Seeing More Cracked Teeth?

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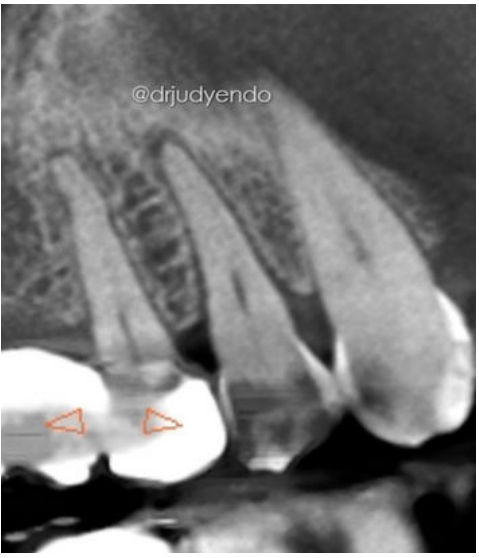
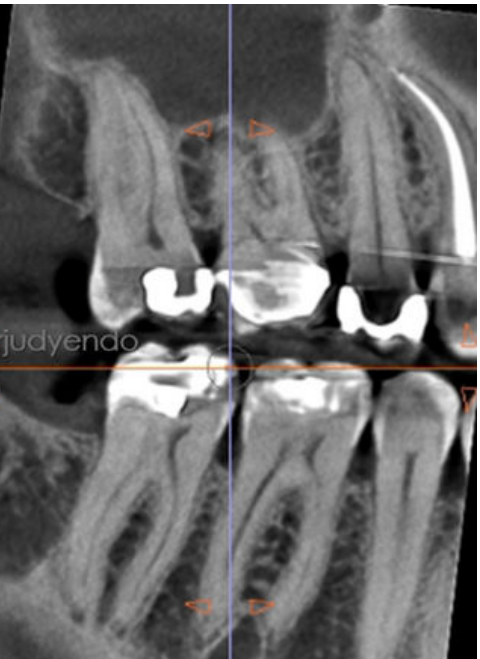
Dr. Judy McIntyre developed an interest in becoming a dentist as a young child after many positive experiences. Originally from Los Angeles, she attended the Harvard School of Dental Medicine, where she conducted research on dental unit waterline biofilms. She completed her endodontics residency at the Adams School of Dentistry at the University of North Carolina at Chapel Hill. Her research on traumatic dental injuries has been published in numerous professional journals. Dr. McIntyre has served as a Guest Board Member of the MA Dental Society, participated in the ADA and MDS Leadership Institutes, and served on the AAE Board of Directors and Committees. She continues to share her passion for dentistry, trauma, radiology/imaging, and endodontics through speaking engagements and social media.

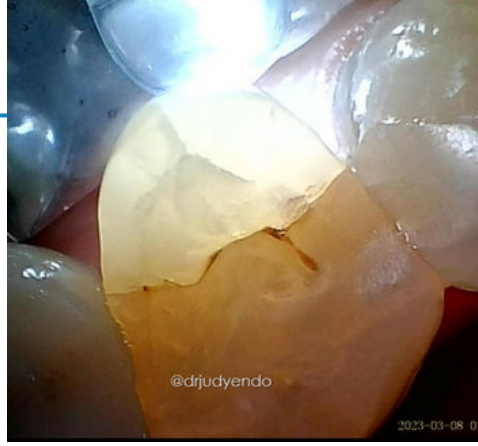




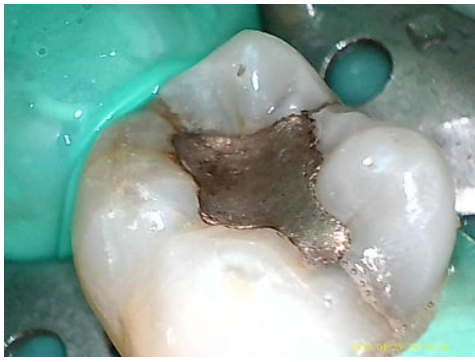
Seemingly, in recent years, more patients are presenting with cracked teeth. A colleague recently asked, “is it that there’s an increased frequency, or is it that we’re finally noticing!?”

Occlusal forces and other factors can cause craze lines and microfractures in the dentition, especially with existing [larger] restorations. When these small craze lines and infractions propagate with continued use and wear, cracks can develop in teeth. Older amalgam restorations that have been in patients’ mouths for several decades can give way after years of use - often clinically evident with stained or visible craze lines and/or marginal ridge cracks. When these craze lines propogate farther, below the CEJ, the term crack is appropriately coined, and often, the tooth may become symptomatic with pulpal involvement. As cracks propagate through the tooth, many patients may report biting sensitivity, which may eventually lead to cold sensitivity: often the first sign and symptom of pulpal involvement. Once cold symptoms are reported, patients are often referred to an endodontist.

