RESULTS

Nine dogs and eight cats were included in the study. The included dogs had intussusception ($n=5$), neoplasia ($n=3$) and inflammatory bowel disease (IBD) ($n=1$). The included cats had neoplasia ($n=6$), intussusception ($n=1$) and IBD ($n=1$). Two dogs with neoplasia (lymphoma) at the ICV did not survive the postoperative period. The remaining dogs and all cats survived beyond discharge.

Within the intussusception group, three dogs were still alive (median: 647 days) and two dogs were lost to follow-up 342 and 469 days, respectively, after surgery. The dog with neoplasia (leiomyosarcoma) at the ICV was lost to follow-up 676 days and the dog with IBD was still alive 152 days after surgery. Using various combinations of hypoallergenic diet, antibiotics and/or adjuvant therapy, five dogs had no gastrointestinal signs and two dogs had soft faeces.

Five cats with ICV resection due to neoplasia (adenocarcinoma $n=4$ and lymphoma $n=1$) had a median survival

time of 443 days after surgery. The remaining cat with ICV neoplasia (lymphoma) was lost to follow up after hospital discharge. Treatment was based on a combination of chemotherapy, hypoallergenic diet, antibiotics and/or adjuvant therapy. Four cats had no clinical signs until neoplasia relapsed and the fifth cat had persistent mild diarrhoea. The cats with intussusception and IBD were euthanised 257 and 2167 days, respectively, due to unrelated diseases. No clinical signs were reported and only the latter cat received a hypoallergenic diet.

CONCLUSION

The most common cause of ICV removal in dogs was intussusception and neoplasia in cats. Patients undergoing resection of the ICV and surviving the postoperative period may have a good long-term outcome with mild or absent clinical signs.

Variation in histopathological changes in multiple liver biopsies from dogs and cats with a congenital portosystemic shunt and correlation with portal blood flow

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INTRODUCTION

Characteristic hepatic histopathological changes are well recognised in animals with Congenital Portosystemic Shunts (CPSS). However, this information is typically based on a biopsy sample from a single liver lobe; it is unknown whether there is significant variation between different lobes. The aim of the study was to investigate variation in histopathological findings between left and right liver lobes in biopsies taken from animals during surgery to address CPSS and to correlate histopathology with variations in portal blood flow.

MATERIALS AND METHODS

A retrospective review of cats and dogs undergoing CPSS surgery with concurrent intra-operative mesenteric portovenogram (PVG) and biopsies taken from both left and right liver lobes between January 2009 and June 2013 was performed. Data recorded included signalment, surgery report, radiologist

PVG report and surgeon PVG description. Radiologist PVG reports and surgeon PVG descriptions were combined to produce a subjective PVG lateralisation (greater flow to right or left portions of the liver or the same to both). Biopsy samples were re-read by a board certified pathologist and scored on 10 different histological features.

RESULTS

Eighteen dogs and four cats were included in the study.

Median age of cats was 14 months. Median age of dogs was 10 months.

18 CPSS were extrahepatic and four were intrahepatic.

Blood flow as assessed by subjective PVG score was greater on the left side of the liver in five cases, greater on the right side in nine cases and there was no difference between the two sides in eight cases.

In bilateral histological grading comparisons, 170/220 (77%) were identical. Total histopathological score was higher for the right side in 12 cases, the left side in three cases and identical between the two sides in seven cases.

The lateralisation of the PVG and histopathological findings were only in agreement in 6/22 (27%) animals

CONCLUSION

In dogs and cats with CPSS, histopathological findings were very similar between left and right liver biopsy samples (77%). This suggests that histopathological changes are typically consistent in different liver lobes and supports the harvesting of a single biopsy sample for routine diagnostic purposes. There was poor correlation between lateralisation of intraoperative PVG and histopathological lateralisation of concurrent left and right liver biopsies. This demonstrates that hepatic portal blood flow at the time of CPSS attenuation does not correlate with histopathological severity of disease.

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