

The Use of Acupuncture in the Treatment of Canine Otitis Externa in a Three-Year-Old Groodle. A Case Report.

Dr Caroline Hoetzer
BVet Biol/DVM, LLB (Hons), BA, GDVA
Holistic Vets Newcastle
Mobile vet, NSW

Abstract

A three-year-old Groodle dog was diagnosed with *Malassezia* otitis externa. In this case, acupuncture and dietary therapy were used in conjunction with conventional topical ear medication with the goal of resolving the current infection and preventing the recurrence of future episodes of otitis externa. Treatment was effective in resolving the acute infection and there has been no recurrence of disease eight months post treatment.

Background – Canine Otitis Externa

Malassezia species are a commensal yeast that normally inhabit the external ear canals and superficial mucocutaneous areas of dogs in low numbers. Due to a number of predisposing factors, this commensal organism may increase in number, causing disease (Bajwa, 2017). The skin in the ears is an extension of the skin on the rest of the body, thus dogs affected by chronic otitis are often affected by dermatitis more generally (Wynn & Marsden, 2003).

Malassezia species have a characteristic shape which can be identified on cytological examination. There is no agreement as to the significance of numbers of yeast organisms present on cutaneous cytology, however the presence of these organisms found on samples collected from inflamed, pruritic skin is considered diagnostic of pathology (Bajwa, 2017).

Canine *Malassezia* otitis carries a good prognosis and is usually responsive to topical antifungal treatment but will often recur. Modern Western medicine recognises that successful treatment of canine otitis requires that the underlying disease or predisposing factors must be managed to prevent recurrence (Bajwa, 2017). An integrative approach to the treatment of canine otitis externa seeks to both treat the presenting disease and to address the underlying factors perpetuating chronic skin disease in the dog.

History

In late October 2021, the dog attended his regular veterinarian for examination, as the dog's ears had been malodorous and pruritic. The dog was diagnosed with *Malassezia* otitis bilaterally and was prescribed a topical ear medication ("Dermotic", Ilium Veterinary Products) q12h AU for 14 days and a tapering dose of Prednisone (Dechra Veterinary Products) 10mg q12h PO for 14 days.

On 11 November 2021 in a home visitation, the owner sought a second opinion for the integrative management of her dog. The owner reported that the dog's ears did improve after 14 days treatment, but after he went swimming in the lake, he has since been shaking his head and scratching at his ears again.

Western Clinical Examination:

The dog presented as a typically exuberant, young Groodle. He was slightly overweight, with a body condition score of 6/9. Cardiovascular and respiratory auscultation were both normal, and there were no musculoskeletal or neurological abnormalities on examination. There was an abnormal amount of yellow-brown waxy discharge visible in the external ear canal

bilaterally, and the skin on the inner pinnae was erythematous. The ears were acutely painful and pruritic. The tympanic membrane was intact on otoscopic examination. There were no other areas of dermatitis visible on the body or feet, and the rest of his physical examination was normal.

Western Diagnosis

A swab was taken from each external ear canal, and cytological examination revealed a moderate amount of *Malassezia* organisms bilaterally. In this case the presence of these organisms found on samples collected from inflamed, pruritic skin in both ears was considered diagnostic of *Malassezia* otitis externa bilaterally.

Integrative Aspects - Clinical Signs:

The dog was adopted by the owner from an intensive puppy farm when he was one year old. The owner reported that when she adopted him, the dog had severe dermatitis over his body, otitis externa and chronic diarrhoea. Since this time, he has had episodes of dermatitis and otitis externa several times each year. On examination, the skin on the inner pinnae was warm to touch, erythematous, and the discharge in the external ear canal was malodorous with a characteristic "yeasty" odour. The ear canals were mildly stenotic and abnormally hairy, creating a suitable environment for the accumulation of moisture and pathogen overgrowth. The dog's coat had a mildly malodorous, damp smell and feel, but otherwise appeared healthy, with no erythema or pruritis visible. The dog's tongue appeared slightly thicker than normal but had a normal pink colour. The pulse felt slippery.

