Evaluation of preprandial and two-hour postprandial serum bile acid concentrations in referral population of dogs

Veronica Gonzalo Nadal, Rodolfo Cappello, Alenka Hrovat

North Downs Specialist Referrals, Bletchingley, United Kingdom

OBJECTIVES

To examine preprandial (PreSBA) and postprandial serum bile acid (PostSBA) concentrations in dogs referred for a work up of neurological, hepatobiliary disease and portosystemic shunts (PSS).

METHODS

All dogs with measured PreSBA and PostSBA concentrations were included retrospectively from 2014–2017. Dogs with increased bilirubin and incomplete BA test

results were excluded. Dogs were divided into four groups based on the final diagnose, i.e. neurological, hepatobiliary disease, PSS and other.

RESULTS

182 dogs met the inclusion criteria. Primary neurological disease was diagnosed in 48/182 dogs. Idiopathic epilepsy was established in 29 and intracranial or spinal disease in 19 dogs with median PostSBA 3.4 (range, 0.8–31.8 $\mu\text{mol/L}$) and 12.1 (range, 0.2–60.5 $\mu\text{mol/L}$), respectively. Hepatobiliary disease was diagnosed in 32/182 dogs with PostSBA 19.2 (range, 0.1–147.5 $\mu\text{mol/L}$). PSS was diagnosed in 21/182 dogs with PostBA 140.2 (range, 43.5–283.3 $\mu\text{mol/L}$). 81 dogs presented with conditions other than hepatobiliary and neurological disease with median PostSBA 4.3 (range, 0.1–61.6 $\mu\text{mol/L}$). PreSBA and PostSBA concentrations in dogs with PSS were significantly higher ($p < 0.01$) than in dogs with primary neurological and hepatobiliary diseases. PreSBA and PostSBA concentrations in 19/21 dogs with PSS exceeded 75 $\mu\text{mol/L}$. All dogs with primary neurological disease and idiopathic epilepsy had PreSBA and PostSBA concentrations below 75 $\mu\text{mol/L}$.

STATEMENT (CONCLUSIONS)

Bile acid concentrations in dogs with neurological and hepatobiliary disorders are significantly lower than in dogs with PSS. Based on results of this study PSS is unlikely in dogs with PreSBA and PostSBA concentrations below 75 $\mu\text{mol/L}$.

Assessment of visceral pain and quality of life in dogs with chronic enteropathy – A controlled questionnaire based pilot study

Jorge Pérez-Accino, Amy Miele, Silke Salavati

Royal (Dick) School of Veterinary Studies, Roslin, United Kingdom

OBJECTIVES

Assessing visceral pain in dogs diagnosed with chronic enteropathy (CE) and its relation to quality of life (QOL).

METHODS

Institutional veterinary and human ethic committees approved the study. Adult dogs presenting with chronic gastrointestinal (GI) signs to a referral hospital ($n = 28$)

were prospectively enrolled and received a standard diagnostic work-up; 18/28 were diagnosed with CE and 10/28 with suspected CE, lacking histopathology. A modified Canine Brief Pain Inventory® (mCBPI) questionnaire was completed by the owners and a visceral pain score (modified Colorado State University Canine Chronic Pain Scale, mCSUCCPS) completed by a veterinarian. A group of control dogs ($n = 22$) was scored as well. Mann-Whitney U test was used to assess differences in scores between cases and controls. Spearman's rank correlation was determined for specific parameters. Significance was set at $p < 0.05$.

RESULTS

The mCBPI and mCSUCCPS scores were significantly higher in dogs with CE compared to controls ($p = 0.0001$, $p = 0.0008$ respectively): 15/28 CE dogs (54%) were perceived to have fair to poor QOL. There was a strong negative correlation between owner perceived pain and QOL ($r = -0.81$, $p < 0.05$). No significant correlation was found between prying position frequency and mCBPI ($r = 0.31$, $p = 0.09$) or between mCBPI and mCSUCCPS ($r = 0.30$, $p = 0.11$).

STATEMENT (CONCLUSIONS)

Visceral pain is an important feature of canine CE, which might not readily detected on physical examination.