

# Gingival recession

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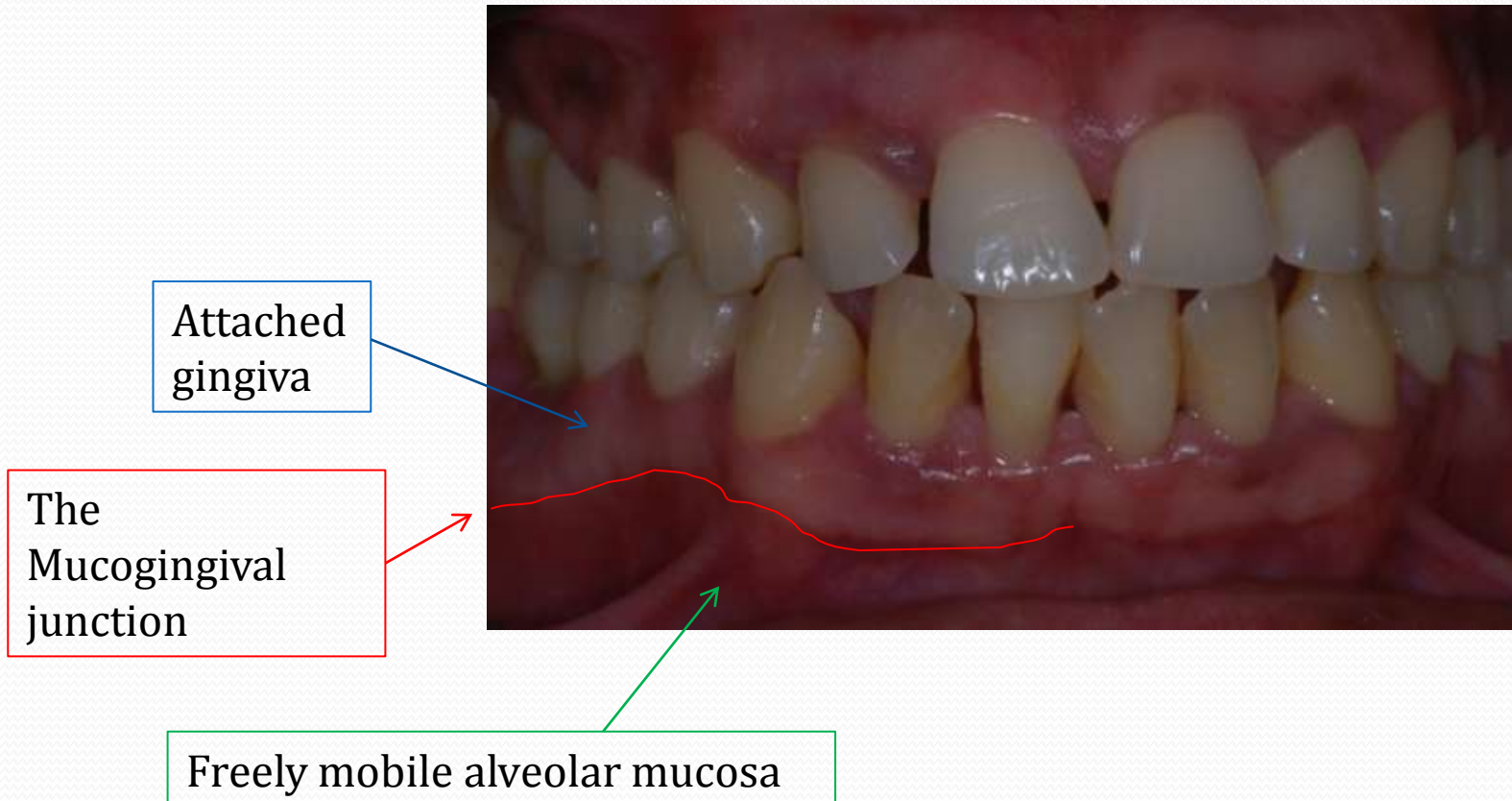
# Classification of recession

- Several classification schemes have been used to help diagnose gingival recession:
- Sullivan & Atkins 1968
- Mlinek et al. 1973
- Miller 1985 a
- Smith 1997
- Mahajan 2010
  
- The most commonly used is the Miller's classification

# Miller's classification

- Divided gingival recession defects into 4 categories
- Evaluated both soft and hard tissue loss
- Determined the level of root coverage achievable with a free gingival graft
- It was therefore diagnostic and prognostic

# The Mucogingival junction



# Miller's classification

## Class I

- Marginal tissue recession which does not extend to the mucogingival junction (MGJ).
- There is no alveolar bone loss or soft tissue loss in the inter-dental area
- Complete root coverage obtainable

