

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.



Photo by Elizabeth Harbin

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*

Acute respiratory distress syndrome in dogs and cats: A review of clinical findings and pathophysiology. DeClue AE, Cohn LA. *J VET EMERG CRIT CARE* 17:340-347, 2007.