

**Prevalence of systolic hypertension in cats with chronic renal failure at initial evaluation.**

**Syme HM, Barber PJ, Markwell PJ, Elliott J.**

Department of Veterinary Basic Science, Royal Veterinary College, London, UK.

**OBJECTIVE:** To determine prevalence of systolic hypertension and associated risk factors in cats with chronic renal failure evaluated in first-opinion practice. **DESIGN:** Prospective study. **ANIMALS:** 103 cats with chronic renal failure. **PROCEDURE:** Systolic arterial blood pressure (SABP) was measured with a noninvasive Doppler technique, and cats that had SABP > 175 mm Hg on 2 occasions or that had SABP > 175 mm Hg and compatible ocular lesions were classified as hypertensive. Information from the history (previous treatment for hyperthyroidism, age), physical examination (sex, body weight), routine plasma biochemical analyses (creatinine, cholesterol, potassium, sodium, chloride, and calcium concentrations), and thyroid status were evaluated as potential risk factors for systolic hypertension. Variables associated with systolic hypertension were evaluated by use of logistic regression. **RESULTS:** 20 (19.4%; 95% confidence interval, 13 to 28%) cats had systolic hypertension. Plasma potassium concentration was significantly and inversely associated with systolic hypertension. **CONCLUSIONS AND CLINICAL RELEVANCE:** Prevalence of systolic hypertension, although clinically important, was lower than that reported previously. The cause of the inverse association between systolic hypertension and plasma potassium concentration is not yet known.