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**Urethral Urolithiasis in Male Cattle Treated Using Pneumatic Lithotripsy**

[Uğur Aydın](https://pubmed.ncbi.nlm.nih.gov/?term=Ayd%C4%B1n+U&cauthor_id=35292890) [1](https://pubmed.ncbi.nlm.nih.gov/35292890/#full-view-affiliation-1) , [Özgür Aksoy](https://pubmed.ncbi.nlm.nih.gov/?term=Aksoy+%C3%96&cauthor_id=35292890) [2](https://pubmed.ncbi.nlm.nih.gov/35292890/#full-view-affiliation-2)

Affiliations

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**Abstract**

One of the most important problems encountered in cattle breeding is urethral urolithiasis. Urolithiasis can be treated using various methods, but they all carry risks. Thus, a continuous search is being carried out for alternatives in this field. This study aimed to treat urethral urolithiasis in male cattle using pneumatic lithotripsy, a minimally invasive method. The urethra and penile tissues of 20 male cattle of different ages and breeds were obtained from slaughterhouse materials and measured before determining the probe diameters and lengths. The study included 9 male cattle (2 Simmental hybrids, 1 Zavot hybrid, 1 Brown, and 5 Simmental), between 4 months and 2 years of age, diagnosed with urethral urolithiasis. A modified lithotripsy apparatus was used for the pneumatic disintegration of urinary stones. The localization of urinary stones in the urethra was determined by palpation and catheterization. After laying the animal in a lateral position, a lithotripsy probe of appropriate length and diameter was advanced from the external urethral orifice to the site of localization. Once the probe came into contact with the stone, a vibration of 125 bar was applied until the stone was broken. The probe was removed, and the urethral channel was washed with 0.1% iodine solution to remove the shredded urethral stones. Uncomplicated recovery was achieved in all treated cases. In conclusion, pneumatic lithotripsy provided successful results in treating urolithiasis and can be used as an alternative surgical method in cattle. Moreover, the low cost is an additional advantage to breeders.

**Keywords:** Bovine; Pneumatic lithotripsy; Urethral obstruction; Urolithic.

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