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Otitis external in dogs: A case report

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Abstract

A male dog of 1 year showed head shaking, tilting of head towards the affected side, foul smell and pus was coming out from the ear. When the affected area was touched, dog felt pain. Tentative diagnosis of otitis externa was done. The pus sample from ear was taken and undergo culture and antibiotic sensitivity test. Culture test report revealed that *Staphylococcus* sps. Grown after 48 hour of incubation at 37°C under aerobic condition. Owner was advised for cleaning of external ear canal with epiotic ear cleaning solution twice a week. Put 3-4 drops of pomisol. Tab Meriquin (Enrofloxacin) 50mg bid for 7 days.

Keywords: Pus, ear, culture, sensitivity, enrofloxacin

Introduction

The outer ear that take sound to the eardrum is called ear canal. Otitis externa is the most common disorder of the ear canal that occur in dogs. It is a common ailment in small animals and occurring 13–16% of the canine case population [1-4]. It is a broad term for a disease state that happens when the layer of cells that line the external ear canal becomes inflamed. It can vary from discomfort and mild inflammation to a life-threatening disease. The clinical signs may be any combination of headshaking, odor, pain on manipulation of the ear, exudate, and erythema. Otitis externa can be caused by many different factors. Some factors like parasites, allergies and foreign objects etc directly cause the inflammation [2], while other factors like bacteria, yeasts, or a middle ear infection) extend the condition. Factors are responsible to promote the otitis externa by altering the structure, function, or physiology of the ear canal.

History

A male dog of 1 year was brought there. It showed head shaking, tilting of head towards the affected side, foul smell and pus was coming out from the ear. When the affected area was touched, dog felt pain.

Culture examination

Owner was advised for culture and sensitivity test. For this sample from ear was taken and culture test report revealed that *Staphylococcus* sps. Grown after 48 hour of incubation at 37°C under aerobic condition.

Antibiotic sensitivity test reported that dog was sensitive to Ampicillin/Sulbactam, Amikacin, Cefazidime/Calvulanic Acid, Cefoperazone, Moxifloxacin, Enrofloxacin, Levofloxacin and Norfloxacin whereas other drugs were resistant.

Remark: Conditions which can cause a false negative culture was:

1. Patient is on antibiotics.
2. Anaerobic bacteria.
3. Fastidious aerobic bacteria which are not able to grow on routine culture media.

Treatment and Discussion

Owner was advised for cleaning of external ear canal with epiotic ear cleaning solution twice a week. Put 3-4 drops of pomisol. Tab Meriquin (Enrofloxacin) 50mg bid for 7 days. As dog was sensitive to enrofloxacin, it was recommended to the dog for 7 days. Response to the treatment was appreciating and successful. Enrofloxacin can be used in the long-term safety and effectiveness. Differential diagnoses of external otitis can be based on the observation of a unilateral vs a bilateral problem. Otoscopic evaluation of the external ear should always be done in animals reporting with otitis externa.

Therefore, the presence of a aural polyp, foreign body and tumor in the ear canal were ruled out by otoscopy⁵. The hair around the ear was clipped better cleaning and treatment of the ear otherwise topical medications can be inactivated by

discharge from the ears or excessive earwax. Irritating topical medications (eg, home remedies and vinegar dilutions) should be avoided as they cause swelling of the lining of the ear canal and an increase glandular secretions.

Table 1: Antibiotic Sensitivity

Drug	Findings	Drug	Findings
Amoxyclav	R	Ceftriaxone	R
Amoxicillin/Sulbactam	R	Ciprofloxacin	R
Ampicillin/Sulbactam	S	Doxycycline Hydrochloride	R
Ampicillin/Cloxacillin	R	Enrofloxacin	S
Amikacin	S	Gentamicin	R
Cefotaxime	R	Levofloxacin	S
Ceftriaxone/Sulbactam	R	Novobiocin	R
Cefuroxime	R	Norfloxacina	S
Co-Trimoxazole	R	Nitrofurantoin	R
Ceftazidime/Calvulanic Acid	S	Oxytetracycline	R
Cefoperazone	S	Pipracillin/Tazobactam	R
Cefoperazone /Sulbactam	R	Ceftriaxone/Tazobactam	R
Ofloxacin	R	Lincomycin	R
Cephalaxin	R	Ampicillin	R
Imipenem	R	Meropenem	R
Moxifloxacin	S	Rifampicin	R
Cifixime	R	Cefpodoxime	R
Fusidic Acid	R	Tobramycin	R
Clindamycin	R		

Conclusion

Clinician must go for antibiotic sensitivity test before going to recommend antibiotics to the patients. As, animal is already resistant to many drugs. Also, differential diagnosis must be proper.

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