Management & Prevention of Gingival Recession

Workbook

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Gingival Recession Checklist & Chairside Visual Guide (last 2 pages)

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1. Gingival Recession Today

- Gingival/soft tissue recession: The exposure of the root surface due to ________ of the gingival/soft tissue margin past the cementoenamel junction (CEJ)\(^ {18,53,91}\)

- Worldwide prevalence: ______ % - ______ % \(^ {2,45,47,55,56,79,84}\)

- Prevalence and severity increases with ______ . \(^ {2,55}\)

- United States: Prevalence of ≥1 mm recession in persons 30 years and older is ______ %, and averaged ______ % teeth per person.\(^ 2\)

- Gingival recession in dental students and dentists \(^ {56}: \) _______________________________

- Gingival recession: Important to patients when it interferes with ______________________, ______________________, or increases the risk of tooth loss due to ______________________ or _______________________. \(^ {59}\)

- Prevalence of root caries experience in the U.S. has been reported to be _____ % among those aged 75+ years.\(^ {37}\)

- Age group 65 and older (12% in 2000) is increasing and expected to exceed ______ % by 2030 and ________ is expected to increase along with it.\(^ {37}\)

2. Who is Susceptible?

Three major factors are associated with increased susceptibility to gingival recession, whether presenting independently or in combination: \(^ {59}\)

1. Thin (delicate, fragile) Gingival Tissue \(^ {1,12,22,49,67,77}\)

2. Mucogingival Conditions \(^ {5,41}\)
   - Gingival/soft tissue recession
   - Probe depth extends beyond the mucogingival junction
   - Absence or narrow band (<2mm) of keratinized tissue

3. Positive History:
   - Progressive gingival recession \(^ {81}\)

   Inflammatory periodontal disease(s) (e.g., plaque-induced gingivitis, localized chronic periodontitis) is a particularly important factor associated with gingival recession \(^ {2,79,81,94}\) especially for teeth with #1 &/or #2 above \(^ {59}\)
3. What Causes It?

Major causes of gingival recession: ________________________________ 79,81 and mechanical (physical) abrasion/removal (e.g., __________________oral hygiene practices or __________________dental procedures).27,35,40,43,45,55,76,79,83,89

Occasional causes:_________ and ____________ injury.40,76

4. What Increases the Risk?

Studies have reported several contributing factors and conditions commonly associated with gingival recession and/or increasing recession. 8,45,54,56,76,77,79 Exposure to such factors and conditions can make susceptible teeth particularly vulnerable to gingival recession.

Modifiable Conditions: Those common risk exposures associated with gingival recession that lend themselves to __________________ through conventional interventional therapy in the clinical setting (Table 1).

<table>
<thead>
<tr>
<th>Modifiable Conditions</th>
<th>Associated with Gingival Recession</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaque</td>
<td>43,56,79,81,84</td>
</tr>
<tr>
<td>BOP</td>
<td>10,43,79,81,84,94</td>
</tr>
<tr>
<td>Shallow Vestibule Problem</td>
<td>88,91</td>
</tr>
<tr>
<td>Frenum Position Problem</td>
<td>45,74,86,88,89,91</td>
</tr>
<tr>
<td>Tissue Deformity (cleft, fissure, etc.)</td>
<td>36,88,89</td>
</tr>
<tr>
<td>Subgingival Restoration</td>
<td>27,35,40,45,83,89</td>
</tr>
<tr>
<td>Damaging OH Methods</td>
<td>43,47,81</td>
</tr>
<tr>
<td>Damaging Oral Habits</td>
<td>24,40,50,71,76,87</td>
</tr>
<tr>
<td>Root Sensitivity Problem</td>
<td>18,19</td>
</tr>
<tr>
<td>Oral Appliance Problem</td>
<td>14,15,17,73,76,77,79,95</td>
</tr>
<tr>
<td>Dental Therapy Tx Pln (inflamm/injury)</td>
<td>26,27,35,40,45,53,76,83,89,95</td>
</tr>
<tr>
<td>Orthodontic Tooth Movement</td>
<td>44,45,49,77</td>
</tr>
<tr>
<td>Diabetes - Poor Control</td>
<td>13,57,58,70</td>
</tr>
<tr>
<td>Tobacco Use</td>
<td>8,38,42,79,84</td>
</tr>
</tbody>
</table>

**Clinical Tip:** Decreasing the susceptible patients' exposure to modifiable conditions will decrease future risk for gingival recession and increase the likelihood of its long-term prevention.
Identifying which patients are more _______________ to gingival recession and which risk exposures are _______________ in the clinical setting are essential first steps in developing an action plan for the management and prevention of gingival recession.

