

Dentistry in the Pediatric and Juvenile

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Pediatric and Juvenile Oral Examination

- Why is this important?
 - Dental problems are not limited to our older or senior patient
 - Recognizing abnormalities early allows for treatment sooner to prevent more serious complications
 - Many conditions are painful



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Canine Dentition

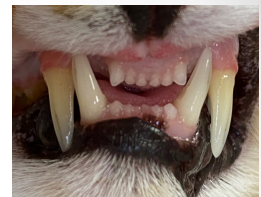
- Deciduous Dentition
 - 28 deciduous teeth
 - 12 incisors
 - 4 canines
 - 12 premolars
 - 0 molars
- Permanent (Adult) Dentition
 - 42 adult teeth
 - 12 incisors
 - 4 canines
 - 16 premolars
 - 10 molars
 - Variations in eruption schedules



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Feline Dentition

- Deciduous Dentition
 - 26 deciduous teeth
 - 12 incisors
 - 4 canines
 - 10 premolars
 - 0 molars
- Permanent (Adult) Dentition
 - 30 adult teeth
 - 12 incisors
 - 4 canines
 - 10 premolars
 - 4 molars
 - All should be present by 6 months



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Anatomy - Dentition

Charting – Modified Triaden Tooth
Numbering System

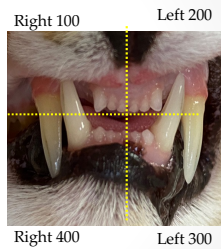
Mouth divided into quadrants

- Permanent – 100, 200, 300, 400
- Deciduous – 500, 600, 700, 800

First digit denotes the quadrant

- Right upper permanent = 1
- Right upper deciduous = 5

Second and third digits denote tooth position
within the quadrant, always starting at
midline



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Normal Dentition

Deciduous Dentition

***** check numbers

d 500
Right Maxilla

d 600
Left Maxilla

d 800
Right
Mandible

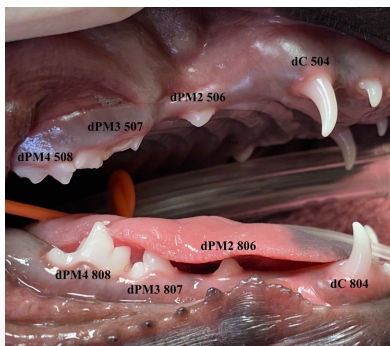
d 700
Left
Mandible



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Normal Dentition

Deciduous Dentition



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Normal Dentition

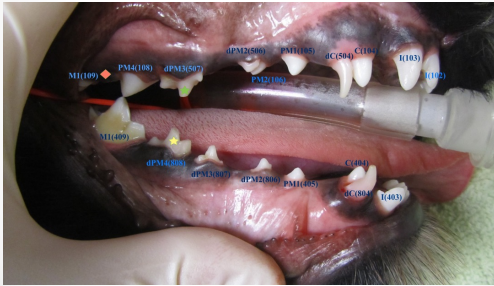
- Deciduous Dentition



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Normal Dentition

Mixed Dentition



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Examination – The Awake Patient



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Delayed Eruption

- The dentition and anatomy of the mouth is constantly changing
- Thorough examinations at every puppy or kitten visit necessary
- By 8 weeks, all deciduous teeth should be erupted.
- By 6-7 months, all adult teeth should be erupted (cats by 6 months).
- Some cases, these teeth may fail to erupt
- Radiograph any areas with missing teeth on oral examination
- Monitor exfoliation – general rule: two of the same tooth should not occupy the same spot at the same time

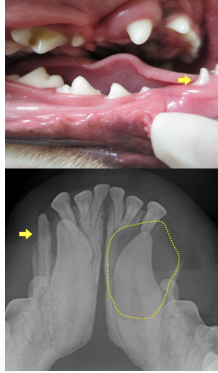
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Delayed Eruption



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Delayed Eruption



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Persistent deciduous



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Persistent deciduous



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Persistent deciduous



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Fractured Deciduous Teeth



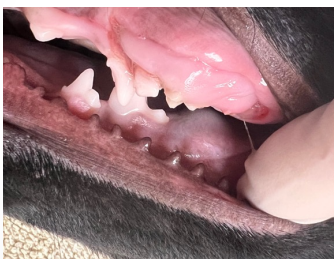
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Fractured Deciduous Teeth



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Fractured Deciduous Teeth



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Occlusion



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Occlusion



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Malocclusion

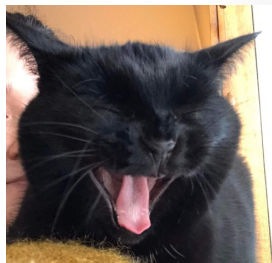
- deviation from normal occlusion
- May be due to:
 - Dental malocclusion (MAL/1) – abnormal positioning of a tooth or teeth
 - Skeletal malocclusion (MAL 2-4) – asymmetry or other deviation of bones that support the dentition



