



Lifelong Ear Partnership

Veterinary Guidance: Fundamentals for
successful otitis externa treatment

Article 5 Title: Otitis Externa in an older dog

This article will review a typical presentation of otitis externa in a dog, it will also cover underlying causes of otitis. To review common findings, how to perform cytology and why please review our previous articles

Cali is a 9 year old female neutered golden retriever cross breed. Cali receives daily NSAIDs for arthritis, and has presented for a 1 week history of increased head shaking.



Figure 1: Cali

History

Her history shows that she presented to the clinic 2 months prior and was successfully treated for ear mites. Treatment success was confirmed in follow up appointments and repeated cytology. From her notes 2 months ago, the following abnormal findings were noted:

1. Hair loss on the bridge of the nose
2. Thinning of the hair at the tail base
3. BCS 6/9
4. Lethargy
5. Otitis Externa – primary cause ear mites

On presentation today:

Today Cali presents again for an ear condition, additionally the owner notes Cali has got progressively lethargic and her body condition score has increased.

On general examination her coat quality is dull and there are signs of alopecia, the skin on her face looks a little thicker.

On otoscopic examination there was mild erythema of the ear canal, mild brown ceruminous discharge and a yeasty odour.

Cytology was performed and results are shown in figure 2.

Question: Can you identify the structures in green, purple and orange circles?

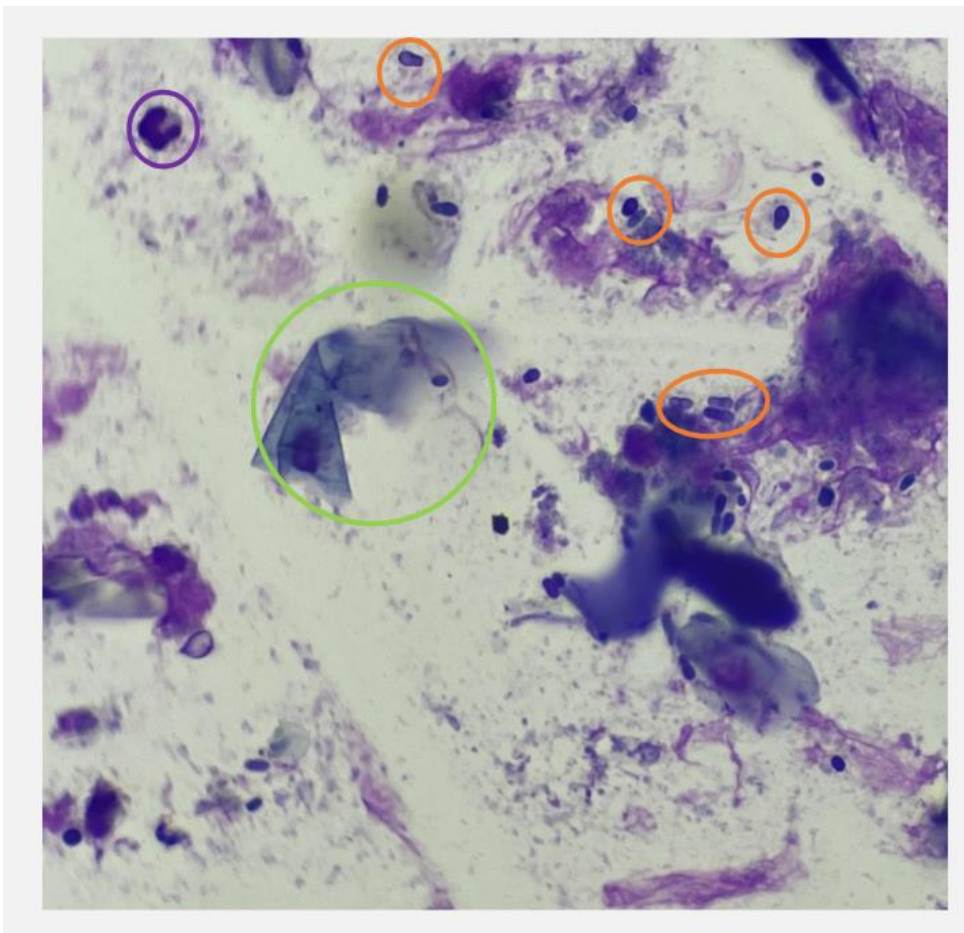


Figure 2 Cytology results

Answers:

Purple: Neutrophil

Green: Keratinocyte (Squames)

Orange: Malassezia

The cytology is consistent with Malassezia overgrowth.

As Malassezia overgrowth and bacterial overgrowth are secondary causes of otitis externa the primary cause will need to be identified to help prevent recurrence.

