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Research Article

TREATMENT OF BLADDER UROLITHS IN A DOG BY INJECTABLE HOMEOPATHY

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ABSTRACT

The occurrence of stones in the renal system in small animals is a frequent problem that impairs the quality of life of patients. It becomes recurrent in many cases, especially if there is a concomitant racial pattern, sedentary lifestyle, and/or inadequate diets. Diagnosis is performed in routine exams or, mostly, with the exacerbation of clinical signs. These signs may vary from simple cystitis, obstruction of the ureters or urethra with urine dripping, to extreme pain conditions. Conventional treatment should be carried out along with changes in routine associated with the administration of specific medicines, depending on the material of origin of the stones, and even with the performance of surgical procedures for uroliths removal. However, this disease can be addressed by complementary therapies, such as homeopathy, which aims to balance the vital energy and uses medicines of plant, animal, and mineral origins that are better indicated for each patient and their particularities. This study aimed to report the treatment of urolithiasis in a dog using homeopathy in Veterinary Medicine. The patient was diagnosed with partial obstruction of the urethra and was treated with the injectable homeopathic medicines *Silicea terra*, *Cantharis vesicatoria*, and *Ruta graveolens*, associated with the oral administration of *Arsenicum album*. After a 60-day treatment period, the animal no longer presented stones in the urethra or bladder, returning to its normal function.

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INTRODUCTION

Canine and feline urolithiasis is one of the main causes of urinary stones formation, occurring from the renal pelvis to the urethra. The mutation that causes cystinuria, and consequently urolith, and the inheritance mode were determined in several dog breeds. These features make cystinuria challenging to control and traditional treatment ineffective¹. The formed stones change the physiology of the urinary tract, varying according to its composition². Due to the low solubility of cystine in urine with a pH < 7.0, and because typical dog urine has a pH range of 5.5 to 7.5, there is a high risk of stone formation throughout life³. The relative occurrence of cystine stones in dogs varies depending on the country of origin. Stone formation is considered a relatively common finding among these species, and the treatment basically includes evaluating and removing any urethral and bladder obstruction when necessary. The procedure includes passing a small-caliber catheter and dislocating the stone by retro-hydropropulsion or cystocentesis⁴.

Surgical treatment is indicated for removing stones when the conservative treatment mentioned above and dietary management associated with the administration of

nutraceuticals are not effective. However, surgery is an invasive procedure and includes disadvantages such as anesthesia, surgical complications, the possibility of incomplete removal of uroliths, and the persistence of the primary cause predisposing to stone formation⁴. There are additional problems that may occur, such as decreased urine storage capacity by the urinary vesicle as a result of successive procedures and scars on the epithelium of this organ; the possibility of stenosis and predisposition to new obstructions when urethrostomy is performed; and also to predispose the patient to a permanent incontinent state. Surgical treatment should be considered when anatomical abnormalities are present, if drug dissolution is not possible, when there is a need to culture the urinary tract mucosa, or when stoned are large enough to cause urethral obstruction^{4,5}.

Given the possible sequelae of cystotomy and urethrostomy procedures, integrative/alternative treatments must be considered, observing the general state of the animal and the pathology stage, whether partial or total, thus determining its urgency⁶. In partial obstruction, complementary treatments should be considered, such as homeopathic treatments, regardless of the stone composition.

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dimensions (2.21 cm long x 1.62 cm high), hypoechoic parenchyma, and homogeneous texture. The spleen (Figure 2D) showed normal dimensions, regular contours, parenchyma with homogeneous texture and preserved echogenicity, presenting a rounded hyperechogenic image with homogeneous texture, defined margins, and measuring 0.37 cm.

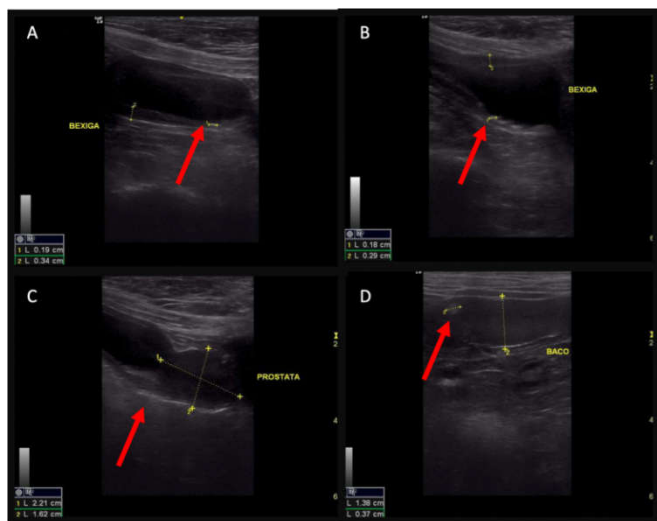


Figure 2 A) Increased bladder wall thickness. Red arrow indicates the presence of stone. B) Presence of stones in the bladder. C) Visualization of the prostate within the normal range. D) Presence of increased density splenic nodule.

