

ROOT NEWS

SPRING 2024



ZVE EVENTS HIGHLIGHTS

1 MOVIE NIGHT



ZVE recently hosted Movie Night at the Chateau Theater. We provided candy, popcorn and soda. Keep an eye out for a different movie next year!

2 SUMMER SHINDIG



June 13th 3-6pm at Iron Butterfly Flower Farm. Food, Drinks, Games & Giveaways. Doctors & Staff are invited!

3 WINE TASTING



We will have a Doctor's event at Studio 324 on Oct 4th from 4-6pm. A professional sommelier will host a guided wine-tasting. Please RSVP to the forthcoming mailed invitation to reserve your spot!



CONGRATULATIONS

We are so proud to report that Dr. Katie Divine is receiving a national award from the American Association of Endodontists this year. She will be awarded the Spirit of Service Award during the AAE national conference in Los Angeles. The Spirit of Service Award recognizes endodontists who devote time and expertise to create partnerships in the dental community, impact dental organizations, and benefit patients through volunteering for under-served patients.

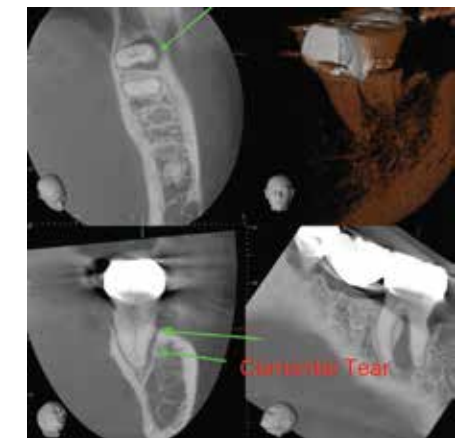
Are Cemental Tears on Your Radar?

By Deborah Majerus, DDS, MS.
(Images credited to Drs. Majerus, Divine, and Regan Anderson)

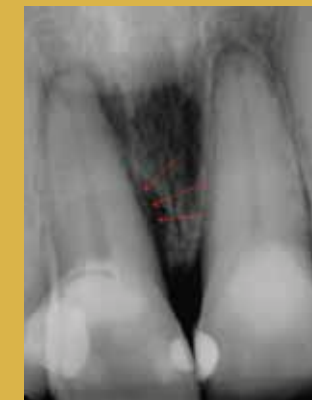
When I was a bright-eyed and bushy-tailed new graduate over twenty years ago, cemental tears were not on my radar, even though they were being written up in the periodontal literature in the early 2000's. However, that all changed when my former co-resident and mentors at the University of Minnesota Endodontic Department wrote up a case report published in the Endodontic literature in 2007 (Tulki, Baisden, McClanahan 2006). Then I started to wonder how many I might have missed before then. Now, with continued experience and a small field of view high-resolution CBCT we can more easily detect and treat cemental tears.



Some cemental tears can be seen on periapical radiographs, but many cannot.



High-resolution CBCT is the ideal imaging modality to visualize cemental tears.



Mid-root cemental tear with endodontically infected #8.

Cemental Tears have also been referred to as "cementum cracks", "cementum fracture", and "cemento-dentinal tears". It is essentially the delamination of the cementum from the root surface. I often explain it to the patient like a fingernail peeling away. The incidence is unknown, but the prevalence has been reported to be under two percent.

The clinical presentation can mimic other common endodontic and periodontal conditions such as localized periodontitis, vertical root fracture, non-healing endodontic treatment, cracked tooth, vertical root fracture, combined or concomitant endo-perio lesions, etc. It is helpful to remember the disease process starts from a mechanical separation of the cementum, and the following mechanical irritation of the adjacent tissues. Cemental tears can occur anywhere in the circumference of the root, and so initially it is often not in communication with the oral cavity; it is a sterile process with a vital pulp. However, as the mechanical irritation continues, periodontal attachment loss can occur, and cause secondary infection of the tear with a presentation similar to localized periodontal disease or cracked tooth. Similarly, if the root canal space concomitantly becomes infected, then penetration of the dentinal tubules by bacteria can also result in the infection of the cemental tear.

Thirty-seven articles were reviewed by Lee and colleagues in 2021. They noted gaps and contradictions in our understanding of the epidemiology and predisposing factors. It seems to occur more often in people over age 60. Other predisposing factors include trauma or traumatic occlusion. It has been postulated that some people may have a congenital anomaly with weak cementum. Certain conditions such as malnourishment and aplastic anemia can affect the functioning of cementoblasts and may result in structurally weaker cementum.

