

Renal and Urinary Bladder Calculi of Korean Native Cattle

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Many urolithiasis has been noted on the ruminants. The factors of urolithiasis are dependent on the sex, age, circumstance, diet, Ca:P ratio, and management. etc. Recently the major factor of the pathogenesis of urolithiasis in feedlot cattle is diet, high concentrate/low roughage feeds with large amount of phosphorous and low Ca:P ratios. In August 2004, calculi were found by chance in hemorrhagic kidney and urinary bladder of six Korean native cattle. The shape of stones in urinary bladder of four cases was yellowish and spherical with smooth surface. In other cases, there were dark-brown spherical stones with rough surface as jag-like shape. However, stones with various shapes and sizes were found in the kidneys. In analysis of urine sediments, struvites(magnesium ammonium phosphate) were detected only in the two cases and one case of them included a compounded form, which consist of struvite, urate, amorphous urate and oxalate. Histopathological features in the urinary bladder and kidney showed same lesions in all cases, which were hemorrhagic interstitial nephritis and cystitis. The causes of urolithiasis were not determined at the present, but it might be associated with dietary imbalance in Korean native cattle.

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