

Medicinal Management of Urolithiasis in a Six-year-old Male Dachshund Dog

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ABSTRACT: A 6-year-old male dachshund dog was presented to the Teaching veterinary clinical complex, durg, with a history of vomition, hematuria, anorexia and dysuria. All the physiological parameters were within range except serum creatinine and blood urea nitrogen. Abdominal ultrasonography showcased hyperechoic area within the bladder suggestive of cystolith and radiography finding revealed an opaque mass.

Keywords: Dachshund, Dysuria, Creatinine, Ultrasonography, Cystolith.

INTRODUCTION

Amongst canines, urolithiasis is a common problem that needs to be dealt with utmost care and urgency. Because of high recurrence rates, it's a point of concern. These stones may be made up of urates, phosphates, oxalates, silica and carbonates (Mulyani *et al.*, 2024). Males are more prone than females for urolithiasis as the anatomical arrangement of penis fits suitably for urolith lodgment. Urolithiasis is highly life-threatening condition that needs to be dealt with emergency (Formsa and Saini 2019). Certain infectious agents or trauma can predispose to urolith formation. According to Singh and Sailo (2013), certain factors leading to urolith formation are inorganic proteins, lack of crystal inhibitors along with crystallization in urine. Also age, breed, gender or any abnormality of the urinary tract needs to be considered (Rath *et al.*, 2023). Difficulty in urination or strangurea along with hematuria are common clinical manifestations with stones in bladder or urinary tract (Hoxha and Rapti 2018). It is utmost important to have ultrasonography and X-ray findings to manage urolithiasis (Ucajev *et al.*, 2024). There is severe bacterial infiltration seen in urolith suspected cases. Urinary tract diseases causes high morbidity amongst canines and felines and hence antimicrobial therapies are a must (Weese *et al.*, 2019).

CASE HISTORY AND OBSERVATIONS

A 6-year-old male dachshund dog weighing 15 kg was brought to Teaching Veterinary Clinical Complex, Padmanabhpur, Durg with clinical signs of vomition, anorexia, hematuria and dysuria. Temperature, heart rate and respiration rates were within the normal range.

Skin fold test examination revealed moderate dehydration and conjunctival mucous membrane was congested. Spike in serum biochemical parameters like creatinine (3 mg/dl) and blood urea nitrogen (65 mg/dl) were suggestive of urinary tract disorder.



Fig. 1. Hyperechoic area with acoustic shadows.

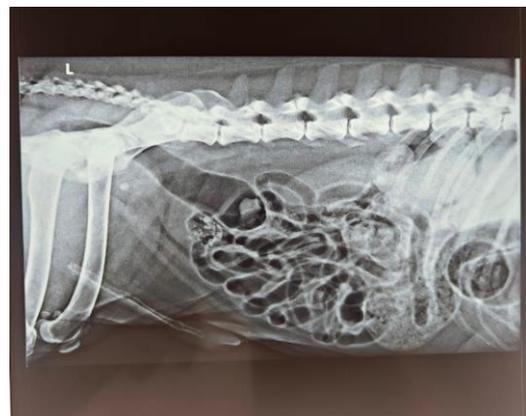


Fig. 2. Radiopaque mass.

Ultrasonography signified hyperechoic area along with acoustic shadows. In lateral plain radiograph, opaque mass was detected. The condition was diagnosed as urolithiasis.

Treatment. Treatment protocol included fluid therapy with Dextrose 5% and Ringers lactate through intravenous route to maintain the hydration status of the body. Antibiotic Amoxicillin and potassium clavulanate @ 12.5 mg/ kg P.O. twice daily along with urinary alkalizer disodium hydrogen citrate @ 7ml. P.O. once daily and allopurinol @ 20 mg/kg/day P.O. was administered for 15 days.

CONCLUSIONS

Urolithiasis is considered as one of the most common disorder in dachshunds. Their dissolutions are important to prevent any further complications leading to anuria. Proper antibiotic therapy for atleast 2 weeks in uroliths or associated urinary tract infections lead to good prognosis. Allopurinol is important to prevent ammonium crystal formation in the urine. Once the main triggering factor (stones) gets dissolved, blood urea nitrogen (40 mg/dl) and creatinine (1.2 mg/dl) values return to their normal values post treatment.

FUTURE SCOPE

For efficient management of reoccurrence of urolithiasis, surgical interventions are must.

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