

# Mini-Review on Canine Anal Sacculitis with a Focus on Recent Literature

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## Mini Review

### ABSTARCT

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Anal sacculitis is a common anal sac disease in dogs. Although there have been few studies performed regarding this condition until recently, there has been increased interest in the last few years. This mini-review discusses what is known about the factors related to the development of anal sacculitis and treatment of the condition with a focus on recent literature. Anal sac disease increased with diarrhea and skin issues, and some breeds were more susceptible. The existence of clinical symptoms and the characteristics of the anal sac's contents were used to make the diagnosis. The two most crucial therapies were manual expression and addressing any probable underlying diseases. In the event of frequent recurrence, surgery was carried out. When an anal sacculotomy is performed following medical therapy, the surgical prognosis can be improved. Future research should look into whether the results of the veterinarians' reports can be verified by asking the vets to keep a logbook of the dogs and cats they treat for anal sac illness.

**Keywords:** Anal sac; Sacculitis; Anal gland; Canine; Dermatology

## INTRODUCTION

Most carnivores have paired, spherical pouch-like sacs bilateral to the anus with a single duct opening to lateral margins of the anal sphincter, termed anal sacs. These sacs serve as receptacles for the secretions of the apocrine and sebaceous glands which line their walls and are thought to play a role in scent communication [1]. Anal sac contents are secreted passively during defecation, but can also be actively expressed when a dog experiences fear. Problems arise when the anal sac contents are not evacuated normally and begin to build up, resulting in discomfort [2]. This overfilling of the anal sacs is generally termed non-neoplastic anal sac disease. Non-neoplastic anal sac disease can include anal sac impaction, anal sacculitis (inflammation with or without infection), and anal sac abscessation.

These conditions are typically considered to exist on a continuum. Non-neoplastic anal sac disease is common in dogs with a reported incidence ranging from 4.4% to 15.7% in primary care practices <sup>[3,4]</sup>.

## LITERATURE REVIEW

Anal sacculitis accounts for approximately 12% of all non-neoplastic anal sac diseases. Clinical signs associated with anal sacculitis include scooting, licking/chewing the perianal region, blood in the stool, leaking anal sacs, diffuse thickening of the anal sac wall, and haemorrhagic or purulent discharge during anal sac expression <sup>[5]</sup>. Several factors including allergic skin disease, breed, stool quality, diet type and changes, obesity, and other perianal skin diseases have been suggested to play a role in the development of anal sacculitis <sup>[3-7]</sup>. Despite this, few studies investigating the etiology of this condition exist.

In two retrospective studies, allergic skin disease, specifically atopic dermatitis, was identified as the the most common comorbidity for dogs with anal sacculitis. This is consistent with the view that allergic skin disease can lead to perianal inflammation and trauma, contributing to anal sac duct stenosis and ultimately anal sacculitis. However, due to the nature of these studies, while a relationship is suggested, true causation is not confirmed.

A strong predisposition for the development of non-specific non-neoplastic anal sac disease has been found for brachycephalic and spaniel breeds. This predisposition may not translate to a predisposition for the development of anal sacculitis as both retrospective studies focusing on this subset of non-neoplastic anal sac disease found German shepherd dogs and Labrador retrievers to be the two most represented specific breeds. For both of these studies, these breeds were the most represented by narrow margins and true risk has not been established.

One study identified a history of diarrhea shortly prior to the development of clinical signs of anal sacculitis in 75% of cases. Of these dogs, 75% were fed either all-meat diets or diets containing chop bones and had a history of either poor stool quality or rectal impaction. A more recent study found that only 20.6% of dogs with anal sacculitis had poor stool quality. This difference may be able to be explained by the fact that most dogs in the second study were fed commercially available dog food. However, the latter study was performed at a referral practice where there was a delay between onset signs related to anal sacculitis and presentation to the clinic, meaning some cases of poor stool quality prior to development of anal sacculitis may not have been captured.

Obesity has also been reported to be implicated in the development of anal sacculitis. However, a large retrospective study of dogs in the United Kingdom found no association between obesity and non-neoplastic anal sac disease in general. When evaluating dogs for obesity, numerical body condition scores ranging from 1 to 9 with an ideal of 4 to 5 is commonly used <sup>[8]</sup>. Looking specifically at anal sacculitis, a retrospective study of dogs in Sweden found that 63.6% of dogs had an ideal body condition score of 5 and 36.3% of dogs were slightly overweight with a body condition score of 6. All dogs were scored at either a 5 or 6. In a retrospective study on dogs with anal sacculitis in the United States, 45.2% of dogs had an ideal body condition of 4 or 5. The remaining 54.8% of dogs were overweight with a body condition score of greater than 6 and 9.7% were obese with a body condition score of 8 or 9. Based on these results, it is still uncertain how much of a role obesity plays in the development of anal sacculitis though it may be less than previously thought.

