

Feline Tooth Resorption

(Odontoclastic Resorption in Cats)

Basics

OVERVIEW

- Loss of varying amounts of substance of the tooth by a disease process (known as “dental resorptions”) affecting cats
- “Odontoclastic” refers to “odontoclasts,” which are cells found around the teeth and are believed to lead to resorption (loss of substance) of the teeth
- A relatively newly recognized syndrome
- Previously known as “FORL,” for feline odontoclastic resorptive lesion
- Feline tooth resorption is not the same problem as “cavities” found in people

SIGNALMENT/DESCRIPTION OF PET

Species

- Cats

Breed Predispositions

- Asian shorthaired cats, Siamese, Persian, and Abyssinian may show breed susceptibilities

Mean Age and Range

- Nearly 50% of cats older than 5 years old will have at least one tooth affected by resorption
- Likelihood of tooth resorption increases as the cat ages

SIGNS/OBSERVED CHANGES IN THE PET

- Most affected cats do not show clinical signs; some show excessive salivation/drooling (known as “hypersalivation”); bleeding from the mouth or difficulty chewing; some cats pick up and drop food (especially hard food) when eating; others hiss while chewing.
- Some cats have behavior changes—they may hide or become aggressive
- Pain, evidenced by jaw spasms
- Tartar or calculus (mineralized plaque on the tooth surface) and excessive gum tissue (known as “hyperplastic gingival tissue”) may cover or hide the tooth resorptive lesion
- Tooth resorption can be found on any tooth; the most common teeth affected are the mandibular (lower jaw) third premolar and molar teeth, followed by the maxillary (upper jaw) third and fourth premolar teeth
- Tooth resorption is classified as Stage 1–5, based on its depth and amount of tooth destruction as follows:
 - ♦ Stage 1—minimal loss of hard tissue (enamel and cementum) of the tooth



- ◆ Stage 2—moderate loss of hard tissue (enamel and cementum) of the tooth and penetrates the dentin (hard portion of the tooth, surrounding the pulp [blood vessels and nerves] and covered by enamel), but does not extend into the internal part of the tooth containing the blood vessels and nerves (known as the “pulp”)
- ◆ Stage 3—deep loss of hard tissue (enamel, cementum, and dentin) of the tooth that extends into the pulp (internal part of the tooth containing the blood vessels and nerves); most of the tooth retains its structure
- ◆ Stage 4—extensive loss of hard tissue (enamel, cementum, and dentin) of the tooth that extends into the pulp cavity; most of the tooth has lost its structure; various degrees of structural damage to roots (part of the tooth below the gum line) and crown (part of the tooth above the gum line)
- ◆ Stage 5—the crown (part of the tooth above the gum line) is gone; the gum tissue covers the scant fragments of the roots; remaining hard tissue of the tooth is visible only on x-rays (radiographs) of the mouth

CAUSES

- Unknown; likely many factors contribute to development of tooth resorption
- Affected cats may have calcium-regulation problems; an improper ratio of dietary calcium, magnesium, and phosphorus; or parathyroid-gland malfunction, producing calcium imbalance
- Hyperreactivity to inflammatory cells, dental plaque (the thin, “sticky” film that builds up on the teeth; composed of bacteria, white blood cells, food particles, and components of saliva), and/or tartar or calculus (mineralized plaque on the tooth surface); various compounds (endotoxins; prostaglandins, cytokines, and proteinases) also are under investigation as possible causes

Treatment

DIET

- Add water to diet to soften food

SURGERY

- Stage 1—an enamel defect is noted; the lesion is minimally sensitive because it has not penetrated the dentin (hard portion of the tooth, surrounding the pulp [blood vessels and nerves] and covered by enamel); therapy includes thorough cleaning and polishing and possible surgical removal of some gum tissue (known as “gingivectomy”) and surgical contouring of the tooth surface (known as “odontoplasty”)
- Stage 2—lesions penetrate the dentin (hard portion of the tooth, surrounding the pulp [blood vessels and nerves] and covered by enamel); often require either extraction or crown (part of the tooth above the gum line) reduction
- Stage 3—lesions enter the pulp (internal part of the tooth containing the blood vessels and nerves); require either extraction or crown (part of the tooth above the gum line) reduction
- Stage 4—the crown (part of the tooth above the gum line) is eroded or fractured with part of the crown remaining; gum tissue (gingiva) grows over the root fragments, yielding a sensitive bleeding lesion upon probing; additional extraction may be needed
- Stage 5—the crown (part of the tooth above the gum line) is gone and scant root fragments remain; surgically remove any inflamed areas of tissue

Key Points

- Loss of varying amounts of substance of the tooth by a disease process (known as “dental resorptions”) affecting cats
- Nearly 50% of cats older than 5 years old will have at least one tooth resorption
- Likelihood of tooth resorption increases as the cat ages
- Daily home brushing may help control plaque (the thin, “sticky” film that builds up on the teeth; composed of bacteria, white blood cells, food particles, and components of saliva)