After 60 days of treatment initiation, the animal no longer had signs of urinary incontinence, returning to his usual behavior. An additional abdominal US was performed, showing a thin-walled bladder (Figure 3A) with thickness ranging between 0.19 cm and 0.22 cm, and anechogenic content in the lumen. No images suggested the presence of stones in the urinary vesicle and throughout the urethra. The spleen (Figure 3B) showed normal dimensions, regular contours, parenchyma with homogeneous texture and preserved echogenicity, presenting a rounded hyperechogenic image with homogeneous texture, defined margins, and measuring 0.33 cm.

Urolithiasis is a common and recurrent problem in dogs⁷. The occurrence of total or partial urethral obstruction in dogs is considered a surgical emergency. Depending on the case, surgery is needed for the immediate urethral unblocking since it can lead to severe consequences for patients. In the situation reported in this study, the animal was still presenting urinary incontinence, which allowed attempting a conservative treatment for the patient. The acquired knowledge of urolithiasis is complex and multifaceted. However, disease eradication is among the highest possible challenges, as it requires a complete review of all factors responsible for stone formation⁸.

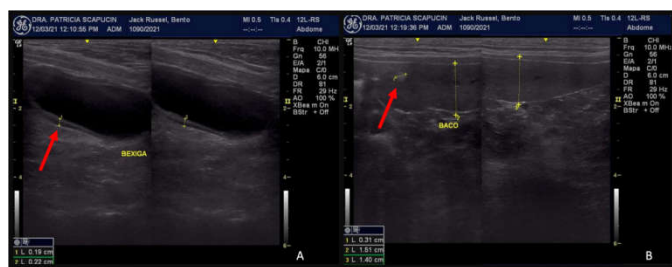


Figure 3 A) Normal bladder wall thickness, absence of stones. B) Presence of splenic nodule with increased density.

In this context, Veterinary Homeopathy becomes an important therapy for controlling this disease. This therapy has been advancing by leaps and bounds in the scope of Veterinary Medicine in the last five years. This improvement has been specially noticed after the popularization of the injectable pharmaceutical form, which provides a speed of action associated with greater effectiveness against the various diseases to be treated. According to Valle and Carvalho⁹, the injectable homeopathic treatment comprises a more effective pharmaceutical form than the traditional form previously prescribed by most homeopaths. In addition to being more effective, pet owners report that the injectable form is more practical as they only need to administer it once a day. Also, the prescribers have the guarantee that their patient will be effectively medicated. Therefore, this is the best pharmaceutical form to be used in the veterinary homeopathic practice.

Corroborating Coelho *et al.*¹⁰, homeopathy is based on the law of similars, and it has been used to treat urolithiasis. Thus, the medicines used in this case were chosen based on the degree of similarity and the French Homeopathy precepts. *Ruta graveolens* well as various homeopathic medicines have a vast sphere of action^{11,12}. It was used in this patient to promote muscle relaxation, causing the opening of the urethra to facilitate the passage of stones. *Silicea terra* is considered a polychrestmedicine in the Homeopathic Materia Medica and is known for its draining activity. It was administered to the patient using an ultra-diluted form and based on the similarity method, aiming to stimulate the biological functions and lead to a favorable response in disease control. *Cantharis vesicatoria* is indicated for the renal environment and acts in the epithelial cells, especially in the bladder¹³. *Arsenicum album* was also prescribed since it is a medicine indicated for the patient's pathogenesis.

The patient showed clinical improvement in the first week of treatment. After 30 days of treatment, an abdominal US was performed. The images showed no stones along the urethra. Two small stones were seen inside the bladder in addition to a nodule in the spleen suggestive of calcification due to its image. The animal was treated with the same medications for another 30 days, totaling 60 days of treatment. At the end of this period, another abdominal US was performed, showing no sediment or stone in the bladder. Therefore, the patient had full resolution of the initial problem within 60 days of homeopathic treatment. Regardless of the type of stone, which was not researched in this case, the homeopathic therapy was effective in its purpose, improved the patient's quality of life, prevented any invasive procedure, and showed complete disease resolution.

CONCLUSION

In the case reported here, the homeopathic therapy used had a critical and favorable response, with no side effects or recurrences up to the present time, no need for invasive procedures, and no discomfort to the patient. Further studies are necessary to confirm these results.

Declaration of Conflict of Interest

The authors declare no conflict of interest in the present study.

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