

# Revascularization of Immature Permanent Incisors After Severe Extrusive Luxation Injury

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## Introduction

Extrusion is an injury characterized by partial axial displacement of a tooth (1). Clinically, the affected tooth appears elongated, is usually displaced in the palatal direction and demonstrates excessive mobility (2,3). Radiographically, extruded teeth appear to have an increased periodontal ligament space. Based on severance of the periodontal ligament that has not yet been exposed to desiccation or disarticulation of the tooth from the blood supply, Andreasen described extrusive luxation as “partial avulsion.” According to Lee and colleagues, this term is useful in terms of treatment approach, as the pulpal outcome of severe extrusion may be comparable to that of a replanted tooth (3,4).

The stage of apical development is a key factor in pulp healing after extrusive luxation (3,5,6). In teeth with open apices, the pulp has greater potential for healing, commonly followed by pulp canal obliteration; in patients with closed apices, the likelihood of pulp revascularization is low, usually leading to pulp necrosis (1,3,5,6). Once pulp necrosis is diagnosed, endodontic therapy should be ini-

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## Abstract

Pulp necrosis is an uncommon sequel to extrusive luxation in immature teeth with incomplete apical closure. In this report, we describe the management of severely extruded immature maxillary incisors and the outcome of revascularization to treat subsequent pulp necrosis. An 8.5-year-old boy with severe dentoalveolar trauma to the anterior maxillary region as a result of a fall was provided emergency treatment consisting of reduction of the dislodged labial cortical bone and repositioning of the central incisors, which had suffered extrusive luxation. When he presented with spontaneous pain involving the traumatized incisors a week later, the teeth were treated via a revascularization protocol using sodium hypochlorite irrigation followed by 3 weeks of intracanal calcium hydroxide, then a coronal seal of mineral trioxide aggregate and resin composite. Complete periradicular healing was observed after 3 months, followed by progressive thickening of the root walls and apical closure. Follow-up observations confirmed the efficacy of the regenerative treatment as a viable alternative to conventional apexification in endodontically involved, traumatized immature teeth.

**KEY WORDS:** children; endodontics; injury; treatment

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# A Custom-milled Titanium Complete-arch Mandibular Framework and a Maxillary Complete Denture Fabricated in 3 Appointments: A Dental Technique

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## Introduction

Implant-supported prostheses must have a passive-fit to the implants; a misfit between a metal framework and an implant may cause mechanical and biologic consequences, such as screw loosening, implant and prosthesis fractures, and breakdown of the peri-implant support (1-6).

Complete passive-fit of a metal framework is rarely seen, especially when fabricating complete-arch 1-piece frameworks using a traditional casting method (2). The development of custom-designed and custom-manufactured titanium frameworks has improved fit and has reduced chair-side time for the dentist. With an accurate impression of the implants and their respective locations, the milled titanium framework can demonstrate passivity when



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## Abstract

**Background:** When restoring multiple implants in the completely edentulous mandible, fabrication of a passive-fitting framework using traditional casting procedures is difficult. The introduction of computer-aided design and manufacturing techniques for fabricating custom 1-piece titanium frameworks simplifies this challenge and reduces time spent by the restorative dentist.

**Purpose:** The aim of this case presentation is to explain how to fabricate a milled titanium framework using Procera technique step by step.

**Materials and Methods:** A 79-year-old woman with an edentulous maxilla and mandible received a maxillary complete denture in 3 appointments by duplicating her existing complete denture, and a mandibular screw-retained fixed dental prosthesis using a milled titanium framework. The patient did not have any problems regarding her implants and restorations in a year of service.

**Conclusion:** This clinical report presents a complete oral rehabilitation, in which a custom-milled titanium complete-arch mandibular framework was fabricated with an overdenture, and a maxillary complete denture was fabricated using a denture duplication technique in 3 appointments.

**KEY WORDS:** implants, titanium, framework, mandible, CAD/CAM

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# Health Considerations for Oral Piercing and the Policies That Influence Them

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## Introduction

Only 26% of states have regulatory authority over tattooing establishments and only 6 of these states exercise authority over body piercing establishments (1). Some state legislatures have introduced bills calling for regulation of body piercers and their establishments, but they do not get much attention from local government. State laws regulating body piercing vary; some states prohibit body piercing for persons 18 years of age while other states allow piercing of this age group. Texas is one of 39 states that prohibits those under the age of 18 to acquire body piercing without the consent of a parent or legal guardian (2). The state of Texas does not have regulatory guidelines for the piercing artists but does regulate piercing studios. The Texas Department of State Health Services Drugs and Medical Devices Group enforces the Health and Safety Codes, Chapter 146, Tattoo and Certain Body Piercing Studio Act (3). This act, however, is primarily concerned with infection control rather than the care of the client or patient during or after the procedure. The Texas Department of Health requires that a person who operates a piercing studio take precautions to limit the spread of infection.



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## Abstract

With the increase in popularity of piercings, the health care professional needs to be aware of the complications that can occur due to lack of regulations of the piercing establishments. Due to lack of training of piercing professionals and lack of enforcement of sterilization procedures, infection and life threatening complications can arise. Complications include, but are not limited to, hemorrhage, nerve damage, gingival recession, HIV, tongue swelling, tooth fracture, Bacteremia, Ludwig's angina, increase salivary flow, jewelry aspiration, and localized infection. Texas requires an individual to be 18 years of age to receive a piercing. However, Texas does not regulate the piercing establishment or the artist providing the services. Oral health care providers should be aware of the lacking regulations of piercing studios so they can be more vigilant of oral complications that may occur.

**KEY WORDS:** oral piercing, oral piercing complications, piercing regulations, dental complications due to oral piercing

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