Many protocols for treatment have been proposed for treatment of anal sacculitis. There is evidence that localized treatment is becoming more popular with one study finding that 73.1% of dogs with anal sacculitis in a primary care practice in Sweden were treated with localized treatment with or without systemic non-steroidal anti-inflammatory medications and an additional 13.5% received local treatment with a systemic immunomodulatory medication with or without systemic non-steroidal anti-inflammatory medications. With the increasing incidence of antibiotic resistance, this focus on localized treatment may improve antimicrobial stewardship. A published protocol for localized treatment of canine anal sacculitis involves:

- The digital expression of the anal sac.
- Careful insertion of a lubricated intravenous catheter sheath or shortened tom cat catheter into the anal sac duct.
- Flushing of the anal sac with saline until all material is removed from within the anal sac.
- Infusion of a commercially available antibiotic, antifungal, and glucocorticoid otic ointment into the anal sac until the sac is full.

## DISCUSSION

Sedation may be required to perform this procedure depending on the comfort of the patient. The procedure is repeated at roughly two-week intervals until remission is achieved. It may need to be repeated multiple times to achieve resolution. Using localized treatment, a study on anal sacculitis in 33 dogs in a referral center in the United States found that 72.7% of cases achieved clinical resolution as determined by a veterinarian. An additional 12.1% were reported to have resolution by the dog's owner but resolution was not confirmed by a veterinarian. The remaining 15.2% of cases did not complete the recommended follow-up and no data was available on whether they achieved resolution or not. No cases were documented to have failed medical therapy.

While the factors involved in the development of anal sacculitis are not definitively identified, it is typically considered a secondary condition and recurrence is possible. In the study on dogs with anal sacculitis in a primary practice in Sweden, 33.7% of dogs experienced at least one episode of recurrence of anal sacculitis with a range of time to recurrence from approximately 1 month to approximately 3 years. Dogs with cutaneous allergic disease had a significantly higher risk of recurrence. In the study on treatment of anal sacculitis in a referral practice in the United States, recurrence of anal sacculitis was seen in 10.7% of dogs occurring anywhere from 85 to 445 days after initial resolution. For two of these dogs, the factors contributing to the development of anal sacculitis was unknown. The third dog experienced recurrence approximately one year after first being treated and seasonal atopic dermatitis was thought to contribute to the development of anal sacculitis. All three dogs achieved resolution with a second round of treatment.

## CONCLUSION

In summary, anal sacculitis is a subset of non-neoplastic anal sac disease. It is a relatively common disease in dogs and negatively impacts quality of life. The presentation of this condition is heterogenous. Anal sacculitis is typically considered secondary to other conditions or risk factors. However, little evidence exists to suggest a link between anal sacculitis and conditions other than allergic skin disease or atopic dermatitis. Further research is needed into the association between various diseases and anal sacculitis in addition to risk factors for development of this condition. Localized treatment for anal sacculitis has been considered an effective alternative to systemic antibiotic therapy for some time and results of recent retrospective studies support the efficacy of this treatment approach.

## REFERENCES

1. Dorigiv I, et al. Comparison of volatile compounds of anal sac secretions between the sexes of domestic dog (*Canis lupus familiaris*). *Vet Res Forum*. 2023;14:169–176.
2. Paterson S, et al. Anal sacs: A new approach to an old problem. *Vet Pract*. 2016;1:31-33.
3. O'Neill DG, et al. Non-neoplastic anal sac disorders in UK dogs: Epidemiology and management aspects of a research-neglected syndrome. *Vet Rec*. 2021;189.
4. Corbee RJ, et al. A cross-sectional study on canine and feline anal sac disease. *Animals*. 2021;12:95.
5. Lundberg A, et al. Local treatment for canine anal sacculitis: A retrospective study of 33 dogs. *Vet Dermatol*. 2022;33:426–434.
6. Halnan CR. The diagnosis of anal sacculitis in the dog. *J Small Anim Pract*. 1976;17:527–535.
7. Hvitman-Graflund K, et al. A retrospective study of treatment, outcome, recurrence and concurrent diseases in 190 dogs with anal sacculitis. *Vet Dermatol*. 2023;34:576-585.
8. Chun JL, et al. A simple method to evaluate body condition score to maintain the optimal body weight in dogs. *J Anim Sci Technol*. 2019;61:366.