

How to treat pus-filled ears

Julia E. Miller, DVM, DACVD

Animal Dermatology Clinic, Louisville, KY

Exudative otitis externa (OE) represents a challenging subset of ear disease characterized by heavy discharge, inflammation, and frequent treatment failure. Successful management requires a structured, methodical approach focused on accurate diagnosis, effective cleaning, biofilm disruption, appropriate therapeutics, and prevention of recurrence.

Accurate diagnosis is the foundation of management. Cytology should be performed in every case to identify microbial populations and guide therapy, as odor and gross appearance are unreliable indicators. Otoscopic examination is equally essential to evaluate canal integrity, identify foreign bodies or masses, assess for tympanic membrane rupture, and detect biofilm-like plaques. These steps are critical for informed treatment decisions and effective rechecks.

Exudate management is central to treatment success. Thorough ear cleaning—often requiring sedation or anesthesia—is necessary to remove debris, reduce microbial burden, and allow medication contact with the epithelium. Video otoscopy provides superior visualization, facilitates deep cleaning, enables myringotomy when indicated, and allows for biopsy or foreign body removal. At-home cleaning protocols must be realistic and tailored to owner ability, with emphasis on proper technique, adequate volume, and avoidance of trauma.

Biofilm formation is an important contributor to chronic and refractory OE. Biofilms are structured microbial communities encased in a protective extracellular matrix that enhances resistance to antimicrobial therapy and host defenses. Clinically, biofilms may be suspected based on thick, adherent discharge or plaque formation on the ear canal walls. Cytology may reveal characteristic “veil-like” material. Disruption of biofilm may improve treatment response, with agents such as EDTA, N-acetylcysteine, and enzymatic formulations showing potential benefit.

Selection of ear cleaners and topical therapies should be guided by the underlying pathophysiology. Considerations include moisture, cerumen accumulation, microbial population, and compatibility with prescribed medications. For example, acidic cleaners may inactivate certain antibiotics, while EDTA-containing products can enhance antimicrobial efficacy when used appropriately.

Treatment protocols should prioritize simplicity and efficacy to maximize compliance. Adequate drug volume, proper administration technique, and use of long-acting or compounded formulations may improve outcomes. Clinicians should reassess treatment

response regularly and adjust therapy as needed rather than repeating ineffective protocols.

Systemic antibiotics are reserved for specific indications, including extensive ulceration, severe canal hyperplasia or stenosis, or confirmed otitis media/interna. Culture and susceptibility testing are recommended when systemic therapy is required, particularly in cases involving rod bacteria. In contrast, routine culture for topical therapy is generally unnecessary.

Inflammation and pain management are critical components of care. Short courses of systemic glucocorticoids are often indicated in severe or hyperplastic cases, while adjunctive analgesia (e.g., gabapentin) may improve patient comfort. Chronic cases may benefit from alternative anti-inflammatory strategies.

Prevention of recurrence depends on identification and management of underlying causes, including allergic disease, conformational factors, and environmental contributors such as moisture exposure. Maintenance protocols may include routine cleaning, intermittent topical therapy, and systemic management of allergies when indicated.

Feline OE warrants special consideration, as unilateral exudative disease should prompt investigation for underlying masses or middle ear pathology. Additionally, species-specific conditions such as ceruminous cystomatosis should be considered.

Recognition of otitis media and interna is essential. In dogs, signs include head tilt, ataxia, circling, and pain on opening the mouth. In cats, neurologic and sympathetic deficits (e.g., miosis, ptosis, facial nerve paralysis) are common. Advanced diagnostics may be required for confirmation.

Early referral to a veterinary dermatologist improves outcomes. Cases persisting beyond 2 months or showing poor response should be referred promptly. Advanced tools such as video otoscopy and imaging allow for thorough cleaning, targeted therapy, biopsy, and management of middle ear disease.

End-stage disease may require total ear canal ablation (TECA). Candidates include patients with mineralized, stenotic, or non-functional ear canals where medical management is no longer feasible. While TECA offers significant pain relief and improved quality of life, potential complications include deafness, hemorrhage, and facial nerve injury.

When TECA is not an option, management focuses on infection control, anti-inflammatory therapy, and pain management. Long-acting ear medications, systemic therapy, and supportive care may help maintain comfort.

In summary, management of exudative OE requires an individualized, multimodal approach emphasizing thorough diagnostics, effective cleaning, biofilm disruption, appropriate antimicrobial use, and proactive prevention strategies. Early referral in refractory cases improves outcomes and should be considered when response to therapy is limited.