

Iatrogenic Outcome of a Talon Cusp Adjustment: A Case Report

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Background

Talon cusps are dental anomalies presenting as extra cusps and are most associated with maxillary anterior teeth. They can cause occlusal interferences, plaque accumulation, caries development, and soft tissue irritation during mastication or speech (1). The most common reason that dental practitioners adjust these cusps is for aesthetics. It is important for clinicians to understand the risks of adjusting these cusps.

Clinical Report

An emergency call was received from University Medical Center in Las Vegas, Nevada on September 14th, 2023 regarding a 14-year-old African American female with facial swelling around the upper lip, showing migration bilaterally. A CT scan was taken and an odontogenic infection was diagnosed. The patient received IV antibiotics overnight.

The next day, another call was received from the Emergency Department. The patient underwent emergency incision and drainage surgery due to increased swelling. After the surgery, the patient was referred to UNLV Pediatric Dental Clinic for treatment on tooth #8.

Clinical Exam

The patient and parent reported no significant medical history, medications, or allergies.

Soft tissue exam: There were no signs of abscess or swelling. When the facial vestibule was palpated, the patient exhibited no tenderness or discomfort.

Hard tissue exam: Teeth #s 8 and 9 were both previously adjusted by another dental practitioner and restored with lingual composite restorations. Around the lingual composite of #8, microleakage was noted. There was normal probing depths of 3 mm with no mobility on #8.

Radiographic exam: A large periapical radiolucency extending to the mid-root region on #8 was present.

After consulting with an endodontist, root canal therapy was recommended to the patient and parent. The possible recurrence of swelling and the potentially life-threatening situation if no treatment was rendered was discussed when patient and parents were presented with risks, benefits, and alternatives.

Dental Treatment

The patient reported to the pediatric dental clinic and was anesthetized with 1.5 cartridges of 2% lidocaine with 1:100,000 epinephrine. The tooth was isolated with a rubber dam and the pulpal chamber was accessed, with findings of necrotic pulpal tissue. Pulpal tissue was removed, and the canal was cleaned. Calcium hydroxide was placed, and the tooth was restored with IRM.

At the second visit, a length of 28 mm was confirmed with an apex locator and radiograph. A size 40 master apical file was used for cleaning and shaping. The canal was obturated with a size 40 master apical cone and two size 25 accessory cones using BC sealer. Final obturation was confirmed with a radiograph. SureFil was placed to seal the gutta-percha, and the tooth was restored with composite as the final restoration.

Conclusion

Occlusal adjustment and removal of talon cusps may cause iatrogenic damage to the tooth, exposing the pulp chamber due to pulpal extensions in the cusp (2). This case highlights the consequences of over-adjusting these cusps. Dental practitioners are responsible for acknowledging the risks and benefits and discussing them with the patient and parents before rendering treatment.

References

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