Endodontic Treatment of a Maxillary Lateral Incisor with a Talon Cusp: Case Report

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This report presents a clinical case of the endodontic treatment of a maxillary lateral incisor with a talon cusp.

Key Words: talon cusp, endodontic treatment, incisor.

The region of the maxillary lateral incisor corresponds to an area of embryological risk, presenting a variety of malformations: cleft lip and palate, maxillary globular cyst, supernumerary teeth, peg-shaped teeth, \textit{dens invaginatus} (Pécora et al., 1987), radicular grooves (Everett and Kramer, 1972) and talon cusps (Mitchell, 1892; Gardner and Girgis, 1979).

The idea that the maxillary lateral incisor is a simple, single-rooted tooth (Pucci and Reig, 1944; De Deus, 1982) ought to be analyzed by an \textit{in vitro} study because many researchers (Madeira, 1973; Halton and Ferrillo, 1989) have reported clinical cases in which the lateral incisors have two roots.

Talon cusp was first reported by Mitchell (1936) and corresponds to the abnormal development of the cingulum of the maxillary front tooth, appearing to have an extra cusp. Talon cusp has been reported as \textit{dens evaginatus} because it appears to be the opposite of \textit{dens invaginatus} (Pécora et al., 1991).

The exaggerated size of the cingulum can cause aesthetic problems, caries, occlusal trauma and tongue irritation. Talon cusp can be associated with Mohrs syndrome (Goldstein and Medina, 1974) and Rubinstein-Taybi syndrome (Gardner and Girgis, 1979).

This report describes the endodontic treatment of a maxillary lateral incisor with a periapical abscess and talon cusp.

Case Report

A sixteen year old negro female was referred to the clinic of the Dental School of the University of Ribeirão Preto with pain in the right lateral incisor. Clinical examination
Figure 1 - Presence of a talon cusp on the maxillary right lateral incisor in a female negro patient.

Figure 2 - Radiograph showing the radiopacity of the talon cusp over the dental crown. A bone rarefaction is also seen in the apical region suggesting a periapical pathological process.

Figure 3 - Radiograph showing the right maxillary lateral incisor after endodontic treatment.
revealed the exaggerated size of the cingulum of the right lateral incisor with the aspect of a cusp, the talon cusp (Figure 1). Between the lingual surface of the normal crown of the lateral incisor and the talon cusp, there was a deep carie. The buccal mucosa was edematous in the apical region and the patient showed sensibility to percussion and palpation.

Results of vitality tests on all teeth in the area were positive except for the results on tooth 12, which did not respond to the thermal test or the electric pulp test. Radiographic examination showed an area of circumscrip apical bone rarefaction and a radiopaque area of the crown, appearing to be an evagination of the dental structure (Figure 2). No other sign or symptom that could be associated with the syndromes of Rubinstein-Taybi and Mohrs were observed. The medical history of the patient was noncontributory.

Endodontic treatment of the acute abscess was performed in two sessions. In the first session, the extra cusp was sectioned with diamond burs and the area was disinfected. After 3 days, with improvement of the abscess, we proceeded with the chemical-mechanical preparation by ultrasonic instrumentation (Profilax III, Dabi-Atlante, Brazil) with Dakin’s solution. The root canal obturation was made with gutta percha cones (Maillefer, Switzerland) and Grossman sealer (manufactured in our Laboratory of Endodontics) (Figure 3).

Discussion

When examining a patient the dentist ought to remember that the maxillary lateral incisor may have a series of developmental anomalies, such as dens invaginatus, talon cusp, peg-shaped teeth and radicular grooves.

The talon cusp consists of an evagination of the cingulum of the tooth. Its treatment does not present difficulties as it is sufficient to cut the cuspid anomaly for the tooth to appear normal. Since the patient did not present other symptoms which could be associated with the Rubinstein-Taybi or Mohrs syndromes, this case was considered to be one of a talon cusp.

Patients with teeth with a talon cusp inevitably have occlusal trauma and difficulty maintaining good dental hygiene in the tight space between the lingual surface of the normal crown and the talon cusp. Hence, removal of this cusp is necessary to reestablish the normal function of the tooth.

References

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