

VETERINARY VOICE: Tips of the Trade

Critical Care – Diagnosing Peritonitis

Definition?	Peritonitis is the inflammation of the peritoneal lining. This inflammation can affect the omentum, visceral and parietal peritoneal surfaces.
Pathophysiology?	<ul style="list-style-type: none">• The etiology can be grouped into chemical, septic, or a combination of chemical and septic peritonitis.• <u>Chemical peritonitis</u> is due to a sterile irritation caused by substances such as urine, bile and pancreatic enzymes. The inciting causes for chemical peritonitis include trauma, inflammation and neoplasia.• <u>Septic peritonitis</u> is due to free bacteria in the abdominal cavity. The most common causes for septic peritonitis include perforating foreign bodies, necrosis of the gastrointestinal tract from obstruction, gastric dilation with ovules, gastrointestinal bacterial translocation, intussusceptions and/or erosive neoplasia. Other organs responsible for septic peritonitis include the liver, kidney, prostate, uterine infections and rarely, the gall bladder.
History and clinical signs?	<ul style="list-style-type: none">• Animals with peritonitis typically present with non-specific histories of anorexia and lethargy. Vomiting, diarrhea and hunched posture or wide-based posture with arched back and lowered front posture (praying posture) can be noted.• Patients can be ambulatory or recumbent and are often in compensatory or decompensatory shock (weak pulses, bradycardia/tachycardia, CRT < 1 sec or >2.5 sec), with dull mentation, and may or may not be febrile or jaundiced. The abdomen can be tense to painful and a fluid wave may be present.
Diagnosis?	Diagnosis can be challenging but can be made by putting together results of multiple tests. Bloodwork includes CBC, biochemical profile, and lactate +/- coagulation panel. Abdominal radiographs are taken to assess for signs of free air (ruptured GI tract), foreign body, GDV, intussusception, mesenteric torsion. Abdominal ultrasound, if available, is very helpful as it will aid in identification of pockets of fluid for centesis. Abdominocentesis or diagnostic peritoneal lavage if abdominocentesis is negative is necessary to collect fluid. Fluid cytology with analysis (protein, pack cell volume, creatinine, bilirubin, glucose, lactate and amylase can be compared to blood values) confirms the diagnosis.
Questions?	The Veterinary Specialty Center of Tucson has a board-certified criticalist caring for critical cases every day of the week. They are also available to answer questions or accept referrals 7 days a week. The critical care service is open 24 hours a day and is staffed by highly trained doctors and technicians at all times. Board-certified criticalists have four additional years of training after veterinary school and are certified by the American College of Veterinary Emergency and Critical Care to assure competency in advanced veterinary critical care.
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