5. Essential Data Collection and Recording

"The surest way to under-treat or over-treat gingival recession is through inadequate records"

Evaluation of the patient’s periodontal status requires obtaining a relevant medical and dental history and conducting a thorough clinical and radiographic examination with evaluation of extraoral and intraoral structures. The Parameter on Comprehensive Periodontal Examination developed by the American Academy of Periodontology states that all relevant clinical findings should be documented in the patient’s record.

See Table 2 for recommendations regarding where to document in the patient record the susceptibility factors and modifiable conditions associated with gingival recession.

<table>
<thead>
<tr>
<th>Susceptibility Factors &amp; Modifiable Conditions Associated with Gingival Recession</th>
<th>Where to Document</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Susceptibility Factors</strong></td>
<td>Periodontal Exam Record</td>
</tr>
<tr>
<td>Gingival/Soft Tissue Recession</td>
<td>✓</td>
</tr>
<tr>
<td>Probing Depth Beyond MGI</td>
<td>✓</td>
</tr>
<tr>
<td>Absence or Narrow band (&lt;2mm) Keratinized Tissue</td>
<td>✓</td>
</tr>
<tr>
<td>Thin Gingival Tissue</td>
<td>✓</td>
</tr>
<tr>
<td>Positive Hx (progressive recession, periodontal diseases)</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Modifiable Conditions</strong></td>
<td>Periodontal Exam Record</td>
</tr>
<tr>
<td>Plaque</td>
<td>✓</td>
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Clinical & Risk Management Tip: In order to establish a baseline and to most effectively track changes over time, all measurable/detectable essential clinical findings are recorded in the periodontal examination record.

A comprehensive periodontal examination should be performed for all new patients and at appropriate periodic intervals based on the needs of the individual patient.
See Figure 1 for an example of a comprehensive periodontal examination record that provides for data collection and recording for gingival recession susceptibility and modifiable risk factors.

Figure 1. Periodontal Examination Record Example

Q: How is periodontal charting data practically managed during dental hygiene/maintenance visits?

A: Given the typical time allotment for dental hygiene appointments, for an adult patient with a relatively full complement of teeth and/or implants it is not always possible to perform and record a comprehensive periodontal examination in addition to performing other required assessments including: medical and dental health history update; review of radiographs; head and neck examination; appliance checks; caries and restoration check; scaling/root planing as needed; coronal polishing; oral hygiene review and instruction/training; lifestyle assessment and recommendations; and fluoride application (if needed). One must also consider the time it takes to greet and exit the patient as well as to perform operator tear-down/disinfection and chairside set up.

However, comprehensive periodontal evaluation [assessment] is a critically important component of the dental hygiene/maintenance appointment. A practical approach is to record on the periodontal maintenance record (see example in Figure 2), only significant negative changes comparing present findings to the most recent data on the periodontal examination record. (Figure 1).

Q: Is comprehensive periodontal data recording/charting required at every hygiene visit?
6. Gingival Recession Interventions Work Session

Gingival Recession Checklist and Visual Guide is a practical chairside support tool that illustrates to the patient the gingival recession modifiable conditions that she or he can personally control. Especially with patients susceptible to gingival recession, mitigating these conditions will improve the chances for better management and prevention of gingival recession.59

Gingival Recession Checklist is especially helpful to the clinician when developing treatment plans. Its use during treatment/procedure planning can help guide the clinician toward options that can potentially decrease the risk of damage to tissues (e.g., mechanical abrasion/removal, inflammation, chemical, or thermal injury). This can help improve the odds of providing better management and prevention of gingival recession.59

