Surviving Diabetic Ketoacidosis

Dogs with diabetic ketoacidosis (DKA) are hyperglycemic, acidotic, and ketotic. DKA is a severe, life-threatening complication of diabetes mellitus. Dogs with DKA usually have type 1 diabetes mellitus with a relative or absolute insulin deficiency. This retrospective study described the outcome of 127 dogs with naturally occurring DKA. The dogs ranged in age from 4 months to 16 years (median, 8 years) when they were diagnosed with diabetes and were 8 months to 16 years of age when diagnosed with DKA. Eighty-seven of the dogs were diagnosed with DKA at the time of diagnosis of diabetes mellitus. Concurrent disease with 1 or more disorders was common: 52 dogs had acute pancreatitis, 21 had urinary tract infections, and 19 had hyperadrenocorticism. Of the 121 dogs that were treated, 89 survived and were released from the hospital. The dogs with coexisting hyperadrenocorticism were the least likely to be discharged. The nonsurvivors had lower ionized calcium concentration, lower hematocrit, lower venous pH, and larger base deficits than did survivors. Hypokalemia and hypophosphatemia were commonly diagnosed and contributed to morbidity but not mortality when properly treated.

COMMENTARY: More than half of the dogs with DKA in this study were newly diagnosed diabetics and more than 70% had concurrent disease. The good news is that the majority did survive and were discharged from the hospital. This is a good review of what to expect with ketoacidotic patients. —Patricia Thomblison, DVM, MS