

Endodontic Spotlight

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Introduction

Summer is most definitely here and I hope you all are finding ways to stay cool this week! In this edition I have a case report of a very successful revascularization procedure that we completed a few years ago. Recent recalls show definitive root growth and a vital pulpal response! For those of you who aren't familiar with revascularization, I've included and updated my Spotlight on Revascularization summary from the very first edition of this newsletter.

Revascularization Tooth #4 Case Report

On 11/6/15, a 13 year old male presents with past severe pain and current sinus tract that traces to a periapical radiolucency from a necrotic #4. Tooth #4 has history of a talon cusp fracturing and exposing the pulp but is otherwise not carious or restored. Tooth #4 is immature and has an open apex. Revascularization with calcium hydroxide was performed and completed on 12/18/15. Patient presented for recall appointments on 7/19/16 and 5/26/17. At the most recent recall appointment, tooth responded to cold and showed definitive root development.



11/6/15 Preoperative



12/18/15 Postoperative



7/19/16 Recall 7 months



5/26/17 Recall 1.5 years

Spotlight on Revascularization

Revascularization is new technique that attempts to regenerate pulpal tissue in an immature necrotic tooth. By regenerating pulpal tissue, the root can continue to develop and allow for the deposition of additional hard tissue to hopefully reduce the chance of a future root fracture. If successful, it provides a better result than simply performing apexification, which does not allow continued root growth. However, at this time good outcome studies have not been published, so the success rate is unknown. The standard protocol involves disinfecting the tooth with irrigation but without filing, placing calcium hydroxide or a triantibiotic paste of ciprofloxacin, metronidazol and minocycline for 3-4 weeks, inducing bleeding and clot formation in the canal and chamber, placing MTA over the clot and allowing it to set with a wet cotton pellet and temporary, followed by placing a permanent restoration 1-2 weeks later. However, there are many variations in the technique. The major advantage of this technique is that it allows for pulp vitality and continued root formation. The major disadvantages include unpredictable results, multiple appointments required, and staining from the MTA and/or minocycline. You will be hearing more about this technique in the coming years.

Endodontic Spotlight is published quarterly by Steven C. Kwan, D.D.S., M.S.D.
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