

ODONTOCLASTIC RESORPTIVE LESIONS—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
- Also known as “FORL” for feline odontoclastic resorptive lesion

SIGNALMENT/DESCRIPTION of ANIMAL

Species

- Cat

Breed Predispositions

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

Mean Age and Range

- Nearly 50% of cats older than five years old will have at least one FORL
- Likelihood of FORL increases as the cat ages

SIGNS/OBSERVED CHANGES in the ANIMAL

- 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 FORL
- FORLs can be found on any tooth; most commonly affected are the mandibular (lower jaw) third premolar and molar teeth, followed by the maxillary (upper jaw) third and fourth premolar teeth
- FORLs are classified Stage 1-5, based on their depth and amount of tooth destruction as follows:
 - Stage 1 FORL—defect in the tooth is less than 0.5 mm deep
 - Stage 2 FORL—penetrates the dentin (hard portion of the tooth, surrounding the pulp [blood vessels and nerves] and covered by enamel), but does not enter the endodontic system (internal part of the tooth containing the blood vessels and nerves; also known as the “pulp”); the extent of root involvement (determined on dental X-rays) helps to determine therapy
 - Stage 3 FORL—penetrates into the endodontic system (internal part of the tooth containing the blood vessels and nerves)
 - Stage 4 FORL—substantial structural damage to roots (part of the tooth below the gum line) and crown (part of the tooth above the gum line)
 - Stage 5 FORL—the crown (part of the tooth above the gum line) is gone; swelling of the gum tissue covers the retained root

CAUSES

- Unknown; likely many factors contribute to development of FORLs
- 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 FORLs—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 FORLs—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 FORLs—enter the endodontic system (internal part of the tooth containing the blood vessels and nerves; also known as the “pulp”); require either extraction or crown (part of the tooth above the gum line) reduction
- Stage 4 FORLs—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 FORLs—the crown (part of the tooth above the gum line) is gone and roots 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 five years old will have at least one FORL
- Likelihood of FORL 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)

