

Public Abstract

First Name:Scott

Middle Name:Allen

Last Name:Secrest

Adviser's First Name:Stephanie

Adviser's Last Name:Essman

Co-Adviser's First Name:

Co-Adviser's Last Name:

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Title:Effects of furosemide on ureteral diameter and attenuation using computed tomographic excretory urography in normal healthy dogs

A number of different diagnostic imaging modalities or techniques have been used to evaluate veterinary patients with ureteral disease. Over the last 10 years computed tomographic (CT) excretory urography has become the imaging technique of choice because of its superior ability to identify the ureters. However, it can't overcome normal ureteral contractions which can prevent visualization of a segment of the ureter. This means that multiple CT scans may be needed to visualize the ureters completely, which increases anesthesia time for veterinary patients.

In people, furosemide is added to the CT excretory urography protocol to improve visualization of the ureters. The purpose of this study was to determine the effects of furosemide on visualization of the ureters using CT excretory urography in dogs. Fourteen volunteer dogs were utilized in this study which compared ureteral diameter and density with and without the use of furosemide on CT excretory urography.

This study demonstrated that a greater number of ureteral segments could be identified when furosemide was added to the CT excretory urography protocol. In addition, mean ureteral diameter was also larger when furosemide was used. Also, no side effects were identified associated with the administration of furosemide.

Our findings suggest that furosemide may improve visualization of the ureters in dogs by increasing the number of ureteral segments that can be identified and increasing their diameter. This may mean that fewer CT scans would be needed to completely evaluate the ureters and thus a shorter anesthetic period.