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Use of Cephalosporin-modified Paste as a Disinfectant for Traumatized Immature Tooth: A Case Report

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Apexification and apexogenesis are the solutions for the pulp-injured teeth with undeveloped root apex. Apexification with calcium hydroxide is a routine procedure. Reports had shown that long-term dressing with calcium hydroxide may decrease the strength of tooth. However, some clinical reports suggest that root completion can occur by controlling the infection without use of a catalyst. Trope et al assessed the efficacy of a triple antibiotic paste (metronidazole, minocycline, and ciprofloxacin) in the disinfection of immature teeth and suggested this tripaste prescription can avoid the side-effects of calcium hydroxide dressing and could be an alternative root canal therapy for immature teeth. However, discoloration developed after applying the triple antibiotic mixture, causing an esthetic problem. To overcome this disadvantage, we clinically practiced using cephalosporin in the place of minocycline, which has been thought to be the agent causing tooth discoloration. A ten-year-old boy presented at the department of endodontics for evaluation due to right facial swelling starting a week before. A radiolucent image revealed the area around the right lower second premolar. This tooth was medicated intracanal by a paste mixture of ciprofloxacin/metronidazole/cephalosporin. After 14 days, the patient had no obvious symptom or signs. The revascularization procedure was achieved two weeks later. At one year follow-up, no discoloration was found and radiographic images showed complete bone healing. This result indicates that a modified triple antibiotic paste (with minocycline replacing cephalosporin) is effective for disinfecting immature teeth with injured pulp and apical periodontitis, and causes no tooth discoloration.

Poster Presentation