The owner reported that the dog had a “sensitive stomach” when he was younger, and often suffered diarrhoea. His digestive issues improved significantly over the last couple of years when she added fresh meat and vegetables to his diet. His current diet is commercial dry dog food in the morning and fresh human grade mince and mixed vegetables for dinner.

TCM Diagnosis:

From a Traditional Chinese Medicine (“TCM”) perspective, chronic yeast otitis externa, where the ear is acutely painful, with thick exudate, pronounced erythema and a strong odour, is generally due to Damp Heat (Wynn & Marsden, 2003). The clinical presentation in this case fits this category. According to TCM theory, Damp Heat usually arises when an animal consumes a diet that is high in processed carbohydrates or starch, which overwhelms the Spleen’s function in the digestive system to transport fluids, leading to Spleen Qi deficiency. This then leads to the accumulation of Damp, Phlegm and Heat, and eventually Liver Blood deficiency and stagnation. In this case, the dog has been fed predominantly dry dog food, which is very high in processed carbohydrates and low in quality protein. The dog is also overfed and overweight, which creates food Stagnation and weakens Spleen function, further creating Damp. The presence of Damp was reflected in the dog’s slippery pulse and thickened tongue. The tongue’s healthy pink colour indicates that Damp has not yet led to Blood deficiency. The addition of quality animal protein to this dog’s diet has likely served to provide the Liver with Blood. Damp Heat affects the skin, leading to dermatitis, and leads to the accumulation of exudate, for example in the ears, as seen in this case. Damp Heat has also invaded the large intestine in the past, giving rise to diarrhoea.

In this case, there appears to be an acute flare up of otitis externa, triggered by swimming. Swimming causes excess Damp in the body, in an already Damp dog. Acute flare-ups of otitis externa are considered an Excess condition, due to an invasion of Wind-Heat. In this case the invasion is due to pre-existing Damp Heat, which is affecting the Liver and Gall Bladder meridians.

For the initial treatment, the TCM diagnosis for this dog was invasion of Wind Heat due to Damp Heat. There is also an underlying Spleen deficiency. This breed is predisposed to atopic dermatitis and skin allergies, and this dog has been afflicted by disease since he was young. The dog's ears also have conformational abnormalities. Together, this indicates an underlying Kidney Jing deficiency.

Treatment

a. TCM Treatment

The initial TCM treatment goal was to treat local ear points, to relieve Wind, drain Damp and clear Heat. Local ear points treated involve the Gall Bladder and Triple Heater meridians which encircle, enter and exit the ear canal, and also intersect with the Small Intestine meridian at the ear (Matern, 2012). The treatment goal was also to include some distal points to support Spleen function, drain Damp and disperse Heat.

Treatment 1: 11/11/21

Needles were placed at local ear points bilaterally: GB 20, TH 17, GB 2, SI 19. Needles were also placed at distal points: LI 11, LI 4, SP 6 and SP 9. See Table 1 for a description of these points. The pulse became smoother after treatment.

Needles: Hwato needles, 0.25mm x 25mm, were placed. Distal front and back leg points were placed to a depth of 1-2mm, with perpendicular insertion. Local ear points were placed to a depth of 1mm, with perpendicular insertion, and TH 17 was placed with tangential insertion.

b. Conventional Western Treatment

A topical otic suspension containing steroid, antibiotic and antifungal ingredients (“Easotic”, Virbac Corporation, containing hydrocortisone aceponate, miconazole nitrate and gentamicin sulphate) was prescribed, to be applied q24h AU for 14 days.

c. Dietary Therapy

Diet is an important consideration in the treatment of chronic skin disease. Where dampness predominates, foods that assist the Spleen should be used, and foods that overwhelm the Spleen should be avoided (Schwarz, 1996). Foods that assist the Spleen are warming and sweet (cooked, sweet root vegetables, oats, lamb, rabbit and mackerel). Highly processed, grain-based food such as dry dog food/kibble is to be avoided (Wynn & Marsden, 2003). Thus, it was recommended to the owner to replace kibble with a natural, grain free, balanced dog food, that contains high quality animal meat, organ meat and bones (“Ziwi Peak Mackerel & Lamb recipe”) and cooked, sweet root vegetables such as pumpkin, carrot, corn and sweet potato. It was also advised that the dog’s meals should be strictly portioned, with no snacks, to reduce his body weight. Diet is a significant dampening influence on the dog’s body; once Damp begins to clear and the Spleen and skin begin to “dry out”, the overgrowth of yeast stops (Wynn & Marsden, 2003).

