

# Endodontic Spotlight

Steven C. Kwan, D.D.S., M.S.D.  
Diplomate of the American Board of Endodontics  
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## Spotlight on Bruxism and Myofascial Pain

### Introduction

History will perhaps remember this year as the defining one of a generation. The year 2020 has been the most unprecedented and perhaps most stressful in the lives of many people. This stress has caused a dramatic increase in bruxism and myofascial pain. Because bruxism can cause pain that mimics endodontic pain, we have seen many patients who think they need a root canal but are actually bruxing instead. It is extremely important to accurately diagnosis the chief complaint before any treatment is started.

In a normal year we typically seen an increase in bruxism in December with such consistency that we call it the “Holiday Grind!” It is not uncommon for us to average one patient a day with pain due to clenching and grinding. This year, we have already been seeing bruxism with even greater frequency and I suspect it may increase with the approaching holidays.

Evaluating for bruxism related pain mostly involves analyzing the patient’s history, occlusion, and muscles of mastication / TMJ.

### History

I will generally ask the patient the following questions:

- Do you know if you clench or grind your teeth? Do you notice if your teeth are together during the day or right when you wake up? Often times patients will know that they do this.
- Do you have significant stress in your life? I’ve had patients break down in tears just upon hearing that someone cares about their stress.
- Do you have a nightguard?
  - If Yes, do you **wear** your nightguard **every night**? Did you wear your nightguard last night? How about the night before? A surprising number of patients will try to imply they are wearing their nightguard (perhaps to save face) but don’t actually wear it regularly. By asking more specific questions, it makes it harder for the patient to obfuscate their record.
  - If No, has anyone ever suggested you get a nightguard?
- Any recent fillings or crowns? How does your bite feel?
- Can you cause yourself pain simply by closing down without any food? If the patient can cause pain simply by grinding their teeth together without food, the bite is likely off.

### Occlusion

Checking occlusion is absolutely critical. If the occlusion is high, that alone can completely mimic and mask any endodontic pain, and we sometimes would be unable to diagnose the

endodontic problem. High occlusion can cause irreversible pulpitis like symptoms (i.e. lingering cold pain and percussion pain). If you just placed a new crown, please ensure that the occlusion has been normal before the patient arrives at our office. If the occlusion is currently or was recently high, we might not be able to definitively determine if there is a root canal problem until it has been adjusted. I check occlusion mainly through the following techniques:

- Marking centric and excusives with articulating paper. However, even if the occlusion appears to be visually fine, if the patient reports their bite feels off, they are usually accurate as their nerves are more sensitive than our paper.
- Evaluate for fremitus by touching the buccal surface of the teeth in the area and having the patient bite and grind their teeth together. If one is shifting significantly more than the others, the occlusion may be off during excussive movements.
- Evaluate for significant wear, abfraction, or other signs of occlusal issues.

### Muscles of Mastication and TMJ

I palpate the three accessible muscles of mastication and the TMJ (note that the medial pterygoid can't be palpated). I'm evaluating if palpation causes discomfort and if I can mimic the chief complaint. If I'm able to mimic the chief complaint, then the main source of the pain is likely myofascial. If I'm able to cause some discomfort, they have some bruxism issues, but it may or may not be related to the chief complaint.

- The **Lateral Pterygoid** can be palpated intraorally by pushing lateral to the maxillary second molars where the muscle attaches into the coronoid process of the mandible.
- The **Masseter** can be palpated extraorally. Remember to palpate the entire body of the muscle which runs from the zygoma to the inferior border the mandible.
- The **Temporalis** can be palpated extraorally. Again, remember that it is also a large muscle the runs from just lateral to the eye to just behind the ear.
- The **TMJ**, located just anterior the ear, should be palpated with the mouth both closed and open to evaluate both the lateral and posterior aspects, respectively. When the patient is opening and closing, also evaluate for TMJ dysfunction including locking, popping, crepitus, and limited opening.

### Diagnostic Considerations

It is important to remember that patient may have one or multiple problems. If the patient has bruxism pain, it could be the sole source of pain or it could be masking an endodontic issue. If myofascial pain is the chief complaint but the patient has an obvious endodontic problem (i.e. an asymptomatic apical lesion), it is extremely important to educate patient that, although endodontic care is indicated, their pain may persist. Obviously if the pain is secondary to bruxism and not due to an endodontic infection, then RCT is not indicated and the myofascial or occlusal pain should be addressed instead.

### Treatment

Treatment options include:

- Occlusal Adjustment: If the occlusion is high based on patient report, articulating paper, and/or fremitus, creating a comfortable bite is critical. Usually if the occlusion is high, patient will notice a significant improvement on closing simply by adjusting the bite. This is a good sign that occlusion was at least partly contributing to the pain.

- Nightguard: We will either advise the patient to see their referring dentist for nightguard fabrication, or simply instruct the patient to wear their nightguard if they have been previously not wearing their nightguard.
- Patient Education: The patient should be educated on the source of the pain and what they can do on their own to improve the pain. These strategies include:
  - Stress reduction
  - Decondition daytime clenching habit
    - Set a timer on their phone to randomly check themselves during the day to determine if and when they are clenching or grinding. Recognize stressor and relax jaw.
  - Rest
    - Chew on the other side
    - No unnecessary chewing (such as gum)
    - Soft foods only
  - Ice
  - Ibuprofen
- Oral Medicine: In more severe cases, especially those with significant TMJ dysfunction, consider referral to Oral Medicine if appropriate.
- Endodontic Reevaluation: Depending on the other findings, bruxism pain may mask endodontic pain enough that it is not possible to determine if a root canal problem exists. If so, the patient may need to be reevaluated after the bruxism pain resolves and/or be instructed to call if pain persists.

### Conclusions

Bruxism related pain, typically manifested as myofascial or occlusal pain, can mimic or mask endodontic pain. It is extremely important to accurately rule out or diagnose non-endodontic pain before any endodontic treatment is initiated. Although this is always important, it is especially relevant now in 2020 given the dramatic increase in stress and bruxism present in the general population.

As we approach the end of 2020, I look back at all that has happened. This has been an unbelievable year, unlike any that we have or will experience. Here at Kwan Endodontics we feel so fortunate to continue to be here treating your patients. Thank you for the trust that you continue to place in us and for allowing us to be part of your team. Stay safe, have a wonderful holiday season, and let's all look forward to a more normal 2021!

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 KWAN ENDODONTICS is located at 6715 Fort Dent Way, Tukwila WA 98188  
 206-248-3330; 206-431-1158 (fax); [www.seattle-endodontics.com](http://www.seattle-endodontics.com)  
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