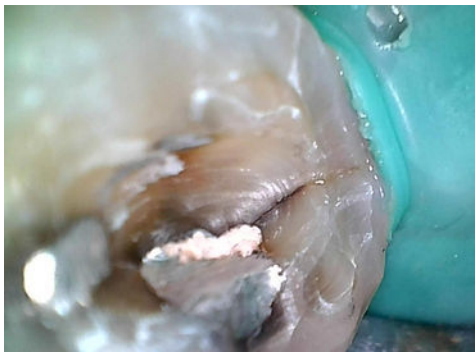
The most beneficial conversations to have with our patients are [earlier] ones to address the incipient cracks and smaller PPDs that we encounter and visualize, especially during yearly prevention and prophylaxis visits. Starting these crack conversations with discussion about occulsal guards and/or full coverage restorations



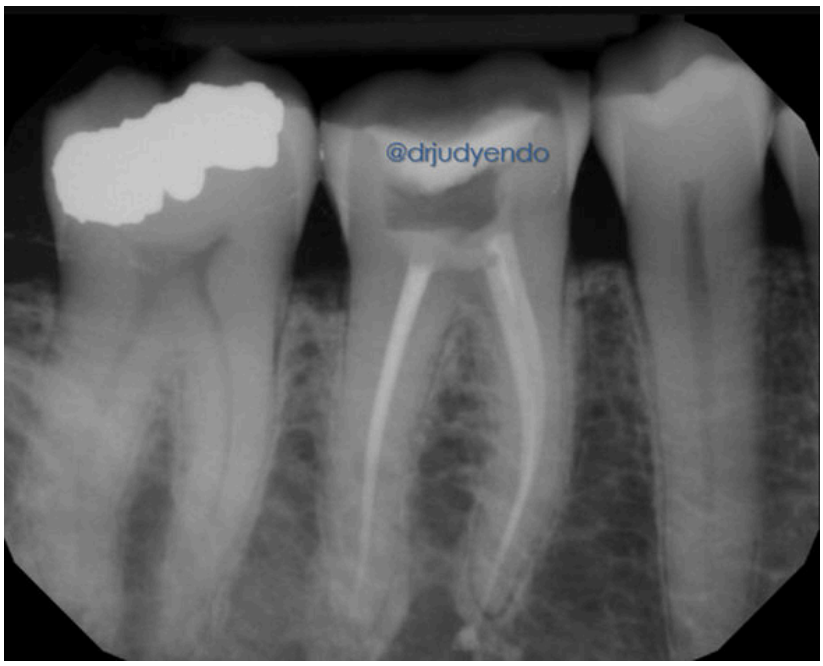
to avoid the propagation of these cracks when craze lines, with and without probing are visualized, is the best starting point for our patients, and the wisest one to avoid un unexpected, untreatable scenario. Trusting and proactive patients may select a new restoration with or without full coverage, and in doing so, may be able to avoid endodontics all together when caught and treated early. Oftentimes, however, these conversations are occurring too late when a truly cracked tooth can no longer be saved. Luckier patients may be able to save their tooth/teeth with endodontics and restorative dentistry both.

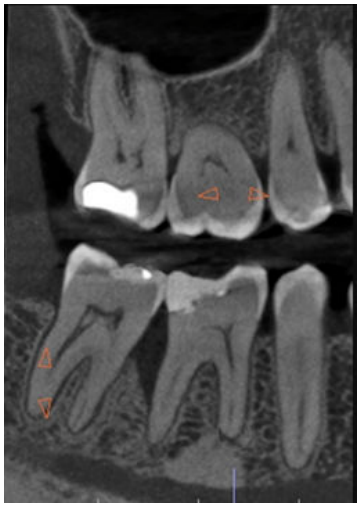


Diagnosis to best understand how to proceed with varying case presentations should be reviewed to better inform clinicians, as well as the hygiene team. Information that should be gathered: probing, the pulp vitality testing, transillumination, the clinical exam, the patient's chief complaint, and then their imaging: periapicals, bite wings, and 3D scans is essential to this diagnosis and future treatment plan.

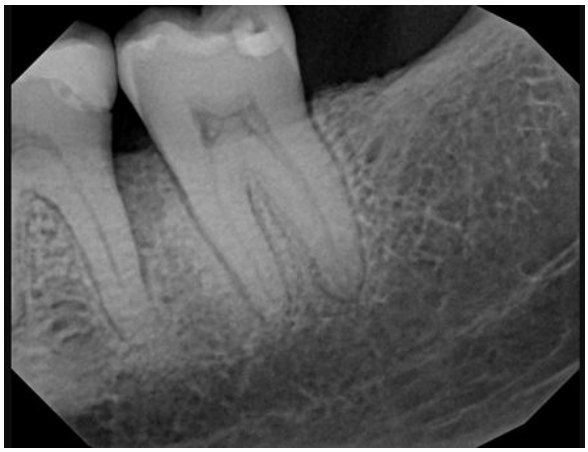


When the entire dental team can begin these conversations before symptoms start or worsen, and before cusps fracture, very often a full coverage crown can prevent crack propagation and avoid endodontic symptoms from developing.

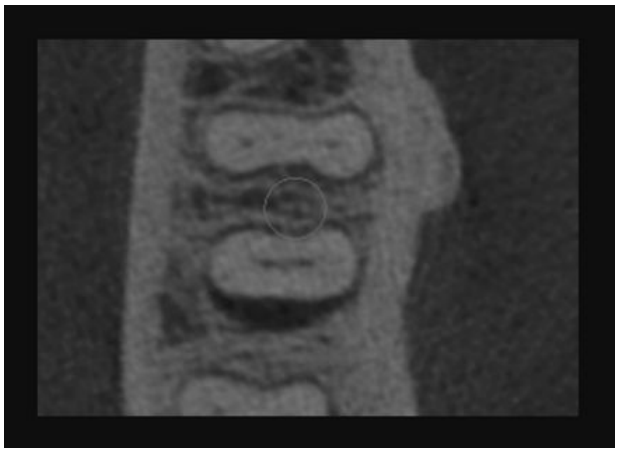




3D imaging screenshots sharing unrestorable cracked teeth



Corresponding PA



Axial 3D image

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