Clinical Management/Treatment Plan Options Work Session:
(Overview of 10 of the 14 Modifiable Conditions on Gingival Recession Checklist)

☐ Poor metabolic control of diabetes
☐ Tobacco use including smokeless

☐ Damaging oral hygiene methods contributing to inflammation/tissue injury

☐ Damaging oral habits/eating habits contributing to inflammation/tissue injury

☐ Bleeding on probing/inflammatory periodontal disease(s) (e.g., plaque-induced gingivitis, chronic periodontitis)

☐ Clinically significant root sensitivity leading to avoidance of oral hygiene procedures
Subgingival restorations contributing to inflammation despite effective oral hygiene and appropriate periodontal treatment

Oral appliances contributing to inflammation/tissue injury (e.g., oral jewelry, fixed orthodontic appliances, removable appliances)

Panned dental therapy that can cause inflammation or physical injury to the gingival tissues

Example:

Potentially traumatic subgingival instrumentation:

Planned orthodontic tooth movement

Orthodontic treatment in general and the following retention phase are considered risk factors especially for the development of labial gingival recession.49,77

Use the Gingival Recession Checklist before, during and after orthodontic treatment. Patients susceptible to gingival recession will be more so during or after orthodontic treatment, especially if they present with modifiable conditions that are not addressed before, during, and after treatment.

The prudent inter-disciplinary dental team will:

1. Determine whether the prospective orthodontic patient is susceptible to gingival recession
2. Consider adjusting tooth movement plans and outcomes
3. Recommend appropriate interventional periodontal therapy—especially for teeth at increased risk for gingival recession
7. When to Monitor and When to Consider Surgery

**Clinical Tips:** Not all teeth presenting with thin gingival tissue, probing depth extending to or beyond the MGJ, &/or absence or narrow band of keratinized tissue will demonstrate gingival recession

*Surgical therapy is not warranted* based solely on the presence of thin gingival tissue, probing depths extending beyond the MGJ, &/or absence or reduction of keratinized tissue.


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**When to Monitor Gingival Recession**

Although individual patient circumstances may dictate otherwise, for patients presenting with: gingival/soft tissue recession; probing depths extending beyond the MGJ; absence or narrow band (< 2mm) of keratinized tissue; and/or thin (delicate, fragile) gingival tissue, it is proposed that the clinician can monitor gingival recession without surgical evaluation when all of the following criteria are met:

- No documented evidence of gingival recession
- Clinical attachment loss (probing depth plus gingival recession) is ______ mm
- ______ mm of gingival recession
- All of the above and none of the following are planned involving the teeth in question
  - Subgingival restorations
  - Orthodontic tooth movement
  - Oral appliances (e.g., oral jewelry, removable dental appliances) that can or will be in contact with the tissue
  - Potentially damaging dental therapy such as those treatments or procedures that can cause inflammation or physical injury to the gingival tissues

**When the Patient is a Candidate for Surgical Evaluation**

Although individual patient circumstances may determine otherwise, for patients presenting with: gingival/soft tissue recession; probing depths extending beyond the MGJ; absence or narrow band (< 2mm) of keratinized tissue; and/or thin (delicate, fragile) gingival tissue, it is proposed that the patient is a candidate for surgical evaluation when at least one of the following criteria are met:

- Documented evidence of gingival recession
- _____ gingival inflammation despite appropriate therapeutic interventions and also present with clinical attachment loss _____ mm and/or gingival recession _____ mm
- _____ gingival inflammation despite appropriate therapeutic interventions and the inflammation is associated with:
• ________ vestibular depth that restricts access for effective oral hygiene
• ________ position that compromises effective oral hygiene
• Tissue ________ (cleft/fissure, etc.)

