

## **"Rubber jaw syndrome" Secondary to Chronic renal failure due to ethylene glycol poisoning**

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**Introduction:** This disease entity, also known as renal osteodystrophy, can be described briefly as a kidney insufficiency with its subsequent effect on the body, particularly the parathyroid gland and the skeleton.

**Materials and methods:** A 9-month-old, intact female mixed dog was referred to Veterinary Medical Teaching Hospital of Gyeong-sang National University with symmetrically enlarged and protruded upper jaw. There was a history of antifreeze liquid ingestion. On blood screen test and ultrasonography in local animal hospital, the patient was diagnosed as acute renal failure due to ethylene glycol poisoning and was treated for 1 month. In spite of treatment, severe azotemia and hyperphosphatemia were not corrected, and anemia was found. Also, the patient's upper jaw began to enlarge continuously. On physical examination, a strong odor of ammonia from mouth and bone pain existed. To evaluate this upper jaw, radiography was performed in Gyeong-sang university veterinary medical teaching hospital. Skull radiographs revealed thickening of maxilla, decreased bone opacity, cortical thinning, loss of lamina dura and periodontal space in the maxilla, ill-defined radiolucent haloes around the teeth.

**Results:** Diagnosis of renal osteodystrophy is based on clinical findings, radiographic evidence of marked skeletal demineralization, and laboratory evidence of chronic renal failure due to ethylene glycol poisoning.

**Clinical relevance:** Clinical radiographic examination of the skull is a useful tool to evaluate secondary effects of skeleton for renal hyperparathyroidism, and ultrasonography is a sensitive method to detect the internal architecture of kidney and parathyroid. Diagnostic imaging is very valuable to consider stage and prognosis of renal osteodystrophy through skeletal and renal findings.

**Key word:** Chronic renal failure, ethylene glycol, hyperphosphatemia, maxilla

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