Treatment 2: 23/11/22

The owner reported that the dog's ears were less painful and that the amount of exudate in the ear canal was reducing. The owner made changes to the diet, as advised, and the dog was eating with great enthusiasm. No reduction in body weight was observed. When pressed, it was revealed that the owner's young children continue to feed the dog snacks during the day, which is preventing weight loss. On examination, the ears were less erythematous, and discharge was reduced bilaterally. The ears were still mildly painful. The dog's pulse was slippery. The case presentation was similar to the first treatment, thus the TCM diagnosis was Wind invasion due to Damp Heat, with underlying Spleen deficiency and Kidney Jing deficiency. The treatment principle was to treat local ear points along the Gall Bladder, Triple Heater and Small Intestine meridians, to relieve Wind, drain Damp and clear Heat, and to treat Spleen points, to support Spleen function and drain Damp Heat. The point prescription from the first treatment was repeated. The owner was instructed to continue using the otic suspension, as prescribed.

Needles: Hwato needles, 0.25mm x 25mm, were placed. Distal front and back leg points were placed to a depth of 1-2mm, with perpendicular insertion. Local ear points were placed to a depth of 1mm, with perpendicular insertion, and TH 17 was placed with tangential insertion.

Treatment 3: 8/12/22

The owner reported that the dog's ears were no longer painful over the last few days. The owner continued to feed a natural diet, which the dog was eating with great enthusiasm. No reduction in body condition was observed (BCS 6/9). On examination, the ears were no longer erythematous or painful, and there was minimal discharge. An ear swab was taken bilaterally,

and no pathogens were visible on cytological examination. Topical ear medication was discontinued as clinical signs had resolved. No further treatment was sought by the owner.

Table 1. Description of location and effect of acupuncture points used in this case (Matern, 2012)

Acupuncture point	Point location	Effect of point stimulation
GB 20	Rostromedial to the atlas, at the height of the base of the ear between the sternomastoid and sterno-occipital muscles	Disperses external Wind Heat, clears the sensory organs. Indicated for otitis externa.
TH 17	Ventral to the ear, in the depression between the mandible and the mastoid process	Expels internal or external Wind, clears Heat, benefits ears. Indicated for otitis externa.
GB 2	Below the anterior edge of the ear directly underneath SI 19, caudal to the condylar process of the mandible	Removes obstructions in the meridian, benefits ears, expels exterior Wind. Indicated for otitis externa
SI 19	Found just cranial to the central part of the ear tragus, caudal to the mandible	Disperses external Wind Heat, benefits ears. Indicated for otitis externa.
LI 11	With the elbow slightly flexed, located in the crook of the arm in the centre between the lateral epicondyle of the humerus and the terminal tendon of the biceps muscle	Draws out Damp, relieves itching, clears Heat in the upper body
LI 4	Between the first and second metacarpal bones, at the level of the head of the first metacarpus	Master point for the face and head, disperses Heat and treats itchy dermatitis
SP 6	3 Cun above the centre of the medial tibial malleolus, on the caudal edge of the tibia	Nourish the Yin and Blood, improve Spleen's function, resolve Damp
SP 9	Medially on the thigh, in a depression between the posterior edge of the tibia and the gastrocnemius muscle	Improve Spleen's function, resolve Damp

Discussion

For the treatment of *Malassezia* otitis externa, conventional topical ear medication in conjunction with acupuncture and dietary therapy were used in this case. In this case, the dog suffered from chronic otitis externa, and dermatitis more generally. The dog had recently been treated for otitis externa, which resolved, and then he went swimming, triggering an acute flare up of clinical signs, and the dog's ears became painful, erythematous and pruritic.