☐ Any of the above and any of the following are planned for the teeth in question
• Subgingival restorations
• Orthodontic tooth movement
• Oral appliances that contact the tissue
• Potentially damaging dental therapy (see above)

### When to Refer the Patient to the Periodontal Specialist

Although there is no single, specific clinical tipping point that can be used as a guideline for all patients in deciding when to do so, a referral to the periodontist is appropriate when: 59

☐ The______________________ prefers referral

☐ The dentist __________________ referral is in the best interest of the patient

☐ The dentist determines she/he does not possess sufficient knowledge, skills, and/or experience to provide the patient with the necessary __________________ objectives

☐ The dentist determines that clinical__________________ dictates additional input into the case

Situations that increase clinical uncertainty include: some medically complex patients; advanced-severe gingival recession defects; multi-tooth involvement; and/or recession risks that cannot be readily modified. 59

According to The Principles and Code of Professional Conduct of the American Dental Association, patients should receive treatment from those licensed dentists who keep current; have the appropriate surgical training; and possess the requisite _____________. _________, and _________________ _________________. 6

Every clinician must _________________ whether they have the knowledge, skills, and experience to monitor or plan/perform surgery on the patient for the management of gingival recession defects. 59
References


Gingival Recession Checklist

The Gingival Recession Checklist and companion Chairside Visual Guide on side two, can be used to facilitate the development of interventions for the prevention and management of gingival recession. They are designed to help the clinician focus on triage, evaluation, planning, and patient communication.

Directions

A. Determine whether the patient is susceptible to gingival recession.
   Teeth can be more susceptible to gingival recession if positive for any factor below:
   1. Thin (delicate, fragile) Gingival Tissue
   2. Mucogingival Conditions
      • Gingival/soft tissue recession
      • Probing depth extends beyond the mucogingival junction (MGJ)
      • Absence or narrow band (< 2mm) of keratinized tissue
   3. Positive History
      • Progressive gingival recession
      • Inflammatory periodontal disease(s) (e.g., plaque-induced gingivitis, chronic periodontitis), for teeth presenting with #1 and/or #2 above

B. Evaluate for the presence of any gingival recession modifiable conditions listed below.

C. Develop a treatment plan to address each positive finding below.

D. Review the Gingival Recession Checklist findings and the Visual Guide with the patient.

Modifiable Conditions

- Poor metabolic control of diabetes
- Tobacco use including smokeless
- Clinically detectable plaque
- Damaging oral hygiene methods contributing to inflammation/tissue injury
- Damaging oral habits/eating habits contributing to inflammation/tissue injury
- Bleeding on probing/inflammatory periodontal disease(s) (e.g., plaque-induced gingivitis, chronic periodontitis)
- Clinically significant root sensitivity leading to avoidance of oral hygiene procedures
- Subgingival restorations contributing to inflammation despite effective oral hygiene and appropriate periodontal treatment
- Oral appliances contributing to inflammation/tissue injury (e.g., oral jewelry, fixed orthodontic appliances, or removable appliances)
- Shallow vestibular depth restricts access for effective oral hygiene
- Frenum position compromises effective oral hygiene
- Soft tissue clefts/deformities compromise effective oral hygiene
- Planned dental therapy that can cause inflammation or physical injury to the gingival tissues (e.g., potentially traumatic subgingival instrumentation; subgingival restorations; removable appliances; gingival retraction; rubber dam clamps, and any procedures that can cause thermal or chemical tissue irritation or injury)
- Planned orthodontic tooth movement

For every positive finding on the Checklist, a tailored and personalized treatment/action plan is developed to address it. Interventions should be patient-centered, and focused on clinically relevant outcomes. Whenever it is clinically reasonable to do, interventions should be instituted in a step-by-step approach, starting first with the most effective conservative measures. Like any safety checklist, the Gingival Recession Checklist is not intended to be 100% all-inclusive; clinicians may find that there are exceptions.

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Gingival Recession Chairside Visual Guide

Gingival Tissue

Thin (more delicate, fragile) gingival tissue

Thick (more protective, durable) gingival tissue

Mucogingival Conditions

Gingival/soft tissue recession

Probe depth extends beyond the MGJ

Cementoenamel Junction

Gingival/soft tissue margin

Narrow band (<2mm) of keratinized tissue

Absence of keratinized tissue (mandibular right canine)

Locating the MGJ

When the mucogingival junction (MGJ) is difficult to distinguish:

Stretch the lip or cheek while probing the gingival sulcus

Gently push alveolar mucosa coronally with the side of the periodontal probe and observe where the tissue stops moving. This position is the MGJ.

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