

Invisalign and Aesthetic Dentistry

A Case Report

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ABSTRACT

Invisalign has been an integral part of dental practices for many years. Besides improving crowding and spacing in teeth, it is an excellent adjunct for many different aesthetic procedures. One such case is illustrated in this article, where the combination of Invisalign and minimally invasive dentistry allowed for a stellar outcome, and one very happy dental patient.

A 25-year-old female patient presented to our office for emergency treatment. Earlier in the day, she tripped while chasing after her rambunctious 2-year-old son and fell onto her face. She had a small laceration on her upper lip. Tooth #8 was traumatically injured, with an Ellis Type III fracture into the pulp horn. The tooth exhibited severe percussion and palpation sensitivity. No midroot fracture or mobility was noted. Tooth #9 had only minor chipping on the incisal edge. No other dental problems were detected.

Observing the patient's dentition (Figure 1), she has an established Class I occlusion. However, she has a large amount of spacing in the anterior regions. Teeth #8 and #9 are splayed very far to the buccal, and are angled 25 degrees to the mesial. This protruding of the maxillary incisors most likely contributed to the fracturing of the tooth when the patient fell.

Root canal therapy was performed on tooth #8, and the fractured portion of the tooth was bonded back on as a temporary restoration (Figure 2). Because of the excessive jutting out of the teeth, the patient would require some form of orthodontic treatment to help properly align the teeth before definitive restorations could be fabricated.

After reviewing all available treatment methods, the patient chose the Invisalign system (*Align Technology*). Invisalign is a set of clear aligners that orthodontically move teeth into their proper positions. Each aligner is worn for two weeks; during this time, the teeth are pushed into their appropriate places by the plastic appliances. Since this patient is a young working mother, she did not want to wear traditional braces, or even ceramic brackets.

A full workup and evaluation was performed. In the mandibular anterior segment, there was approximately 3 mm of spacing. The maxillary anterior region had 6 mm of spacing present. No carious lesions or significant periodontal issues were noted. All necessary photographs, detailed polyvinyl siloxane (PVS) impressions (*Genie, Sultan Healthcare*), and accompanying radiographs were sent to Align Technology for production of the virtual ClinCheck.

The ClinCheck is a 3D representation of the patient's actual teeth. This virtual model simulates how the teeth will move during Invisalign treatment. After reviewing and modifying the ClinCheck