## Class II

- Marginal tissue recession which extends to or beyond the MGJ
- There is no alveolar bone loss or soft tissue loss in the inter-dental area
- Complete root coverage obtainable

# Miller's classification

## Class III

- Marginal tissue recession which extends to or beyond the MGJ.
- Bone or soft tissue loss in the interdental area is present
- Partial root coverage related to level of papilla height

## Class IV

- Marginal tissue recession which extends to or beyond the MGJ.
- The bone or soft tissue loss in the interdental area is present with gross flattening
- No root coverage

# Miller class I

No loss of  
interdental soft  
tissue

MGJ



# Miller class II

MGJ



# Miller class III

Loss of interdental  
papilla



# Miller class IV

Loss of interdental papilla beyond the gingival recession defect



# Gingival recession

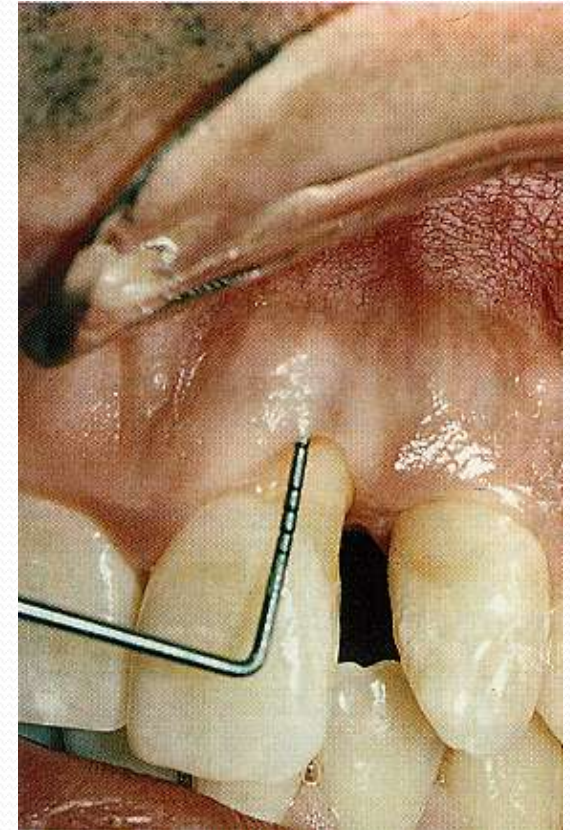
- Gingival recession should be recorded at the initial assessment
- It allows you to calculate the periodontal attachment loss
- If periodontal therapy is required; gingival recession should be measured again and recorded at the reassessment
- This provides you with information on levels of gain of attachment

# Attachment loss =

Probing depth measurement  
(gingival margin to base of pocket)

+

Recession measurement  
(CEJ to the gingival margin)



CEJ – Cemento-enamel junction

# Causes of recession

- Anatomical - bulbous roots/ enamel pearls
- Tooth positioning/crowding
- Thin labial bone / bony dehiscence
- Thin biotype gingival tissue
- Toothbrush trauma
- Periodontal disease
- Traumatic occlusion
- Habitual – nail biting / pen chewing / piercing
- Orthodontic tooth movements

# Labial positioned lower incisor



# Multiple aetiologies common

**Traumatic /tooth  
positioning/ erosion**

**Post orthodontic /thin biotype**



# Chronic periodontitis

- The disease process usually leads to gingival recession especially in patients with a thin gingival biotype
- The consequence of successful treatment also leads to gingival recession
- It is therefore important to record gingival recession levels before and after treatment
- Always inform patients recession can increase following treatment

# The attached gingiva

- It is bound tightly to the underlying bone
- It provides protection to the mucosa during function
- Some studies have suggested recession is more likely if there is less than 1mm of attached gingiva (keratinised gingiva) Lang & Loe 1972
- Others show that sites with a width of attached gingiva less than 2mm can remain stable Dorfman et al 1982

Gingival health can be maintained independent of its dimensions

# Options for treatment of recession

- Remove the cause and monitor
- Correct tooth positioning
- Surgical intervention
  - Connective Tissue grafting
  - Free gingival grafting
  - Rotational flap
  - Tunnel preparation
- +/- regenerative materials
- Gingival veneers

# Plaque removal



# Connective tissue grafting



# Gingival veneer



# Summary

- Recession can be multi-factorial and the cause should be diagnosed prior to treatment
- Always record recession prior to any treatment
- If recession is present it is worth recording the width of attached gingiva at and adjacent to the gingival recession
- Predictable root coverage is only achievable in type I and II gingival recession defects