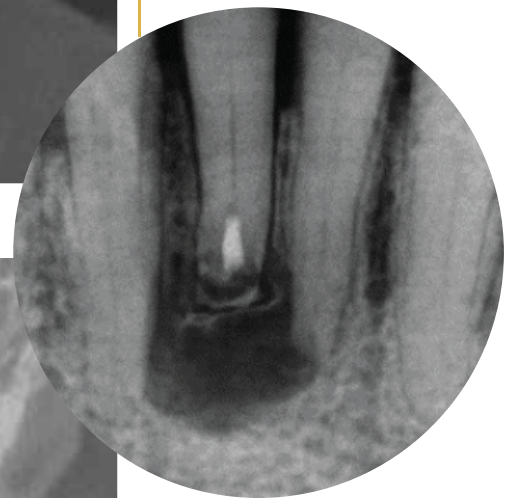
Proper diagnosis is important to prevent unnecessary treatments or poor outcomes. A limited exam complete with periodontal assessment as well as pulpal testing and high-resolution CBCT imaging is ideal. Depending on the presentation, the options include watchful waiting vs. non-surgical debridement vs. open flap periodontal surgery and guided tissue regeneration vs. apical surgery and guided tissue regeneration vs. intentional replantation vs. extraction. If the pulp remains uninvolved, then root canal treatment may be avoided.

The definitive treatment consists of removal of the separated fragment of cementum. If the tear is located cervically, then sometimes scaling and root planing can remove the piece. However, if any part remains the irritation will continue, so periodontal surgery may be needed to ensure complete removal, followed by guided tissue regeneration.

If the cemental tear is located mid-root or apically, then again surgery combined with guided tissue regeneration is a good option if the area is accessible surgically. If an area is not accessible surgically, such as the mid-palatal aspect of a maxillary tooth or the lingual aspects of a mandibular tooth, then intentional replantation is another option. In some cases the periodontal destruction is so severe that extraction is the best option.



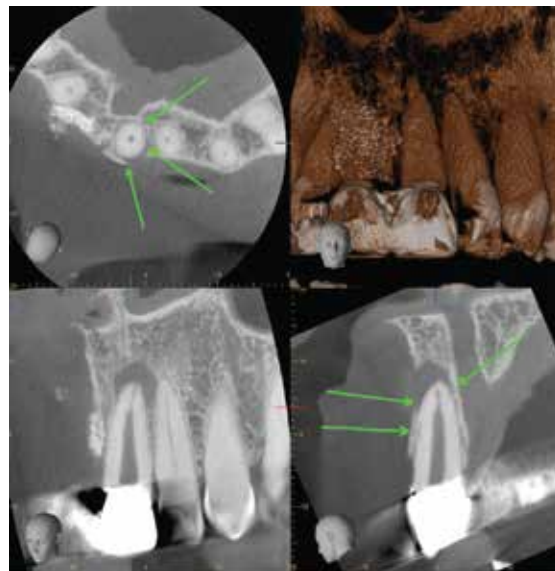
— Apical cemental tear treated surgically. Endodontic microsurgery was completed on this lower incisor with pulp canal obliteration to address both periapical disease and the apical cemental tear.



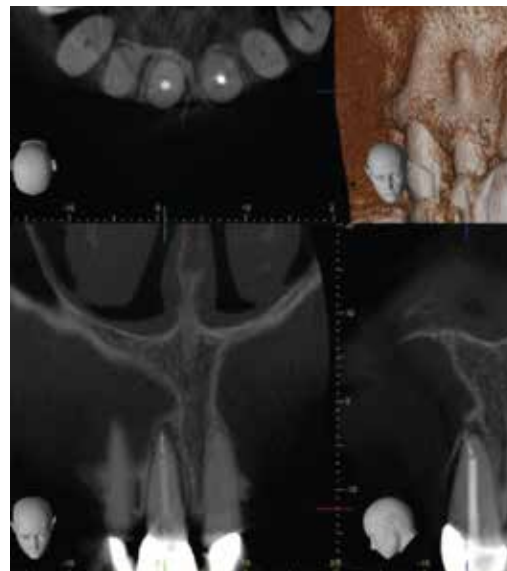
— Facial cemental tear before surgical repair.



Palatal cemental tear not visible on the periapical radiography.



Palatal cemental tear not visible on the periapical radiograph.



Cemental tear treated surgically.



Post-Op radiograph.

