Management of otitis externa; tips for success

S. Panitarnangit

Dermatology clinic, Small animal hospital, Faculty of Veterinary science, Chulalongkorn Univiersity, Bangkok, 10330, Thailand

Keywords: otitis externa, tips

Introduction
Otitis externa is very common skin disease of pets. In order to have successful management of otitis externa, primary causes have to be indicated and controlled to prevent recurrence of the disease. There are several underlying causes of otitis externa, for example, atopic dermatitis, food allergy, tumor of ear canal. Moreover, predisposing factors such as swimming, pendulous ears should be of concern and are a part of client education for long term control. Acute otitis externa is common and can usually be managed with topical treatment that usually have direct effect to the lesions with its exposure. Basically, topical ear preparation contains glucocorticoids which have anti-inflammatory activity, antibiotics and antifungal agents which reduce secondary infection of the ears caused by bacteria and yeast. However, cleaning the ear before topical treatment is of most important to ensure effective results of the treatment as ear was, debris or biofilm are opposing factors of the treatment. Chronic or recurrent otitis externa require more intensive and combination of treatment of either topical and systemic treatment.

Clinical Examination
On clinical examination, otitis externa can be classified into 2 types based on clinical signs

1. Erythroceruminous otitis: This common type of otitis externa is common and pets may show predominant signs of pruritus rather than pain. Pathological changes depend on chronicity of the disease. Color of exudates may indicate types of organism to cause infection, i.e. yellow-brown exudate is usually caused by bacteria while chocolate brown exudate is usually related with malassezia infection. However, coinfection of bacteria and yeast is not uncommon.

2. Suppurative otitis is usually related with pain and severe inflammation. Ulceration or erosion of ear canal epithelium is often seen in severe cases. Pseudomonas infection is common and usually has yellow-green exudate. Bloody ear exudate can also be seen. Pathological changes: palpation of ear canal can give general information about anatomical or pathological changes.

Underlying causes
Chronic or recurrent otitis should be carefully evaluated to identify primary, predisposing and perpetuating causes. Successful management requires that these are all treated and managed. The goals of the treatment are

- Identify and manage primary causes
- Correct predisposing factor
- Remove debris and discharge
- Manage secondary infection
- Reverse chronic pathological changes
- Biofilm is usually involved in chronic/recurrent otitis. It acts as a shield of bacteria protecting them from antimicrobial agents causing ineffectiveness of the treatment and bacterial resistance.

Otoscopic examination
Otoscopic examination is a routine ear examination to visualize ear canal epithelium appearance, exudate and other possible abnormalities of ear canal such as mass, ear mite or foreign bodies. Otoscopic examination should be best performed under general anesthesia or deep sedation. Ear exudate or debris should be removed prior otoscopic examination to visualized tympanic membrane.

Ear Cytology
Ear cytology should be performed in either acute or chronic otitis by using cotton swab to collect samples from ear canals and stain for cytology examination.

Bacterial culture and antibiotic sensitivity
Bacterial culture and antibiotic sensitivity should be considered as a part of diagnostic work up when dealing with chronic or severe otitis. Ear cytology should be done to evaluate bacterial appearance which may provide basic information about possible secondary cause whether it is bacteria or malassezia.
Biopsy and Histopathology is not a routine laboratory test for otitis but it will provide very useful information when otic mass or autoimmune is suspected.

**Diagnostic imaging**
Diagnostic imaging is an useful method to diagnose otitis media and otitis interna. Radiography can be used as supporting diagnostic tool for chronic or recurrent otitis externa especially stenosis, mass or tympania membrane rupture. This method required special radiography using radiopaque material flushing into ear canal. CT-scan is very useful technique in otitis diagnosis especially to evaluate whether it is otitis media.

**Compliance and adherence**
Successful management of otitis is definitely dependent on client compliance. Despite correct diagnosis and treatment given, failure of the treatment may be noted if lack of owner compliance.

References