Antibiotic Susceptibility Profiles and the Important Role They Play in the Survival of Dogs with Septic Peritonitis

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Introduction
Canine septic peritonitis is inflammation of the peritoneal cavity secondary to bacterial contamination and infection. Inflammation of the peritoneal cavity is most commonly the result of intestinal perforation due to foreign bodies, administration of non-steroidal anti-inflammatory drugs, neoplasia, or dehiscence of previous surgical sites. Other sources of bacterial contamination include the biliary tract, urinogenital tract and trauma to the abdomen. Clinical signs of dogs with septic peritonitis include peritoneal effusion and abdominal pain. Most animals with septic peritonitis are systemically ill and exhibit nonspecific clinical signs such as anorexia, vomiting, mental depression and lethargy. While diagnostic imaging findings consistent with abdominal effusion or the presence of pneumoperitoneum are good evidence of septic peritonitis, a diagnosis is based on abdominocentesis or diagnostic peritoneal lavage and analysis of the fluid sample for presence of toxic neutrophils with intracellular bacteria. Comparison of glucose and lactate concentrations with peritoneal lavage and analysis of the fluid sample for presence of toxic neutrophils with intracellular bacteria. A comparison of glucose and lactate concentrations with peritoneal lavage and analysis of the fluid sample for presence of toxic neutrophils with intracellular bacteria.

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Methods
The antibiotics administered were segregated into three groups: (1) Presurgical (defined as antibiotics administered prior to arrival at the VTH or at the VTH beginning greater than one hour prior to surgery), (2) Perioperative (defined as given less than or equal to one hour prior to surgery and during the surgical procedure) and (3) Postoperative (defined as given after completion of the surgical procedure). The postoperative antibiotic group was subdivided into (a) dogs that had suitable antibiotics given presurgically, perioperatively, and postoperatively and (b) dogs that had unsuitable antibiotics given presurgically and postoperatively but changed to suitable antibiotics postoperatively. We compared the number of survivors against dogs that died or had euthanization for each of the above antibiotic treatment groups and subgroups.

Results
The three most common bacteria found in 28 cases of dogs with septic peritonitis were Escherichia coli followed by Enterococcus spp and then Strepococcus spp. In 16/28 (57.1%) of cases with septic peritonitis resulted in survival while 12/28 or 42.9% of the cases with septic peritonitis resulted in death or euthanasia. When compared to previous literature these percentages are consistent with the typical survival rates. A comparison of glucose and lactate concentrations with peritoneal lavage and analysis of the fluid sample for presence of toxic neutrophils with intracellular bacteria. A comparison of glucose and lactate concentrations with peritoneal lavage and analysis of the fluid sample for presence of toxic neutrophils with intracellular bacteria. A comparison of glucose and lactate concentrations with peritoneal lavage and analysis of the fluid sample for presence of toxic neutrophils with intracellular bacteria.

Conclusion
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