

Platelet Activation and Clopidogrel Effects on ADP-Induced Platelet Activation in Cats with or without the A31P Mutation in *MYBPC3*

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OBJECTIVES: (1) To determine effects of clopidogrel on platelet responsiveness in cats with and without A31P mutation. (2) To characterize variability in feline platelet response to clopidogrel

METHODS: 14 cats in a healthy colony of both Maine Coon and mixed domestic cats. 8 homozygotes for A31P, 6 wild type. All had echo prior to study with no evidence of HCM. Received 18.75mg clopidogrel PO for 14 days. The percentage change in ADP induced platelet aggregation was assessed between start end end of treatment. Non-responders had <10% change.

RESULTS/DISCUSSION:

Cats with A31P mutation are not only likely to develop HCM but also have increased expression on P-selectin, platelet-derived micro vesicles and platelet endothelial cell adhesion molecule-1. In this study cats with the A31P mutation had an overall increase in platelet aggregation compared to wild type cats.

There were 2 non-responders 13 responders with median percentage of inhibition in responders 86%. Both non-responders already had low ADP-induced platelet aggregation prior to treatment, but overall normal response to thrombin before and after treatment. There is high inter-individual variability in response which is similar to what is seen in human medicine.

Overall there were potent anti-platelet effects in both A31P cats and wild type cats, but it is likely that some cats with HCM exhibit clopidogrel resistance. Clinical significance of this is unknown.

Bacterial Cholangitis, Cholecystitis, or both in Dogs

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OBJECTIVES: To characterise the clinical features of bacterial cholangitis and cholecystitis in dogs.

METHODS: Multicenter retrospective case series of 27 client owned pets in Ireland/UK. Inclusion criteria of histopathological confirmed cholangitis/cholecystitis and bile culture/cytology supporting bacterial aetiology. Biopsies were obtained via laparotomy or ultrasound guided needle biopsy.

RESULTS/DISCUSSION:

During the study period there were approximately 460 cases of hepatitis, only 27 of cholangitis/cholecystitis - prevalence of 6%. Cases had both chronic and acute presentations. Clinical pathology abnormalities included elevated ALP (25/26), elevated ALT (25/26), hyperbilirubinemia (20/26), hypercholesterolemia (13/22), and inflammatory leukogram (21/24, 7 of which had bands/toxic changes).

Ultrasound was directly instrumental in decision making in 25/26 cases - indicating need for surgical intervention or changes suggestive of liver/gall bladder disease prompting sampling. One case had no ultrasonographic changes identified.

While healthy human bile is normally sterile it is unclear if this is the case in dogs as there are reports of culturing bacteria from healthy livers/gall bladders. 22/23 bile cultures were positive, 9/9 gall bladder wall cultures and 3/10 liver cultures. 40 separate isolates: E Coli in 17, Enterococcus in 8, clostridium in 5. In 31 of 32 cases with sensitivity performed there was evidence of antibiotic resistance. 10/16 E Coli had resistance to 3 or more classes, two thirds resistant to clavamox, and 3 isolates also resistant to fluoroquinolones and 1st gen cephalosprins. All of the enterococci had resistance to multiple agents. 2 cases were resampled at a later time and had developed resistance to fluorquinolones. No correlation was identified between culture/susceptibility and prognosis.

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Hypothermia in Uremic Dogs and Cats

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OBJECTIVES: To determine the prevalence of uremic hypothermia and the effects of improving uraemia on body temperature in patients undergoing intermittent hemodialysis

METHODS: Retrospective review of 122 uremic dogs and 79 uremic cats undergoing intermittent hemodialysis. Cases with chronic end stage kidney disease were excluded. A group of control animals in the ICU that were non-azotemic were used - 2 controls for each dog, one control for each cat.

RESULTS/DISCUSSION:

In cats hypothermia was significantly higher (38% of cases), and mean temp significantly lower in uremic than nonuremic patients. Hypothermia was determined to be primarily a consequence of the uraemia itself. Azotemia should be considered in hypothermic cats if renal values are not immediately available.

In dogs prevalence of hypothermia was not significantly higher but mean temp was still significantly lower. Hypothermia was more correlated with bodyweight than the uraemia itself. This may indicate that hypothermia in dogs is generally related to critical illness.

Post-dialysis in dogs there was an increase in body temperature hypothesized to be secondary to one or a combination of removal of uremic toxins or endogenous cryogens, or as a direct consequence of the dialysis process. In cats those less than 5kg actually had a decrease in temp post-dialysis.