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Dental Malocclusion (MAL/1)

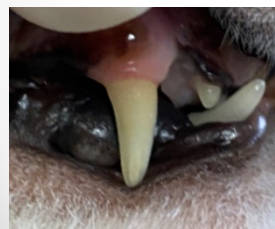
- Described according to the direction the tooth placed
 - Labial (LAB)
 - Mesial (MV)
 - Distal (DV)
 - Lingual (LV)
 - Palatal



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Malocclusion

Dental malocclusion (MAL/1) – abnormal positioning of a tooth or teeth



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Malocclusion

Dental malocclusion (MAL/1) – abnormal positioning of a tooth or teeth



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Malocclusion

Dental malocclusion (MAL/1) – abnormal positioning of a tooth or teeth



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Malocclusion

Caudal mucogingival lesions secondary to a dental malocclusion

- Cats
- Reactive oral lesions secondary to occlusal trauma
 - congenital or acquired malocclusion
- Gingival and mucosal lesions result of contact between the maxillary fourth premolar tooth and the mandibular tissues
- have been described as granulation tissue, inflammatory polyps and pyogenic granulomas

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Malocclusion

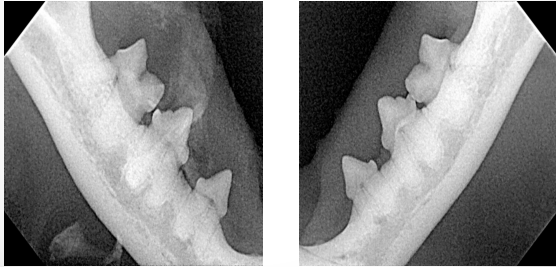
Caudal mucogingival lesions secondary to a dental malocclusion



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Malocclusion

Caudal mucogingival lesions secondary to a dental malocclusion



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Malocclusion

Caudal mucogingival lesions secondary to a dental malocclusion

- Causes
 - Congenitally acquired – malocclusion, brachycephalic
 - Acquired
 - Proposed occlusal drift (teeth migration in coronal direction) = seen in humans, worsened after teeth removed. Cats?
 - Alterations of the periodontal ligament and cement of the mandibular premolar and molar teeth, indicative of a possible distal drift, have been reported in feline patients.
 - Hypercementosis, narrowing of the periodontal space and alveolar bone expansion of the premolar and molar teeth (as well as maxillary canine teeth) = periodontal growth (or segmental alveolar bone growth),

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Malocclusion

Caudal mucogingival lesions secondary to a dental malocclusion

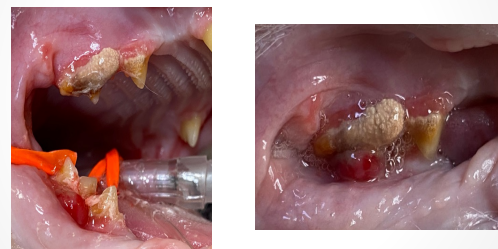


Proliferations (ie, broad-based plaques or exophytic lesions of oral mucosa)

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Malocclusion

Caudal mucogingival lesions secondary to a dental malocclusion



Proliferations (ie, broad-based plaques or exophytic lesions of oral mucosa)

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Proliferations (ie, broad-based plaques or exophytic lesions of oral mucosa)

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Proliferations (ie, broad-based plaques or exophytic lesions of oral mucosa)

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Malocclusion

Caudal mucogingival lesions secondary to a dental malocclusion

- gingival clefts (ie, localised gingival recession with or without bone resorption)



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Malocclusion

Caudal mucogingival lesions secondary to a dental malocclusion

- gingival clefts (i.e., localized gingival recession with or without bone resorption)

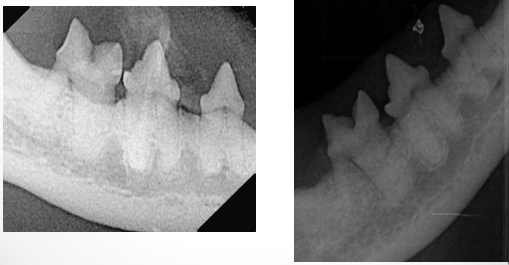


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Malocclusion

Caudal mucogingival lesions secondary to a dental malocclusion

- gingival clefts (i.e., localized gingival recession with or without bone resorption)

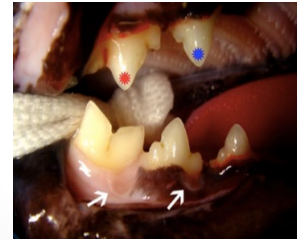


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Malocclusion

Caudal mucogingival lesions secondary to a dental malocclusion

foveae = mucosal or gingival depression without ulceration)



Gracis M, Molinari E, Ferro S. Caudal mucogingival lesions secondary to traumatic dental occlusion in 27 cats: macroscopic and microscopic description, treatment and follow-up. J Feline Med Surg. 2015 Apr;17(4):318-28. doi: 10.1177/1098612X14541264. Epub 2014 Jul 7. PMID: 25001492.

