

The LOE Down on Acute Pancreatitis



This paper reviewed 158 articles relating to treatment recommendations

for acute pancreatitis (AP) in both dogs and humans. It assigned each recommendation a level of evidence (LOE) explaining how well the treatment is supported by science or expert opinion. Level A represented recommendations with the highest LOE and Level D the lowest. Treating existing dehydration and ongoing fluid losses with IV fluid therapy—typically a mainstay of AP treatment—carries a reasonable LOE. Antiemetics help decrease risk for dehydration and improve overall comfort level; use of maropitant as a central and peripheral antiemetic is the preferred first-line treatment. Analgesia to control both local and visceral pain can be achieved

via single-agent or multimodal therapy using opioids, NMDA antagonists, α_2 -adrenergic agonists, and adjuvant drugs (eg, tramadol, gabapentin). Lidocaine is an attractive option for pain control in AP because of its anti-inflammatory properties and ability to control central and peripheral pain when administered as a CRI.

Nutritional management in AP is another area gaining attention. The prior recommendation of “resting the pancreas” and keeping the patient NPO has given way to a new theory that feeding the patient as soon as it is tolerated helps deliver nutrition directly to damaged intestinal cells while reducing bacterial translocation and decreasing pancreatic inflammation. Many treatment recommendations are extrapolated from human patients with AP; larger veterinary studies are required to fully evaluate ideal treatment for AP in dogs.

Global Commentary

The practice of withholding food from dogs with AP probably stems from Pavlov’s classic experiments on gastric acid secretion. Pavlov (with

Heidenhain) showed that the anticipation of food, as well as its ingestion and digestion, caused acid stimulation and pancreatic-enzyme secretion through various neurohormonal pathways.¹ Therefore, logically, withholding food and even not exposing the dog to the sight or smell of food should reduce the pancreatic-enzyme secretion that causes pancreatitis. The evidence now is that “resting the pancreas” is actually harmful and the prognosis is improved if some enteral nutrition is provided in the first 48 hours. However, enteral nutrition has only become possible because of the development of effective antiemetics and improved analgesia.—*Ed Hall, MA, VetMB, PhD, DECVIM-CA*

Reference

1. Ivan Pavlov-Biographical. Nobelprize.org. http://www.nobelprize.org/nobel_prizes/medicine/laureates/1904/pavlov-bio.html. Accessed October 9, 2015.

Source

Mansfield C, Beths T. Management of acute pancreatitis in dogs: a critical appraisal with focus on feeding and analgesia. *J Small Anim Pract*. 2015;56(1):27-39.

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TBI & Pituitary Dysfunction

Pituitary dysfunction, a relatively common complication of traumatic brain injury in humans, may afflict brain-injured dogs as well. It can go undetected on routine diagnostic testing and contribute to morbidity. Dogs ($n = 17$) with nonfatal head trauma and associated neurologic dysfunction were included in this study.

Blood collected between <1 and 1460 days posttrauma was assayed for

thyroid-stimulating hormone (TSH), total thyroxine (TT4), free T4 (FT4), basal cortisol, endogenous adrenocorticotrophic hormone (ACTH), and insulin-like growth factor-1 (IGF-1). Decreased serum IGF-1 concentration was noted in 7 cases; TT4 and TSH were decreased in 4 cases; and FT4 measured in 3 of these dogs was also decreased. Cortisol and ACTH were undetectable in 2 dogs; an ACTH stimulation test performed on 1 was consistent with hypoadrenocorticism. Both dogs had multiple concurrent deficiencies with associated clinical signs suggestive of panhypopituitarism. The authors conclude that dogs with traumatic brain injury may develop hypothalamic-anterior pituitary dysfunction that might require treatment.

Commentary

Hypoadrenocorticism and hypothyroidism are well-recognized diseases that respond well to therapy. Testing for both diseases immediately following injury can be misleading. An ACTH stimulation test may not be diagnostic for several weeks following injury. A low TSH concentration in combination with a low free or total T4 can be consistent with euthyroid sick syndrome or secondary or tertiary hypothyroidism. Thus, diagnostics must be interpreted in combination with clinical signs.—*Patty Lathan, DVM, DACVIM*

Source

Murtagh K, Arrol L, Goncalves R, Granger N, German AJ, Smith PM. Hypothalamic-anterior pituitary hormone deficiencies following traumatic brain injury in dogs. *Vet Rec*. 2015;176(1):20.