

Saving Teeth - Alternatives To Extraction

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1. Tooth pathology limited to the crown

- Uncomplicated crown fractures

- A. Enamel only, no dentine exposed and no displacement of the tooth (T/FX/EF).

Where fractures have only removed enamel from the tooth surface there is no exposure of the dentinal tubules and as a result the pulp is not exposed to bacterial insult.

Treatment is required to remove sharp edges, improve cosmetic appearance, restore anatomy of the tooth and control pulpal inflammation.

Tools required: Intraoral radiography.

Examination and treatment tools, Fluted bur or Soflex discs, Acid etch, Bond, Unfilled resin composite, NSAID's.

- B. Enamel and dentine exposed - pulp NOT exposed (T/FX/UCF).

A fracture which removes both enamel and dentine from the tooth but does not expose the pulp canal increases the likelihood of inflammatory pulpitis. It also exposes the dentinal tubules allowing bacterial access into the pulp if the odontoblasts die.

Treatment is required to resolve sharp edges, improve cosmetic appearance, restore tooth anatomy, control pulpal inflammation and prevent future bacterial pulpitis.

Tools required: Intraoral radiography.

Examination and treatment tools, Fluted bur or Soflex discs, Acid etch, Bond, Unfilled resin composite, NSAID's.

- Enamel hypoplasia or carious lesion.

The enamel is thin or absent due to infection or trauma to the ameloblasts at the time when enamel is forming on the permanent dentition. (8-13 wo). the thin or absent enamel exposes the dentinal tubules and puts the odontoblasts at risk. Inflammatory and bacterial pulpitis are a higher risk.

Treatment is required to improve cosmetic appearance, restore tooth anatomy, control pulpal inflammation and prevent future bacterial pulpitis.

Tools required: Intraoral radiography.

Examination and treatment tools, Soflex discs, Acid etch, Bond, Unfilled resin composite, NSAID's.

2. Periodontally affected tooth

- Increased periodontal sulcus depth or pocket formation

Periodontal disease is a host inflammatory response to the bacterial biofilm in plaque. The progression of periodontal disease beyond the reversible stage of gingivitis into periodontitis results in increased periodontal sulcus depth & formation of periodontal pockets or gingival recession (see below). Increased sulcus depth can occur without losing alveolar bone in cases where the gingival tissue becomes hyperplastic.

Treatment: supra gingival cleaning, subgingival cleaning- curettage, restoration of anatomy, application of perioceutical.(Local Delivery System -Antibiotic LDS-AB)

Tools required: Intraoral radiography, examination instruments, tooth scaling, curettes - hand and mechanical, LDS-AB.

3. Linguoversion of mandibular canine teeth (304,404)

Malocclusions where the mandibular canines are displaced lingually. The resulting displacement leads to trauma of the hard palate or maxillary teeth. Ulcerations and oronasal fistulas are frequently seen as a result. Generally the deciduous dentition is predictive and should be extracted at a young age to prevent entrapment.

It is then important to monitor the eruption of the permanent dentition so that early intervention can be undertaken.

The goal of early intervention is to apply crown extensions to the teeth and thereby use the eruption of the tooth to direct the tooth into an appropriate location. The result being a non-traumatic occlusion. Ideally performed when tooth eruption is 5mm through gingiva.

Normal occlusion is not always possible, so the aim is to achieve healthy occlusion.

Treatment: Removal of mal-occluded deciduous canines. Application of composite crown extensions to emerging adult dentition. restoration of crown once teeth appropriately positioned and sufficiently erupted.

Tools: Intraoral radiography, examination tools, extraction tools, acid etch, bond, composite, Soflex discs.

References

Clarke D.E, Vital pulp therapy for complicated crown fracture of permanent canine teeth in dogs: a three-year retrospective study. J Vet Dent 18 (3) 117-121 2001

Cohen S, Hargreaves K.M, Pathways of the Pulp Missouri, Mosby Elsevier, 2011

Niemic B.A Veterinary Periodontology Iowa,Wiley-Blackwell 2013

Niemic B. A, Mulligan T.W, Vital pulp Therapy J Vet Dent. 18(3):154-6, 2001

Oakes A.B, Beard G.B, Lingually displaced mandibular canine teeth: orthodontic treatment alternatives in the dog. J Vet Dent. 9(1):20-5, 1992

Powers J.M, Wataha J.C, Dental Materials, Missouri, Elsevier, 2013

Taney K.G, Smith M.M, Composite Restoration of Enamel Defects J Vet Dent 24 (2) 130 - 134, 2007

Wiggs B.W, Lobprise H.B. Operative & Restorative Dentistry pp351-394 Periodontology pp186-231 Basic and Advanced Endodontic Therapy pp280-350 in Veterinary Dentistry Philadelphia, Lippincott-Raven, 1997