period 2007–2013 and had a CBC performed on admission. The demographic data and admission laboratory variables were compared between survivors and non-survivors. Correlations between laboratory variables were investigated. Receiver operating curve (ROC) analysis was performed. A multivariable logistic regression model was performed to determine the effect of RDW as an independent prognostic indicator.

RESULTS

Mortality in the study population was 41.7% (25/60). The mean $\pm$ SD RDW was significantly higher in non-survivors (16.38 ± 1.32) than survivors (15.45 ± 1.03) ($p = 0.004$). The RDW had a significant positive correlation with lactate ($r = 0.342$, $p = 0.008$) and with haematocrit (HCT) ($r = 0.538$,

$p < 0.0005$). A ROC analysis of RDW for predicting non-survival yielded an area under the curve of 0.70 with a cutoff of 16.65 being 89% specific but only 40% sensitive for non-survival. When RDW, HCT and lactate were entered into a multivariate model, only RDW, retained a statistically significant association with mortality ($p = 0.036$ for RDW).

CONCLUSION

An elevated red cell distribution width is associated with all cause mortality in dogs with septic peritonitis. Further investigation is needed to allow the clinically relevant use of RDW as a novel predictor of mortality in patients with septic peritonitis and investigate the mechanism behind this association.

Analgesia for cats after ovariohysterectomy with either buprenorphine or methadone administered in a 'quad' combination: to develop best practice for cat shelter neutering programs

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Effective neutering programs and performing pre-pubertal neutering can help to control the number of stray, unwanted and abandoned cats, therefore enhancing cat welfare. The use of a medetomidine-midazolam-ketamine-buprenorphine "quad" protocol, developed at the RSPCA Greater Manchester Animal Hospital (GMAH) has been previously described for use in such programs. This study aimed to compare that protocol with one consisting of medetomidine-midazolam-ketamine and methadone, and to see whether there was any significant difference in post operative pain in cats undergoing ovariohysterectomy.

One hundred female cats (age 2–86 months) admitted to the RSPCA GMAH for ovariohysterectomy were included in a

blinded, randomised clinical trial, and allocated to one of two groups. Group A were anaesthetised with an intramuscular injection of 50mg/m² ketamine, 2.5mg/m² midazolam, 500µg/m² medetomidine and 5mg/m² methadone. Group B received 60mg/m² ketamine, 3mg/m² midazolam, 600µg/m² medetomidine and 180µg/m² buprenorphine. All cats also received 0.3mg/kg meloxicam. Anaesthesia was supplemented with isoflurane (0.5% inspired) mixed with oxygen. All ovariohysterectomy surgeries were carried out by the same veterinary surgeon, who was blinded to the anaesthetic used. All cats were reversed with atipamazole one hour after induction.

Cats were pain scored by one RVN (who was also blinded to the anaesthetic used) pre-operatively, and 2, 4, 8 and 24 hours post operatively using a simple descriptive scale (from 1–5), the Colorado State acute pain scale (0–5) and by measuring the mechanical nociceptive threshold (MNT; force, N) close to the surgical site with a pneumatic probe (Prod, Topcat Metrology). Heart and respiration rates were measured pre-operatively, and at 5 minute intervals during surgery.

Data was analysed using appropriate statistical tests, including students t-tests, and mixed between-within group ANOVA. Statistical significance was $p \leq 0.05$.

There was no significant difference between the groups in age, body weight and surgery time. In general, pain scores were not statistically different between the groups. HR and RR were significantly lower intraoperatively than pre-operatively for both groups, but there was no significant difference between groups for both pre-op and intra-op HR and RR. Pain scores were low for all cats, and none required rescue analgesia.

Both anaesthetic protocols provide adequate post-operative analgesia following ovariohysterectomy in cats.