MANAGEMENT OF CHRONIC OTITIS EXTERNA IN DOGS

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ABSTRACT

Chronic otitis externa is a highly prevalent, multifactorial disorder that is a common problem in veterinary practice among dogs. Chronic inflammation of the external ear canal can potentially lead to distress, repeated infections, and permanent structural changes if it is not effectively treated. Successful treatment requires a diagnostic plan based on accuracy that reveals causative factors of that identifies primary triggers, secondary infections, perpetuating changes, and predisposing risk factors. This review integrates current understanding of pathophysiology, clinical presentation, diagnostic methods, therapeutic options, and long-term monitoring techniques of chronic otitis externa in dogs. The review emphasizes the significance of holistic case management, client communication, and individualized therapeutic regimens that integrate medical, surgical, and preventive techniques.

INTRODUCTION

Otitis externa is a frequently seen disorder of small animal dermatology and accounts for a considerable proportion of small animal consultative work internationally. Chronic disease—a condition of inflammation that persists beyond three weeks or reoccurs a number of times in a year—is a particular diagnostic and therapeutic challenge. This disease ensues as a result of multifactorial interplays between host predispositions, environment, underlying disease, and microbial colonization. Unless identified and properly treated in time, chronic otitis progresses to fibroplasia, calcification, stenosis, and even otitis media or interna and consequently significantly impairs canine welfare.

ETIOLOGY AND PATHOGENESIS

Development and continuation of chronic otitis externa are explained by a multi-dimensional model of primary, secondary, perpetuating, and predisposing factors.

Primary Causes (initiate disease)

- Athopic dermatitis and adverse food reactions
- Ectoparasites (e.g., Otodectes cynotis, Demodex spp.)
- Foreign bodies, like awns of grass,
- Endocrinopathies (hypothyroidism, hyperadrenocorticism)
- Autoimmune dermatoses (e.g., pemphigus foliaceus)

Secondary Infections (complicate disease):

- Bacteria: Staphylococcus pseudintermedius, Pseudomonas aeruginosa, Proteus spp.
- Yeast: Malassezia pachydermatis

Perpetuating Factors (maintain disease):

- Epithelial hyperplasia and hyperkeratosis
- Fibrosis, stenosis, and calcification of the
- Biofilm formation
- An extension to the middle ear.

Predisposing Factors (increase susceptibility):

- Breed-related conformation (e.g., Cocker Spaniels, Poodles, Labrador Retrievers)
- Pendulous pinnae and excess hair in the canal

- Humid environments and frequent swimming
- High cerumen production

This multifactorial approach outlines why intervention must go from controlling infections to addressing underlying causes and organizational changes.

DIAGNOSTIC APPROACH

A systematic and stepwise approach to diagnosis reinforces the potential to uncover all contributory factors.

History & Clinical Examination

- Duration, recurrence, past therapies, itching, pain, odour, discharge, systemic signs.
- Signalment (breed, age, lifestyle).

Otoscopy

- Direct visualization of canal patency, exudate, epithelial changes, and tympanic membrane integrity

Cytology

- Bedside identification of yeast, rods, and cocci.
- Measurement of neutrophils, macrophages, and degenerative changes.

Culture & Sensitivity

- Indicated in refractory, deep, or Pseudomonas-suspected infections.
- Guides rational antimicrobial selection in the era of resistance.

Advanced Imaging (CT/MRI)

- Essential for suspected otitis media, surgical planning, or neurologic involvement.

Allergy and Endocrine Testing

- Elimination diet trials (8–12 weeks).
- Intradermal or serum IgE testing for atopy.
- Thyroid and adrenal function tests where indicated.

MEDICAL MANAGEMENT

Topical Therapy

The core of therapy:

- Combination formulations containing antibacterial, antifungal, and corticosteroid agents (e.g., gentamicin–mometasone–clotrimazole).
- Adjunctive cleaners such as Tris-EDTA, squalene, or ceruminolytics to disrupt biofilms and enhance drug penetration.

Systemic Therapy

- Corticosteroids (prednisone, prednisolone) to reduce inflammation, pruritus, and stenosis.
- Oral antibiotics or antifungals reserved for deep infections, otitis media, or systemic extension.

Ear Cleaning and Debridement

- Regular mechanical removal of debris.
- Sedated or anesthetized ear flushing when canals are obstructed.

Anti-inflammatory and Immunomodulatory Agents

- Cyclosporine A or tacrolimus for immune-mediated or allergic otitis refractory to steroids.
- Allergen immunotherapy or long-term diet modification where relevant.

SURGICAL INTERVENTIONS

Surgery is an option in end-stage or refractory cases:

Lateral Ear Canal Resection (Zepp's procedure)

Improves ventilation and drainage in early to moderate disease.

Total Ear Canal Ablation with Lateral Bulla Osteotomy (TECA-BO)

Gold standard of irreversible otitis with fibrosis, mineralization, or neoplasia. Provides absolute closure but requires highly technical surgical expertise.

LONG-TERM MANAGEMENT & MONITORING

Consistent Re-assessment

- Cytology at each follow-up.
- Customization of pharmacologic therapies according to microbial/inflammatory phenotype.

Maintenance Therapy

- Premedication of ear drops to prevent irritation.
- Pulse topical treatment to control microbial overgrowth.

Control of Underlying Disease

- Lifelong allergy management through immunotherapy, novel protein diets, or hydrolyzed diets.
- Hormone replacement therapy (e.g., levothyroxine).
- Weight management and environmental modification.

Client Education

- Teaching owners to recognize early signs of relapse.
- Ensuring adherence to long-term protocols.

SUMMARY

Chronic otitis externa in dogs is a multifaceted and dynamic disease process that extends far beyond simple ear infections. Successful control requires an integrated approach that allows for complete diagnostics, directional therapeutic intervention, ongoing monitoring, and surgery when necessary. By tailoring therapy to correspond to a given set of underlying causative and risk factors that are distinctive to that particular dog, veterinarians can achieve long-term control, enhance quality of life, and prevent progression to irreversible severe ear disease. Ongoing advances in microbiology, immunomodulation, and surgical techniques continue to improve our abilities to deal effectively with this multifaceted ailment.

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