

capsules

THE CURRENT LITERATURE IN BRIEF

Pancreatitis: Lessons from the Human Model

In humans, acute pancreatitis (AP) is usually a mild, self-limiting disease. However, up to 20% of human patients develop a more severe form of the disease, characterized by sepsis, multiple organ failure, and mortality rates approaching 30%. Scoring systems, serum markers, and advanced imaging methods are used to assess the severity of disease to optimize patient management. Because the pathophysiology of the disorder is similar between humans and dogs, some of the concepts used to assess severity and treatments for people may be useful in dogs.

Scoring system: In veterinary medicine, a severity score relating pancreatic enzyme concentrations to an organ score based on the number of extrapancreatic organs involved has been proposed. More studies are needed to determine its usefulness in veterinary medicine.

Serum markers: Trypsinogen activation peptide (TAP) is produced when trypsinogen is cleaved to form the active protease, trypsin. With initiation of AP, trypsinogen is activated, resulting in TAP release. Studies show that TAP levels are more sensitive and specific than amylase levels in diagnosing AP in humans. TAP levels may also be a good tool in dogs, except that they fail to detect mild pancreatitis.

C-reactive protein (CRP) is elevated in dogs with infection, trauma, inflammation, and experimental pancreatitis. Recent abstracts suggest that CRP concentrations may have prognostic value as they differ significantly between dogs with mild pancreatitis and those with severe pancreatic necrosis.

Diagnostic imaging: Contrast-enhanced computed tomography is the preferred method for diagnosis, severity determination, and identification of complications of AP in humans. Although not readily available, it may one day be useful in dogs. Abdominal ultrasonography is currently the most widely used technique for evaluating the canine pancreas.

COMMENTARY: This article summarizes the current information on severity assessment, diagnostic imaging, and treatment of AP in humans and dogs. This disorder can lead to life-threatening systemic inflammation, resulting in multiple organ failure and death in both humans and dogs. Novel concepts used to assess the severity of AP and its treatment in humans may apply to dogs. Applying treatment methods of humans to dogs is one more avenue to pursue in managing this often difficult disease.—*R. Michael Thomas, DVM*

Acute pancreatitis in dogs. Holm JL, Chan DL, Rozanski EA. J VET EMERG CRIT CARE 13:201-213, 2003.