Otitis Externa in Pets

Anatomy of the Ear Canal in Dogs and Cats

The ear canal in pets is shaped like an "L" and has two parts: a vertical and a horizontal canal. The vertical canal is the first part, which runs down the side of the head, and the horizontal canal goes inward toward the eardrum (tympanic membrane). This structure helps protect the inner ear but can make ear infections harder to treat because debris and fluid can get trapped. Behind the eardrum is the middle ear, which contains small bones that help with hearing, and the inner ear, which controls both hearing and balance.

What is Otitis Externa?

Otitis externa is an inflammation of the outer ear canal, commonly seen in both dogs and cats. It can range from mild to severe, causing discomfort and irritation. If left untreated, it can progress to more serious ear infections and even damage to the ear structure.

Causes of Otitis Externa

There are several potential causes for otitis externa, which can be divided into primary and secondary causes:

• Primary Causes:

-Parasites: Ear mites (Otodectes) are a frequent cause -f ear infections, especially in cats.

-Foreign Bodies: Things like grass seeds or dirt lodged in the ear can cause irritation.

-Allergies: Both food allergies and atopic dermatitis (allergic skin disease) can trigger ear infections, especially if the infection occurs on both sides or repeatedly.

-Autoimmune Diseases: Rare, but possible in some pets.

• Secondary Causes:

oBacteria: Common bacteria like Staphylococcus intermedius can infect the ear.

-Yeast Infections: Malassezia pachydermatitis yeast -vergrowth is a common cause of ear infections.

-Underlying Ear Conditions: Ruptured eardrums or middle ear infections can perpetuate ear infections, making them difficult to treat.

Predisposing Factors

Some pets are more prone to ear infections due to:

- Pendulous Ears: Floppy ears can trap moisture, leading to infections.
- Excessive Hair Growth: Some breeds have hair that grows in the ear canal, contributing to ear problems.
- Chronic Moisture: Pets that frequently swim or have damp ears are more likely to develop infections.

Signs of Otitis Externa

Signs to watch for include:

- Frequent scratching or rubbing at the ears
- Shaking the head
- Redness or swelling in the ear canal
- Unpleasant odour from the ears
- Discharge (which may be yellow, brown, or black)
- Sensitivity or pain when touching the ears

Diagnosis

If your pet shows signs of otitis externa, your veterinarian will perform a thorough examination, which may include:

• Visual Examination: Using an otoscope or a video otoscope (specialised equipment), your vet will look into your pet's ear canal to check for redness, swelling, or discharge. They'll also look at the eardrum to check for damage.

• Cytology: A swab of the ear discharge can be examined under a microscope to identify any bacteria or yeast, which helps guide treatment.

• Culture and Sensitivity Testing: In more severe or persistent cases, samples may be sent to a lab to determine the exact cause of the infection and the most effective treatment.

• Imaging: In complicated cases, CT scans or X-rays may be necessary to check for more extensive damage to the ear or surrounding bones.

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Treatment Options

1.Medical Management:

-Topical Therapy: Ear drops or ointments are the first line of treatment and typically contain antibiotics, antifungals, and anti-inflammatory medications.

-Cleaning: Your vet may clean your pet's ears or prescribe a medicated ear cleaner for home use.

-Steroids: Short courses of steroids can reduce pain, itching, and swelling, making it easier for your pet to tolerate ear cleaning and treatment.

-Oral Medications: In some cases, systemic antibiotics or antifungal medications may be needed.

2.Surgical Management:

-Lateral Wall Resection: This procedure removes a portion of the outer ear canal to improve ventilation and drainage. It is only recommended early in the disease process when the infection is mild.

-Total Ear Canal Ablation (TECA) and Lateral Bulla Osteotomy (LBO): This is a more aggressive procedure for severe, chronic cases. The entire ear canal is removed, and the bulla (middle ear) is cleaned out to remove infected material. TECA-LBO is a highly successful procedure with up to 92% success in resolving severe ear infections.

Post-Treatment Care

After treatment or surgery, it's important to follow your vet's instructions carefully:

- Ear Cleaning: Regular ear cleaning is crucial to prevent reinfection. Your vet will recommend a suitable ear cleaner and show you how to use it.
- Medications: Continue using any prescribed medications for the full course, even if your pet seems better before the end of treatment.
- E-Collar: If your pet has had surgery or is prone to scratching, an Elizabethan collar may be needed to prevent further trauma to the ears.

Potential Complications

While most pets recover well with appropriate treatment, there can be complications in some cases:

- Recurrent Infections: If the underlying cause of the ear infection isn't treated (e.g., allergies or ear mites), the infection may come back.
- Chronic Changes: In severe, untreated cases, the ear canal can become narrowed, leading to more frequent infections.
- Surgical Complications: Surgery carries risks like nerve damage (e.g., facial nerve damage causing a drooping lip or ear) or vestibular problems (affecting balance).

