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## Calculi in dog: A case report

**Komal, Sweety, Vaishali, Tushar Jain and Man Singh**

#### Abstract

A male Labrador of 5 year showed decreased appetite, haematuria and difficulty in urination. The case was tentatively diagnosed for calculi. Owner was advised for left and right lateral abdomen and the report revealed that patient has calculi in urinary bladder and penile urethra at the level of proximal end of os-penis. Later on, penile calculus was pushed back in urinary bladder by retrograde hydropropulsion. Medication was given afterwards. Antibiotic amikacin was given for 7 days and syrup neeri pet.

**Keywords:** Calculi, urinary, penile

#### Introduction

Aggregates of crystalline and occasionally non crystalline solid substances that deposits in one or more areas within the urinary tract is called Urolithiasis (Koehler *et al.*, 2009) [2]. Uroliths that form in the urinary bladder are cystoliths. When urine becomes oversaturated cystoliths formed (Dehmiwal *et al.*, 2016) [1]. The major predisposing factor that lead to the formation of calculi are increased urine salt concentration, decreased water intake, increased irreversible water losses, increased mineral excretion, urinary tract inflammation, change in urine pH. These are formed by deposition of minerals in the urinary bladder. Their size vary from large, single stone or a collection of stones (sand-like grains to gravel). Most canine uroliths are found in middle age group inside bladder or urethra and they may be multiple small or single large (Rafee *et al.*, 2014) [4]. Struvite uroliths are most commonly encountered stones worldwide associated with UTI (Yadav *et al.*, 2011) [7].

#### History

A male Labrador of 5 year was brought to the clinics. He had a history of decreased appetite, haematuria and difficulty in urination.

#### X-Ray

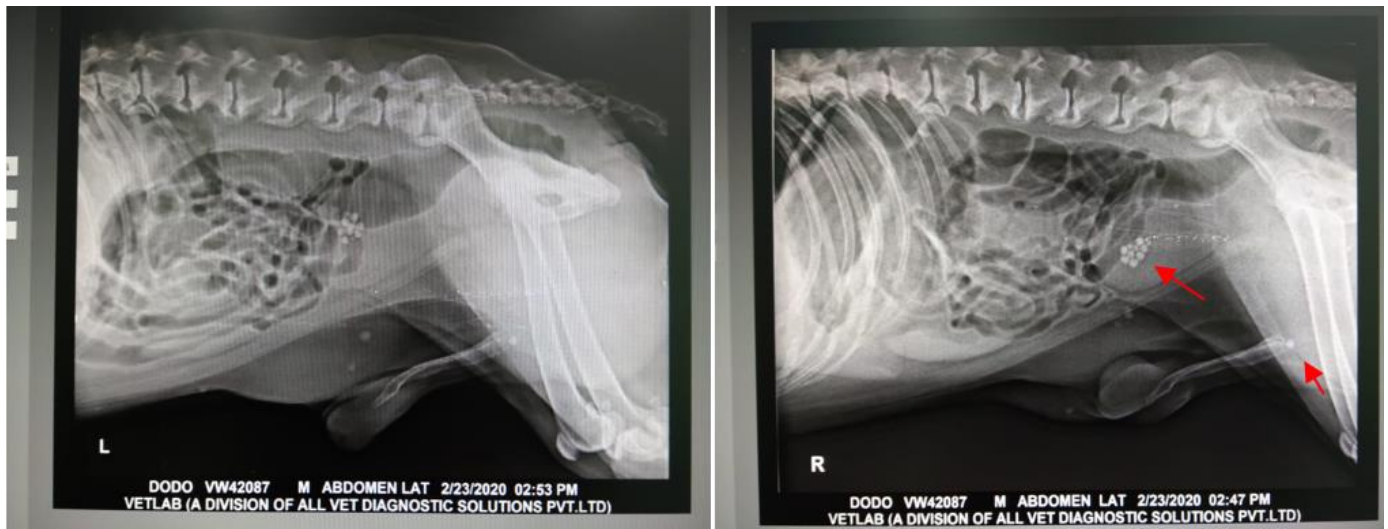
Owner was advised for left and right lateral abdomen. The report revealed that patient has calculi in urinary bladder and penile urethra at the level of proximal end of os-penis.

#### Treatment and Discussion

Penile calculus was pushed back in urinary bladder by retrograde hydropropulsion. Medication was given afterwards. Antibiotic amikacin was given for 7 days and syrup neeri pet. The urinary system is designed to expel out metabolic wastes in liquid form. However during urolith formation, sustained alterations in urine composition promote over saturation of one or more substances eliminated in the urine and result in their precipitation and subsequent growth. Haematuria and dysuria showed by dogs might be due to irritation caused by uroliths to urinary bladder mucosa. Radiography can be used to diagnose the cystic calculi but it becomes challenging if urinary stones are radiolucent (Saini and Singh, 2002; Larson, 2009) [5, 3]. But in this case, the calculi could be visualized clearly in the radiography. Magnesium ammonium phosphate, calcium oxalate, calcium phosphate, silica and cystine crystals are often radiodense.

#### Conclusion

The dog showed improvement in condition after the treatment. To prevent reoccurrence of cystoliths, general and dietary management is required to prevent. A common recommendation for prevention of urolithiasis is to increase water consumption to encourage diuresis and reduce time for aggregation and crystallization (Tion *et al.*, 2015) [6].



**Fig 1:** Arrow showing calculi

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