

Don't start without the charting

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Last year, the American Association of Orthodontists (AAO) Board of Trustees appointed President Lee Graber and me to a joint task force along with the current president of the American Academy of Periodontology and another practicing periodontist. Our charge was to determine how orthodontists can avoid being sued for periodontal problems that arise during orthodontic treatment. Is this a real problem? Most definitely! Here are the facts. According to conversations with the claims manager for the AAO Insurance Company, periodontal problems that develop or exacerbate during orthodontic treatment currently account for the largest portion of liability claims against orthodontists. The purpose of the task force was to determine how to avoid this trend.

Lee Graber and I began a series of conference calls with the 2 periodontists. Our goal was to establish a protocol so that orthodontists can determine which adult patients are at risk of developing periodontal problems. Obviously, the first key is to have a thorough health history, consisting of specific questions that might uncover a risk for potential periodontal complications, such as smoking, diabetes, or past periodontal therapy.

A second major ingredient in determining periodontal risk is to have appropriate intraoral radiographs. Most orthodontists take panoramic radiographs before treatment. These radiographs will show significant bone loss, but they are inadequate to diagnose subtle interproximal bone loss. And since the x-ray tube makes a curved path around the patient's head during the radiographic exposure, it causes overlapping of some posterior contacts and further blurs the image of the crestal bone. The periodontists informed us that the gold standard for diagnosing posterior bone levels is a vertical bitewing. With this image, the x-ray beam passes through the occlusal surfaces of the posterior teeth, and therefore the distance from crestal bone to cemento-enamel junction (CEJ) is accurate.

In the maxillary and mandibular anterior regions, periapical radiographs are the best for evaluating bone levels. Usually, 3 maxillary and 3 mandibular anterior periapicals are necessary to make a thorough assessment. The periodontists advised that CEJ to bone levels of 5 mm

or greater could indicate a significant periodontal problem that might require attention before orthodontics.

But there is another key record that is absolutely necessary to correctly interpret the radiographic findings. That is the periodontal charting. A 5-mm distance from CEJ to bone in an interproximal site that does not bleed is probably not a risk. But if that site does bleed when probed, the risk of disease progression is much higher. So, what did the periodontists suggest? They recommended that all adult orthodontic patients have a complete periodontal charting performed before beginning orthodontic treatment.

What should the charting include? There are 5 important parts to the charting. First, the sulcus depths around each tooth are mandatory. The sulcus depths provide us with knowledge about the attachment levels around the teeth. Second, bleeding upon probing should be recorded. Bleeding can be interpreted differently. For example, bleeding in a 3- to 4-mm pocket could simply be gingival inflammation due to the accumulation of aerobic caries-producing bacteria. But bleeding in a 6- to 7-mm pocket would most likely indicate active periodontal disease caused by anaerobic periodontal pathogens in a susceptible patient.

The third piece of information needed on the charting is bone loss in the molar furcations. If these defects are present before orthodontic treatment, they are often difficult to manage with brackets and wires in place. A fourth item to assess is the presence of any areas of recession that would indicate the need for gingival grafting. Finally, excessive tooth mobility should be recorded; this could indicate occlusal trauma or inadequate bone support.

Here's the problem. Most orthodontists won't take the time to perform the charting. But therein lies an opportunity. Our task force believes that the orthodontist should request the charting from the referring dentist. In this way, the general dentist and the orthodontist partner in sharing the responsibility for diagnosing and managing the adult periodontal patient. Do you get your periodontal chartings from the referring dentists? I do! I would not start adult orthodontics without the periodontal charting.