Prevention

Preventing otitis externa includes regular ear checks and cleanings, especially if your pet is prone to ear infections. If your pet has allergies or other conditions that contribute to ear problems, working closely with your vet to manage these underlying issues can help prevent infections.

Conclusion

Otitis externa is a common but treatable condition in pets. Early detection and consistent treatment are key to preventing chronic issues and ensuring your pet's comfort. If your pet is prone to ear infections, regular veterinary care and a good ear care routine will help keep their ears healthy and infection-free.

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Total Ear Canal Ablation with Lateral Bulla Osteotomy (TECA-LBO) made easy

What is TECA-LBO?

Total Ear Canal Ablation with Lateral Bulla Osteotomy (TECA-LBO) is a surgical procedure performed in dogs and cats to treat chronic, severe ear infections (otitis externa) or other ear conditions that have not responded to medical treatment. The procedure involves removing the entire ear canal (both vertical and horizontal parts) and cleaning out the middle ear (bulla) to eliminate the infection and prevent future problems.

This surgery is often considered when chronic ear infections have led to irreversible changes in the ear canal, such as thickening, calcification (hardening of the tissues), and narrowing of the canal. These changes make it difficult for medications to reach the infected area, and without surgery, the infection can persist or worsen.

Post-Surgery Care

1.Hospital Stay: Your pet will likely stay in the hospital for a day or two following the procedure. During this time, pain management, fluid therapy, and wound care are provided.

2.Wound Management: The surgical site will need to be kept clean and dry. Your veterinarian will likely recommend that your pet wear an Elizabethan collar (E-collar) to prevent scratching or damaging the surgery site.

3.Medications:

- -Pain Management: Pain medications will be prescribed to keep your pet comfortable during the healing process.
- -Antibiotics: Depending on the severity of the infection, your vet may prescribe antibiotics to prevent any post-operative infections.
- -Anti-Inflammatories: To reduce inflammation and swelling, corticosteroids or other anti-inflammatory drugs may be given.

4.Follow-Up Visits: Your veterinarian will schedule follow-up appointments to check on your pet's healing progress, remove any drains or sutures, and monitor for potential complications.

How does the TECA-LBO procedure work?

The surgeon removes both the vertical and horizontal sections of the ear canal. This step is crucial because in chronic otitis externa, the ear canal is often filled with thickened, diseased tissue that is unresponsive to treatment.

Removing the entire ear canal eliminates the source of the infection and the site where bacteria and debris accumulate.

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Lateral Bulla Osteotomy (LBO)

After the ear canal is removed, the surgeon will open the middle ear (bulla) by making a small hole in the bone. The infected tissue, pus, or debris inside the bulla is carefully cleaned out to prevent future infections. The middle ear lining may be scraped or flushed to ensure all infected material is removed. Any abnormal growths or tissue will also be removed during this step.

Complications

While TECA-LBO is generally a successful procedure, there are some potential complications to be aware of:

1.Infection: As with any surgery, there is a risk of post-operative infection. Keeping the wound clean and following your vet's instructions will help reduce this risk.

2.Facial Nerve Damage: Up to 40% of dogs and 60% of cats may experience temporary facial nerve damage after the surgery. This can cause drooping of the lips, inability to blink on the affected side, and a drooped ear. In most cases, this resolves within a few weeks, but in some instances, it can be permanent (4-13% of dogs, up to 30% of cats).

3.Horner's Syndrome: This condition can occur in cats (and rarely dogs) if the sympathetic nerves running through the middle ear are affected. It causes a drooping upper eyelid, a sunken eye, and a raised third eyelid. It's more common in cats and can be permanent in about 30% of cases.

4.Para-Aural Abscess: Some pets may develop an abscess in the area around the ear after surgery. This typically presents as swelling, pain, or difficulty opening the mouth. Abscesses can often be treated with antibiotics or drainage, but in some cases, further surgery may be needed.

5.Vestibular Problems: Rarely, damage to the inner ear structures can cause vestibular issues, such as a head tilt or balance problems. These signs typically resolve within a month but can be permanent in severe cases.

What to Expect After Surgery

- Improved Comfort: Pets with severe ear infections often experience significant discomfort. After TECA-LBO, once healing occurs, the pain and irritation should be greatly reduced.
- Hearing: Because the ear canal is removed, your pet most likely will lose their hearing in the operated ear. However, many pets with chronic ear infections have already experienced hearing loss in the affected ear, so this may not be a noticeable change.
- Appearance: The ear flap (pinna) will remain intact, but the ear canal opening will no longer be visible. The appearance of the ear will change, but in most cases, pets retain a relatively normal look.

Outcomes

TECA-LBO has a high success rate (up to 92%) in resolving chronic ear infections and providing long-term comfort to affected pets. While the loss of hearing in the affected ear is inevitable, the improved quality of life, freedom from chronic pain, and reduced risk of future infections make this procedure a worthwhile option for pets suffering from severe ear disease.

In most cases, pets adjust well to life without the affected ear, and their overall health and happiness improve significantly after surgery.

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