.
Corticosteroid medication

- Prednisolone, dexamethasone or betamethasone are common oral agents.
- They have the effect of suppressing the normal activity of the adrenal cortex, consequently, during times of stress, the gland is unable to respond to increased glucocorticoid demand.
- On the day of surgery, the patient should increase the usual dose and gradually return to the usual dose within 48 hours.
Diabetic patient

- Local anaesthesia does not require any change in the normal diet and insulin regime.

- General anaesthesia requires a period of starvation and consequently, carefully controlled and insulin management is required.
IV. Specific oral surgical problems
Removal of teeth and roots

A history of difficult extractions with presence of remaining roots is a warning.

Careful extraction that takes few minutes is advisable, but if extraction is going to be difficult, surgery is advised.
Retained wisdom teeth
Removal of this tooth will need radiography to:
• Show the root direction.
• Show the level of the inferior alveolar canal.
Retained lower premolars

- It is close to the mental nerve, so extraction should be done carefully.
- Some postoperative mental paraesthesia is anticipated, recovery may be slow, within few weeks or months.
- A flab is raised and if extraction is still a problem, crown and root sectioning is advised.
- Careful debridment and accurate soft tissue closure is done, then it is better to insert the denture to apply some pressure to the surgical area and minimizes post operative oedema.
Facial injuries

- They are complicated in old age due to:
  - Presence of any underlying medical problem.
  - Osteoporosis which leads to decreased bone density and increased its ability to fracture (bone behaves more like a dry stick than a green stick).
  - Increased blood vessel fragility which leads to fracture with haematomas.

- Healing of fracture is slow and delayed union and even non-union is a very real problem.

- Clinical examination should include not only the facial area but extended to exclude fractures elsewhere (wrist and hip)
Mandibular fractures
Condylar fractures
Are common and usually need no treatment other than analgesics.

Angle and body fractures
- Minimally displaced fractures can be accepted and subsequent adjustment to dentures made to allow for the new position.
- Significant displacements need reduction and fixation.
Thank you