

Frequency of Urinary Tract Infection in Dogs Treated with Oclacitinib

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In the Literature

Simpson AC, Schissler JR, Rosychuk RAW, Moore AR. The frequency of urinary tract infection and subclinical bacteriuria in dogs with allergic dermatitis treated with oclacitinib: a prospective study. *Vet Dermatol.* 2017;28(5):485-e113.

FROM THE PAGE ...

Several drugs used to treat chronic skin diseases in dogs can predispose patients to UTI and bacteriuria. These sequelae have been established in dogs that receive glucocorticoids and cyclosporine,¹⁻³ but it has not been established whether oclacitinib also predisposes dogs to UTI. Approximately 0.5% to 11.3% of allergic dogs treated with oclacitinib have had clinical signs described as cystitis; however, quantitative urine cultures were not performed.⁴⁻⁶ In addition, there were previously no studies that investigated the frequency of UTI or subclinical bacteriuria in dogs receiving oclacitinib in the absence of other predisposing urinary or metabolic concerns. The purpose of this study* was to evaluate the frequency of UTI and subclinical bacteriuria in dogs receiving oclacitinib.

Fifty-five dogs were included in the study. All were at least 24 months of age and had a history of allergic dermatitis and no apparent history of urinary tract disease or predisposition to UTI. Dogs with bacteriuria or positive urine culture and susceptibility results within the previous 24 months were excluded from the study. Steroids, antibiotics, cyclosporine, and lokivetmab were withdrawn for suitable periods before the study and were not allowed during the study. Forty-seven of the 55 dogs received oclacitinib for over 180 days and had follow-up urinalyses and quantitative urine cultures. The remaining dogs were withdrawn early due to need for systemic antimicrobials ($n = 6$), decreased efficacy of oclacitinib over time ($n = 1$), or urinary incontinence ($n = 1$); follow-up cultures were performed earlier in these dogs.

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None of the study patients developed positive urine cultures during the study. A small number of dogs ($n = 7$) developed microscopic hematuria; however, in 6 of these dogs, this occurrence was suspected to be iatrogenic from cystocentesis. Granular casts, crystalluria, and pyuria were noted in 3 dogs, 9 dogs, and 1 dog, respectively. These developments were deemed not clinically significant because of lack of lower urinary tract signs and negative bacterial cultures.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** Oclacitinib was not associated with increased risk for UTI or subclinical bacteriuria. Routine urine cultures are not warranted if a dog is receiving only oclacitinib.
- 2** If a patient receiving oclacitinib has a prior history of UTI or suffers from a condition predisposing to UTI, routine urinalysis with culture is warranted.
- 3** No novel nonurinary adverse events were reported. Consistent with previous reports,^{4,7} GI events, which were noted in 7.3% of study patients, were the most common adverse event.

References

1. Torres SM, Diaz SF, Nogueira SA, et al. Frequency of urinary tract infection among dogs with pruritic disorders receiving long-term glucocorticoid treatment. *J Am Vet Med Assoc.* 2005;227(2):239-243.
2. Peterson AL, Torres SM, Rendahl A, Koch SN. Frequency of urinary tract infection in dogs with inflammatory skin disorders treated with ciclosporin alone or in combination with glucocorticoid therapy: a retrospective study. *Vet Dermatol.* 2012;23(3):201-e43.
3. Ihrke PJ, Norton AL, Ling GV, Stannard AA. Urinary tract infection associated with long-term corticosteroid administration in dogs with chronic skin diseases. *J Am Vet Med Assoc.* 1985;186(1):43-46.
4. Cosgrove SB, Cleaver DM, King VL, et al. Long-term compassionate use of oclacitinib in dogs with atopic and allergic skin disease: safety, efficacy and quality of life. *Vet Dermatol.* 2015;26(3):171-179.
5. Cosgrove SB, Wren JA, Cleaver DM, et al. Efficacy and safety of oclacitinib for the control of pruritus and associated skin lesions in dogs with canine allergic dermatitis. *Vet Dermatol.* 2013;24(5):479-e114.
6. Cosgrove SB, Wren JA, Cleaver DM, et al. A blinded, randomized, placebo-controlled trial of the efficacy and safety of the Janus kinase inhibitor oclacitinib (Apoquel) in client-owned dogs with atopic dermatitis. *Vet Dermatol.* 2013;24(6):587-597.
7. Little PR, King VL, Davis KR, Cosgrove SB, Stegemann MR. A blinded, randomized clinical trial comparing the efficacy and safety of oclacitinib and ciclosporin for the control of atopic dermatitis in client-owned dogs. *Vet Dermatol.* 2015;26(1):23-30.



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