

CLIENT EDUCATION HANDOUT

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Small Ruminant Urolithiasis

Overview

Obstructive urolithiasis, or a blockage caused by urinary stones, is a frequent problem in male small ruminants. These uroliths (stones) consist of mucus, protein and minerals in the urinary tract. The composition varies depending on the diet and geography. Calcium based uroliths are common in ruminants grazing lush, rapidly growing clover pastures or being fed alfalfa hay. Urethral obstruction is most commonly seen in show or pet goats and lambs that have a high concentrate and low roughage diet

Species and Animal Groups Affected

Male goats castrated at an early age are more susceptible due to a lack of testosterone driving development of the urethra and urethral process. Urinary stones also occur in male lambs, particularly in feedlots.

Signs

- Straining to urinate or abnormal urination (i.e., dribbling, prolonged urination, bloody urine)
- Signs of pain (i.e., vocalization, flagging tail, grinding teeth, rapid breathing)
- Depression and weakness
- Lack of appetite
- Abdomen appears distended and pain in abdomen may be shown as repeated stretching, kicking, and watching the flank

Causes

- High grain and low roughage diets
- Low water consumption or availability
- Electrolyte imbalances in diet
- Abnormal urine pH

Risk Factors

- Castration of males at an early age followed by improper dietary management

Treatment

- In some cases, the urethral process at the end of the urethra may be amputated allowing passage of uroliths. This is a simple procedure but may not fully alleviate the problem.
- In many cases, surgical intervention is necessary.

Management Considerations

- Water consumption may be increased by providing free salt in the diet along with constant fresh, clean water

Expected Course and Prognosis

- The prognosis is good when cases are found early and appropriate treatment is provided
- If not found early there is risk of bladder rupture and severe electrolyte disturbances which may be fatal
- Recurrence of uroliths is common and management is the key to prevention

Notes

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Blackwell's Five-Minute Veterinary Consult: Ruminants, Second Edition, Christopher C.L. Chase, Kaitlyn A. Lutz, Erica C. McKenzie and Ahmed Tibary © 2017 John Wiley & Sons, Inc.