Taking a harder look

To investigate the primary cause of Cali's otitis it can help to write a problem list.

1. Recent onset dermatological signs such as flank and tail alopecia as well as aural pruritis.
2. Tired after exercise and lethargic
3. Osteoarthritis
4. Myxoedema
5. Malassezia overgrowth

Question: What would be your next step?

Answer: As Cali is an older dog with systemic symptoms (alopecia / lethargy) you decide to run further diagnostics starting with biochemistry and haematology.

See Figure 3 for abnormal test results, all other biochemistry and haematology values are within normal limits.

Test Results – Abnormalities Only			
Name	Result	Units	Interval
Full Blood Count			
WBC	H 16.4	$\times 10^9/L$	6.0 - 15
RBC	L 4.68	$\times 10^{12}/L$	5.00 - 8.50
HCT	L 35.2	%	37.0 - 55.0
Biochemistry			
Cholesterol	H 10.6	mmol/l	2.8 - 8.3
Triglycerides	H 2.30	mmol/l	0.34 - 1.97
Total T4	L < 3.9	nmol/l	10.0 - 55.0

Figure 3 Blood test abnormalities

Question: Based on the abnormalities what would you like to do next?

1. Conduct ACTH stimulation test
2. Measure TSH
3. Blood smear examination
4. Conduct a low dose dexamethasone suppression test (LDDST)

Answer: Measure TSH.

Clinical findings of alopecia, otitis externa, mild non-regenerative anaemia, low total T4 and increased cholesterol could all be explained by hypothyroidism.

When thinking about otitis externa it is always important to come back to primary, secondary, predisposing and perpetuating factors (PSPF). Immunocompromising disorders fall into the category of predisposing factors – therefore without treatment, dogs with such disorders will always be at increased risk of development of otitis externa.

Equally some other systemic diseases can have an immunocompromising effect alongside direct impact on the skin as a primary factor.

Remember to always think about the wider clinical picture when presented with a case of otitis externa.

Hypothyroidism and Otitis

Dermatological signs are the most commonly observed clinical abnormality in hypothyroid dogs, having been reported in up to 80% of hypothyroid dogs (Scott-Moncrieff, 2014). Thyroid hormones also play a role in immune responses (Mooney and Shiel, 2012). This increases the susceptibility of hypothyroid patients to secondary infection. Clinically this may present as a chronic or recurrent otitis externa.

Treatment for Cali

Hypothyroidism can be successfully treated with levothyroxine, such as Forthyron (include link to Forthyron SPC if appropriate). The owner noticed a change in her energy levels within days.

Within two weeks of starting Forthyron Cali's owner was delighted to report she had her old dog back and that the lethargy she had contributed to old age had reversed. Dermatological changes can take up to 3 months to see the difference, as the owner has been made aware of this, they are patient and happy with Cali's progress.

The malassezia overgrowth was resolved with a topical otitis treatment. Due to the action of Forthyron Cali had no further episodes of otitis externa.

Summary

Although you may be presented with an otitis case, the rest of the dog should never be ignored. Only by consideration of the underlying cause and undergoing systematic diagnostic work up of all primary, predisposing, secondary and perpetuating factors, can otitis be successfully managed (Bensignor, 2021).

References:

Mooney, Carmel T.; Shiel, Robert E. Book Chapter: Canine hypothyroidism Book Title: BSAVA Manual of Canine and Feline Endocrinology Publisher: BSAVA (British Small Animal Veterinary Association) Publication Date: 2012 Pages: 63-85 DOI: 10.22233/9781905319893.8

Scott-Moncrieff, J. Catharine Book Chapter: Hypothyroidism Book Title: Canine and Feline Endocrinology (Fourth Edition) Publisher: W.B. Saunders Publication Date: 2015 Pages: 77-135 DOI: 10.1016/B978-1-4557-4456-5.00003-1

Bensignor, Emmanuel Book Chapter: An approach to otitis Book Title: BSAVA Manual of Canine and Feline Dermatology Publisher: British Small Animal Veterinary Association Publication Date: 9/1/2021 Pages: 143-149 DOI: 10.22233/9781910443811.19

Other Endocrine disorders and Otitis

Hypothyroidism isn't the only endocrine disorder that can influence the ears. Although dermatological features such as alopecia, thinning of the skin and follicular plugging are more commonly encountered it is not uncommon to see patients with Cushing's syndrome suffer with relapsing or chronic otitis externa. As experts in endocrinology, Dechra prides itself on providing educational content and resources for endocrine disorders. Should you wish to learn more please reach out to your local distributor or Dechra representative.