Minimum database or massively debatable bloods? Correlation of urea strip and external laboratory results, and their predictive value for renal disease in 768 dogs and cats

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OBJECTIVES

1. Assess the correlation of urea strips (USt) with external laboratory results (EU). 2. Assess the predictive value of USt for renal disease.

METHODS

Retrospective analysis of clinical records of 347 cats and 421 dogs undergoing USt, external testing, and urine SG measurement at a charity hospital over 3 years. Results were analysed for correlation of results from USt with EU and predictive value of USt results for renal disease (IRIS guidelines).

RESULTS

For dogs and cats, USt showed good (USt within 20% of EU) correlation with EU in 38 cases (5%), fair (USt within 50%) in 100 (13%) and poor (USt within 50%) in 630 (72%). In cats, good correlation was present in 21 (6%), fair in 18 (5%), and poor in 308 (89%). In dogs, good correlation was present in 17 (4%), fair in 20 (5%), and poor in 384 (91%).

Cats with renal disease (n=130) were identified by USt in 42 cases (32%), and cats without renal disease (n=217) were identified in 40 cases (11%) giving a PPV of 19% and a NPV of 31%. Dogs with renal disease (n=157) were identified in 56 cases (35%) and dogs without renal disease (n=264) were identified in 33 cases (13%), giving a PPV of 20% and an NPV of 25%.

STATEMENT (CONCLUSIONS)

The use of urea strips in small animal practice and "minimum databases" is highly questionable as they show generally poor correlation with laboratory values, and have a low positive and negative predictive value for renal disease.

The use of midazolam in combination with medetomidine for premedication in healthy dogs

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OBJECTIVES

To assess the sedative effects of intravenous (IV) midazolam and medetomidine in combination at different doses compared to medetomidine alone in healthy dogs for premedication.

METHODS

Forty client owned dogs presented for elective neutering were enrolled in a prospective randomized blinded study. Dogs were assigned to four groups: medetomidine 15 µg/kg (positive control group), medetomidine 10 µg/kg & midazolam 0.2 mg/kg, medetomidine 5 µg/kg &

midazolam 0.3 mg/kg and medetomidine 5 µg/kg & midazolam 0.2 mg/kg. The same clinician assessed sedation after administration at T+2.5 minutes and T+5 minutes using a composite simple descriptive sedation scale between 0 and 15 (0=no sedation; 15=profound sedation). The dose of propofol for induction, quality of induction, ease of intubation and any adverse events were recorded.

RESULTS

There was no significant difference in sedation scores between treatment groups at T+2.5 minutes or T+5 minutes (p=0.82 and p=0.63 respectively). Administration of midazolam in combination with medetomidine resulted in 71% of dogs displaying paradoxical behaviours (p<0.0001) such as agitation, excitation, restlessness, aggression and vocalization which was different from pre-sedation state. Propofol requirement was not different between groups. Induction and tracheal intubation quality was smooth in all groups.

STATEMENT (CONCLUSIONS)

In healthy dogs, at the doses studied, the combination of midazolam-medetomidine administered IV for premedication provided moderate sedation but was associated with a high incidence of paradoxical behaviours. This drug combination IV is not recommended for premedication in dogs.