Sedation Of Cats With Chronic Kidney Disease

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Introduction: Previous studies have shown that sedation does not adversely affect kidney function in healthy cats, but the effect on cats with chronic kidney disease (CKD) is unknown.

Methods and Methods: Prospective observational study involving client-owned cats with CKD undergoing routine abdominal sonography. Each cat received standard sedation protocol of oral gabapentin, butorphanol and midazolam intramuscularly, followed by alfaxalone intravenously to effect. Pre-sedation blood tests included haematology and biochemistry. A second blood test for glomerular filtration rate (GFR) markers (symmetric dimethylarginine [SDMA] and creatinine) only was collected at the point of maximum sedation (20 cats) or two hours post-sedation (12 cats).

Results: Thirty-two cats (age 15 years median, range 7 – 20) had pre-sedation SDMA and creatinine concentrations of 19 µg/dL median (Q1 – Q3 14.5 – 23) and 200 µmol/L median (Q1 – Q3 147.5 – 260) respectively. There was no significant difference between pre-sedation and samples obtained at the point of maximal sedation (SDMA 19 µg/dL median, Q1 – Q3 15 – 24.5, p = 0.31; creatinine 200 µmol/L median, Q1 – Q3 147.5 – 255, p = 0.71) or two hours post-sedation (SDMA 25 µg/dL median, Q1 – Q3 20 – 26, p = 0.51; creatinine 200 µmol/L median, Q1 – Q3 175 – 280 ,p = 0.06). Main adverse effect was prolonged sedation after discharge in some cats.

Conclusion: Sedation with a combination of gabapentin, butorphanol, midazolam, and allfaxalone is not associated with short term changes in markers of GFR for cats with underlying CKD undergoing routine, non-invasive diagnostic procedures.