Barodontalgia

Case Report

84th Annual AsMA Scientific Meeting
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Disclosure Information
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I have no financial relationships to disclose.

I will not discuss off-label use and/or investigational use in my presentation.
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CC: “During our July Vacation when my husband and I were drove up into the mountains, I got a terrible pain in my lower right tooth and it stayed with me the whole week. Then it went away when we came back down.”
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Subjective findings

- Pain in the lower right jaw
  - Patient points to tooth #29 (45)

- Pain occurred at about 7000 feet (2100 meters)

- The pain was strong at first (about an 8-9 on a 1-10 scale) and then gradually decreased to about a 4, but was there the whole vacation.
  - Described as a dull and throbbing pain with hot and cold sensitivity.
  - The pain intensified in the morning and lasted the whole day.
  - The pain stopped immediately after descending, however, the hot and cold sensitivity remain and do not linger.

- Patient denies any sinusitis or issues with her ears and denies the use of any sinus related medications.
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Objective findings
- visual assessment

- #29 (45): Abfractive lesion
- #30 (46): Porcelain Crown
- #31 (47): Heavy wear, vertical buccal cracks and horizontal occlusal cracks on tooth
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Objective Findings
- Radiographic assessment

#29 (45) Amalgam approximating pulp

#31 (47) Questionable loss of lamina dura on distal root
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Radiographic findings
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Objective findings

• Palpation test.
  - No sensitivity to palpation on entire right side.

• Percussion test
  - Tooth #29 (45): mild to moderate tenderness.
  - Tooth #30 (46): no tenderness.
  - Tooth #31 (47): mild tenderness to percussion.

• Probing test
  - No probing depths >3mm around 29-31 (45-47).

• Tooth sleuth bite test

• Thermal testing
  - Teeth 29 and 31 (45 and 47): hypersensitive to the cold test but did not linger.
  - Tooth #30 had very little response to the cold test.
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Assessment of Teeth

- Tooth #29 (45)
  - Patients perspective: Patient thinks it is tooth #29 that elicited the pain.
  - Radiographic assessment: Large coronal radiopacity approximating pulp. No apical radiolucencies. Lamina dura appears intact.
  - Test Results: Probing, palpation and bite test; NSF
    - Percussion test - mild to moderate tenderness.
    - Thermal test - Hypersensitive/did not linger

- Tooth #30 (46)
  - Test Results: Probing, palpation and bite test; NSF
    - Percussion test – no tenderness to percussion.
    - Thermal test – Very little response to cold.

- Tooth #31 (47)
  - Visual assessment: One large and two small amalgam fillings with heavy occlusal wear. Crack running through distal marginal ridge, across occlusal surface, and connecting to vertical crack in buccal groove.
  - Radiographic assessment: Questionable if lamina dura is intact on distal root.
  - Test Results: Probing, palpation and bite test; NSF
    - Percussion test – mild tenderness.
    - Thermal test - Hypersensitive/did not linger
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Diagnostic Assessment
- Patient description: “Dull throbbing pain during ascent”

- If pain occurs during **ascent**:
  - Tooth is usually **alive**.
    - Dull throbbing pain:
      - Reversible pulpitis,
      - Periodontal abscess,
      - Barosinusitis
    - Sudden sharp penetrating pain:
      - Irreversible pulpitis, recent treatment

- If pain occurs during **descent**:
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Assessment

- Occurred during ascent: alive (teeth are vital)

- Dull throbbing pain:
  - Reversible pulpitis
  - Suspect teeth
    - #29 filling approximating pulp
    - #30 Porcelain veneer crown
    - #31 Heavy wear and cracks
  - Periodontal abscess
    - All probing’s 3mm or less
    - No visible radiographic signs of periodontal disease

Barosinusitis

- Sinuses clear
- Health history does not indicate ear or sinus issues
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**Plan**

- Inform the patient
  - Start conservative/treat the obvious
    - Tooth #31 (47) Cracked Tooth.
  - Treatment selected may not cure the cause.
  - May require additional treatment.
    - #29 (45) still suspect.
    - #30 (46) may also be cause

- Treat the obvious:
  - Tooth #31 (47); heavy occlusal wear with cracks on occlusal and buccal surfaces.

Start conservative...
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Clinical findings
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Objective findings (day of treatment)
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Treatment

- Place crown
- Follow-up appointment to evaluate
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• Patient flew in November without incident however...

• Patient states that cold sensitivity is mostly gone, but still has a little achiness occasionally on this tooth.
  - Again, patient points to tooth #29 (45).

• Tooth #29 (45)
  - Visual assessment: Large DO amalgam. Facial abfractive lesion.
  - Radiographic assessment: Large coronal radiopacity approximating pulp. No apical radiolucencies. Lamina dura appears intact.
  - Test Results: Probing, palpation and bite test; NSF - Percussion test – mild tenderness.
  - Thermal test – responded and did not linger.

• Tooth #30 (46)
  - Test Results: Probing, palpation and bite test; NSF - Percussion test – No sensitivity to percussion test.
  - Thermal test – Very little response to cold.

• Tooth #31 (47)
  - Visual assessment: Porcelain veneer crown
  - Radiographic assessment: intact lamina dura
  - Test Results: Probing, palpation and bite test; NSF - Percussion test – No sensitivity to percussion.
  - Thermal test – Little response to cold.
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Assessment

- Tooth #29 (45)
  - Visual assessment: Large DO amalgam. Facial abfractive lesion.
  - Percussion test - mild to moderate tenderness.
  - Occlusion check - reveals traumatic occlusion

Plan

- Adjust lateral interferences bond class V facial and reevaluate.

Treatment
• Final Assessment:

  Patient states that everything is great, and that she hasn’t even thought about her teeth since the last time she was in.
References