Prognosis is not well studied, but certainly it is better than fractures of the dentin. Lin et al. reported in 2014 that 94% of treated teeth remained functional. Often, removal of the cemental tear and debridement of any infected tissue will result in healing. However, recurrence is a risk and the strategic importance of the tooth must be weighed in the overall treatment plan, as well as patient preference of course. As part of any treatment plan, occlusal adjustment is recommended.

I hope this short summary has been helpful at increasing awareness of this relatively rare but sometimes perplexing problem. We are here as your partners in care for your patients, and happy to help in any way that we can!

ZVE LEADERSHIP ROLES

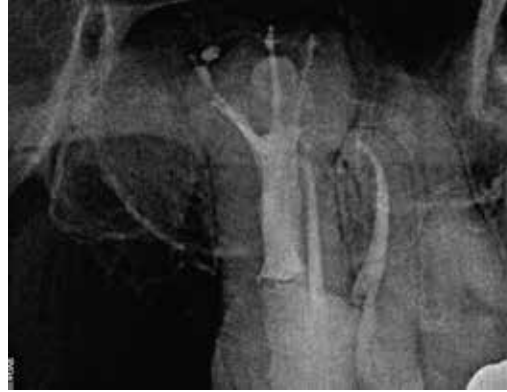
Dr. Majerus continues as Adjunct Affiliate Professor teaching endodontics at the University of Minnesota School of Dentistry. She is an examiner for the endodontic residents in their oral examination process. She has been involved with the leadership of the MAE and ZVDS as Past President.

Dr. Regan Anderson is serving as the Past President of the Minnesota Association of Endodontists. He is in discussions with an oral radiologist about researching the possible applications of MRI imaging in dental applications and assessment of pulpal vitality. He will be volunteering at the Mission of Mercy in Duluth this summer.

Dr. Divine will complete her term as the New Practitioner Trustee for the Foundation for Endodontics in April. She serves as Chair of the AAE Membership Engagement Committee. She will present at the AAE24 Annual Meeting and is a Track Organizer for the 2025 meeting. She serves on the MDA Membership Committee and as part of their inaugural "Leadership Academy". She is the 2024-2025 President of the ZVDS. She has volunteered to be the Endodontic Lead at the MN Mission of Mercy Duluth this summer. Dr. Divine teaches monthly as an Adjunct Affiliate Professor at the University of Minnesota School of Dentistry and serves as a manuscript reviewer for the journal Dental Traumatology.



INTERESTING CASE SNAPSHOTS



This is an interesting case! The patient came to us for a second opinion. It had been recommended that this patient have this tooth

extracted because the anatomy seemed too complex for root canal treatment. The patient was motivated to save it and came to us to see if we could help him maintain the tooth. Dr. Divine (2019) published in the Journal of Endodontics that palatal roots of maxillary molars demonstrate a single canal 99%+ of the time. Well, this is certainly an exception. In addition to MB1, MB2 and DB canals, the palatal canal by itself demonstrated at least five portals of exit!



This #18 demonstrated sinuous curvature in the mesial root and multiple portals of exit in the distal apex. It also highlights how we should envision two orifices present in the distal root of lower molars. Usually the single canal of a distal root in lower molars will have a long oval or figure-eight configuration, so it can be approached from both a buccal and lingual side of the canal entrance.

SINCE YOU
LAST HEARD
FROM US...



Our hygienist assistant Camille had a baby and we're so happy to have her back from leave. Myles is a very happy boy and gets so much love from his big sister.



Wendy Miller continues to shine outside of work teaching tennis and competing nationally in racquetball tournaments. She competed in National Doubles in February at the Sun Devils Fitness Center in Tempe, Arizona. Wendy brought home a bronze medal in Mixed A doubles & silver medal in Women's A Doubles.

PEER OFFICE VISITS

General dentists and endodontists have been coming to shadow at Zumbro Valley Endodontics to see how we practice. We welcome our referring doctors to come spend some time. Within the last year, we have had dentists come from Chicago, St. Cloud, Minneapolis, and Florida to observe and share ideas. If you would like to spend some time with us, please feel free to contact Dr. Regan Anderson at drmichael@zumbrovalleyendo.com

