ARDS in Cats and Dogs

Acute respiratory distress syndrome (ARDS) is a term that was first used in human medicine in 1967 to describe a syndrome of acute lung injury (ALI) with pulmonary edema and acute respiratory failure. There are numerous causes, but in dogs it is commonly a sequela of bacterial pneumonia, aspiration pneumonia, sepsis, or shock. Risk factors have not been identified in cats, but severe sepsis has been associated with necropsy findings consistent with ALI/ARDS. It appears that inflammatory changes are similar for humans, dogs, and cats. The clinical signs are often delayed for 1 to 4 days after the triggering event. Patients with noncardiogenic pulmonary edema and appropriate risk factors should be suspected of having ALI or ARDS. Mortality is close to 100% and patients typically have 3 overlapping phases: exudative, proliferative, and fibrotic. The exact mechanisms are not completely understood; however, a central role for macrophages, neutrophils, and a variety of cytokines is present.

COMMENTARY: ARDS is a secondary inflammatory response to injury. The resulting inflammatory cascade leads to devastating pulmonary damage. Further understanding of the pathophysiology of this syndrome should lead to abating the inflammatory cascade and prevention of the pathologic process.—Henry Childers, DVM


Surgery for Lick Granuloma

Canine acral lick dermatitis or lick granulomas are difficult to treat and in some cases surgical removal is indicated. Wound dehiscence, owing to excessive skin tension and repeated trauma, are often complications of the surgery. This report describes a technique using a phalangeal fillet to reconstruct a nonhealing wound on the lateral metatarsal region in a dog. The first step involved excising the wound en bloc. Open wound management with daily lavage and wet-to-dry dressings was started. Staphylococcus aureus was cultured, and the dog was treated with trimethoprim-sulfonamide. The dog was also given clomipramine in an attempt to address the suspected psychogenic cause of the original lesion. After 3 weeks of medical management, the first attempt at grafting was undertaken. The skin graft was full-thickness and meshed, harvested from the right lateral thoracic region. Ten days after surgery, it was apparent that the graft was failing. The phalangeal fillet technique was performed at that time. The neurovascular bundles on the plantar aspect of the foot were identified and retracted, and the proximal, middle, and distal phalanges were removed. The fifth digital pad was excised as well. Bipolar cautery and digital pressure were used to control bleeding. Partial separation of the most proximal aspect of the flap did occur but was managed with minimal debridement of the skin edges and addition of several more skin sutures. The dog recovered with good functional results.

COMMENTARY: Wounds of the phalangeal region are difficult to reconstruct when a large defect is created. Phalangeal fillet is a useful one-stage technique for cosmetically covering wounds due to the viable and local blood supply provided. This technique was very successful in this report given that the lesion involved the fifth digit, which is not a major weight-bearing digit and so is easily sacrificed. Caution should be taken using this technique on the major weight-bearing third or fourth digits, as it is likely to cause lameness.—Kristy Broaddus, DVM, Diplomate ACVS


New Enteroscopy Technique

A new double-balloon enteroscopy technique was described in 2 dogs. With this push and pull technique, an endoscope is advanced through the intestine by being held alternately by a balloon at the tip of the endoscope and a balloon on the tip of an overtube. Both oral and anal approaches were used in the study. The oral approach was completed in 2 hours and 10 minutes and involved 26 advancing maneuvers to an estimated total depth of 4.95 m. The anal approach required 15 minutes, with an estimated depth of insertion of 95 cm, and was completed with 4 advancing movements. No complications were noted in either dog. The technique was not difficult to perform, and allowed safe enteroscopy of the entire small intestine.

COMMENTARY: While endoscopy has become an increasingly common method for diagnosis and treatment of gastrointestinal disorders, the midregion of the small intestine has been left relatively neglected because of the difficulty in accessing this area. The technique described here has been safely used and well tolerated in humans. One problem identified is consistently and accurately determining the depth of insertion of the enteroscope and the location of pathologic changes. The 2 reports of complications in humans (1 of perforation and 1 of subsequent abdominal pain and fever) imply that any fragile lesions observed during endoscopic examinations should not be crossed with the endoscope. Further studies with more dogs will help determine the safety and utility of this technique.—Jennifer L. Schori, VMD