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Malocclusion

Skeletal malocclusion MAL 2



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Malocclusion

Class 2 Skeletal Malocclusion (MAL/2)



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Malocclusion

Class 3 Skeletal Malocclusion (MAL/3)



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Malocclusion

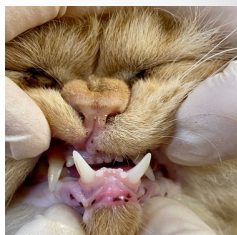
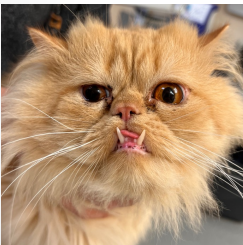
Skeletal malocclusion – MAL 3



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Malocclusion

Skeletal malocclusion MAL 4 (and MAL 3)



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Malocclusion

Skeletal malocclusion – MAL 3

- Extractions – deciduous and adult
- Vital Pulpotomy on adult teeth



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Fractured Teeth

Treatment Options:

- Extractions – deciduous and adult
- Vital Pulpotomy on adult teeth



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Congenital hard and soft palate defect



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Enamel Hypoplasia

Generalized



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Enamel Hypoplasia

Focal



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Oral Inflammation

Gingivitis versus Periodontitis

- Both are types of periodontal disease
- **Gingivitis** = inflammation of the gum tissue due to reaction to plaque bacteria
 - swollen gums
 - bright red gums
 - bleeding gums
- **Periodontitis** = inflammatory disease of the supporting structures of teeth or periodontium:
 - Gingiva
 - periodontal ligament
 - alveolar bone
 - cementum



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Oral Inflammation

Gingivitis versus Periodontitis

- Clinical feature that distinguishes periodontitis from gingivitis is the presence of clinically detectable attachment loss (loss of periodontium)
 - gingival recession
 - bone loss (height and density)
 - ligament loss
 - periodontal pocket formation
- Gingivitis is reversible, periodontitis is not (needs help)



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Oral Inflammation

Feline Juvenile Gingivitis/Juvenile Hyperplastic Gingivitis

- Pronounced focal or generalized inflammation of the gingival tissues in young cats
- Diagnosed between 7-10 months of age
- Possible causes:
 - exaggerated tooth eruption inflammation
 - Viral exposure (FeLV, FIV, Calici)
 - Immune-mediated disorders
 - Multifactorial response
- Generalized inflammation does not radiate to the surrounding mucosa
- Typically do not see periodontitis changes
- Retained deciduous



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Oral Inflammation

Feline Juvenile Gingivitis/Juvenile Hyperplastic Gingivitis



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Oral Inflammation

Feline Juvenile Gingivitis/Juvenile Hyperplastic Gingivitis

Treatment



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Oral Inflammation

Feline Juvenile Gingivitis/Juvenile Hyperplastic Gingivitis

Annual Recheck with daily brushing



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Oral Inflammation

Juvenile Gingivitis/Juvenile Hyperplastic Gingivitis



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Oral Inflammation

Juvenile Gingivitis/Juvenile Hyperplastic Gingivitis



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Oral Inflammation

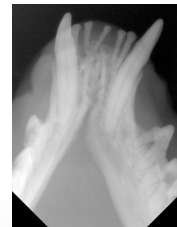
Juvenile periodontitis

- Usually occurs before 8 months of age
- Siamese, Main Coon, and domestic shorthaired cats are predisposed.
- Most common presenting sign is halitosis at the time of permanent tooth eruption.
- Oral examination reveals marked generalized inflammation of the marginal gingiva extending to the attached gingiva.
- Closer examination under general anesthesia will usually reveal marked incisor mobility, as well as gingival recession, periodontal pocketing, and furcation exposure of the cheek teeth



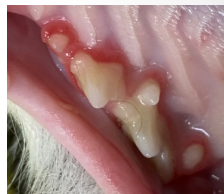
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Oral Inflammation Juvenile Periodontitis



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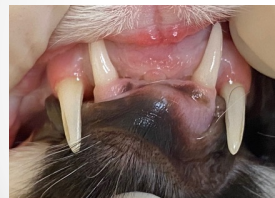
Oral Inflammation Juvenile Periodontitis



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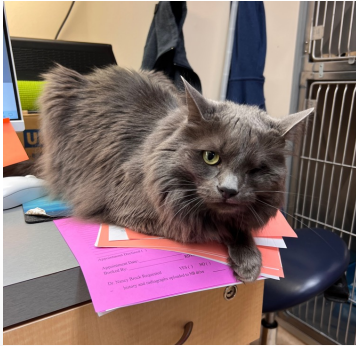
Oral Inflammation Juvenile Periodontitis

3 months recheck



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Questions?



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