BOTOX

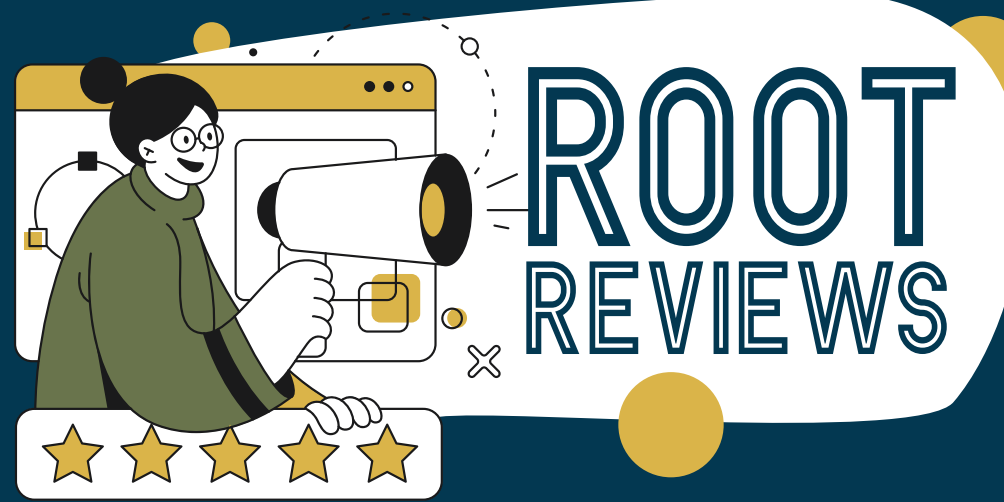
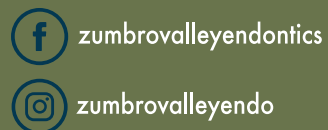
Botox treatment for patients with bruxism: We continue to have success in adjunctively treating patients with bruxism using Botox injections. We focus these injections on prevention and symptom relief for these patients. This can help with limiting damage to teeth and restorations, as well as to relieve tension, headaches and chronic pain.



Zumbro Valley Endodontics has expanded hours to better serve your patients.

We are open Monday-Friday 7AM-4:30PM. Now that we are open on Fridays, we can treat patients five days per week, and this should improve our ability to see emergency patients promptly.

2659 Superior Drive NW Suite 100
Rochester, MN 55901
Phone: 507.281.1295 Fax: 507.529.5589
E-mail: frontdesk@zumbrovalleyendo.com
Website: Zumbrovalleyendo.com



Here are some recent reviews from our patients at Zumbro Valley Endodontics that we've received since our last newsletter. Please feel free to explore over 1,000 patient reviews on our website: ZumbroValleyEndo.com or 450 5-star reviews on Google.

"Zumbro Valley Endodontics took great care of me. They walked me through the process of my needed root canal and helped answer questions I had. During the procedure they made sure to keep me comfortable and safe. Dr. Regan Anderson was quick, efficient and friendly. They are there to support you every step of the way, including healing time as they gave contacts for home in case of a concern and/or questions. I highly recommend them!"
-Stephanie

"These wonderful folks were able to schedule an emergency evaluation of my tooth pain. The care team sent me out pain free to the next referral arranged by Wendy. I am so grateful. Thanks so much."
- Ann

"This is a truly exceptional endodontics practice. Very, very impressive in every respect. They could not be more competent, professional or caring. I have had a huge amount of dental work done in some very good places over the past few decades and my experience at Zumbro Valley Endodontics was one of very best. I feel very fortunate to have access to have such high quality dental care. With their help, I may just succeed in keeping my choppers for a few more decades!"
-Viki

"Dr Divine and the staff did a wonderful job of analyzing my situation, sharing/explaining the xray results, providing recommended course of action, and then performing the root canal. I was made comfortable during the procedure and did not experience any pain. Post-procedure recovery expectations were explained in detail. Contact information for the office and the Dr's cell phone were shared in case I had any post-procedure concerns/questions. The previous pain I was experiencing is now gone and all is good."
-John

"This was my first root canal and all I can say is that Dr Majerus and her the staff made it a wonderful experience -I never thought I would say that about a root canal! The check-in, prep, procedure and payment processing were all top notch! The staff were very pleasant and truly concerned about my comfort and well being. They answered all my questions and were kind, pleasant and professional with every aspect from the time I entered their office until I left. At the end of the procedure they gave me ibuprofen, a warm lavender washcloth, chopstick and a mint. What an unexpected but wonderful gesture! I didn't need any more pain meds and the swelling subsided relatively quickly. I will definitely recommend Zumbro Valley Endodontics to anyone that needs the services they provide and if I need a root canal in the future they will be the only place I call. Thank you Dr Majerus, Camille, and Wendy-you are a great team!"
-Carol