Cytological examination of ear swabs confirmed the presence of *Malassezia* bilaterally. The combination of clinical signs and cytological findings indicated a diagnosis of *Malassezia* otitis bilaterally. In the integrative management of this case, the dog was treated with acupuncture weekly for two weeks. Relevant local ear points on meridians that encircle the ear, and traverse the ear, were needled, in addition to distal points relevant to the underlying factors supporting disease, in accordance with TCM theory. The dog was also given daily topical ear medication containing a steroid and antifungal by his owner. The diet was also changed to address the predisposing factors underlying skin disease and reduce Damp. In this case, the integrative approach to treatment resulted in the complete resolution of clinical signs.

Acupuncture has been shown to improve the outcomes of treatment of canine bacterial otitis in a randomised controlled study (Sanchez-Araujo & Puchi, 1997). In this study, dogs were either treated with acupuncture or sham acupuncture, in addition to conventional topical ear medication. It was found that dogs treated with acupuncture had a shorter recovery time, and had improved resolution of disease, confirmed on cytological examination. In a one year follow up by the researchers, it was found that the dogs treated with acupuncture continued to have a significantly reduced rate of recurrence of disease (Sanchez-Araujo & Puchi, 2011). The results of these studies are reflected in the results of this case study. In this case study, a similar acupuncture point prescription was used, in addition to conventional topical ear medication, which resulted in the complete resolution of clinical signs, confirmed by the absence of pathology on cytology, and there has been no recurrence of otitis in this dog eight months post treatment.

An integrative approach to the treatment of otitis externa seeks to address the predisposing, primary and perpetuating causes, in addition to treating the acute disease (Marsden, 2012). Predisposing causes of canine otitis include conformational issues affecting the ear canal, and excessive Damp accumulation from swimming, which were both relevant predisposing causes of otitis in this case. Perpetuating causes of otitis include the invasion of pathogens in the ear canal, which was found in this case on cytological examination. The primary cause of otitis externa relates to the health of the skin barrier more generally. Where the skin barrier is compromised, the animal will experience enhanced allergen sensitisation and is more likely to develop diseases such as atopic dermatitis, which often precedes the development of other allergic disorders such as food allergies (Trompette et al., 2022). Therefore, addressing dietary factors is an important strategy in the integrative management of chronic otitis externa cases. In conventional Western medicine, the benefits of including marine sources of omega three fatty acids in the diet to improve the health and quality of the skin and coat, and in reducing pruritis, are well established (Bauer, 2011). Research also shows that including animal meat and organ meat into the diet plays an important protective role for dogs in preventing skin disease (Hemida et al., 2021). In this case, the dog was placed on a diet high in animal protein, organ meat and oily fish.

In this case, the dog had an Earth constitution, which is prone to the accumulation of Damp, according to TCM theory. The dog has suffered skin disease and otitis since he was young, which never fully resolved. TCM theory explains that chronic *Malassezia* otitis externa is caused by Damp Heat. Damp accumulates in the body when the Spleen is overwhelmed in its function of transporting fluids around the body. TCM theory understands that a diet high in processed carbohydrates overwhelms the Spleen, and in this case, the dogs was fed a

conventional dry food diet, high in processed carbohydrates. This diet causes Spleen Qi deficiency which leads to the accumulation of Damp and the generation of Damp Heat, affecting the skin and other organs. The dog's diet was changed to a diet containing high quality animal protein and organ meat and cooked, root vegetables, which support normal Spleen function in generating Nutritive Qi to support Liver Blood, and oily fish in the diet to support a healthy skin barrier function. Foods that overwhelm the Spleen, like processed carbohydrates, were eliminated. It was recommended to reduce the dog's food intake as he was overweight, which reduces the accumulation of Damp and Food stagnation, however this is difficult for the owner to achieve with two young children in the house that feed him constantly.

In this case, acupuncture, diet therapy and conventional medical treatment together were effective in resolving canine otitis. Known predisposing factors for otitis remain in this case; the dog has abnormally narrow and hairy ear canals, and a love of swimming. However, eight months since acupuncture treatment and dietary management commenced, no pathology has recurred. The owner is pleased at the dog's response to treatment. If episodes recur in the future, and the owner seeks further treatment, the goal would be to further address the root causes of skin disease in this dog, with points to support the Wei Qi, the Lungs which govern the skin, and to address the dog's underlying Spleen Qi deficiency and poor Kidney Jing.

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