Using New Human Insulin for Cats

This study compared the efficacy of once-daily glargine insulin to twice-daily lente insulin in cats with diabetes mellitus. Cats were fed a high protein, low-carbohydrate diet — either canned, dry, or a combination of both — during the study. Cats were randomized to receive either glargine or human recombinant lente insulin. Cats were reevaluated at weeks 1, 2, 4, 8, and 12. Effective glycemic control was based on the owner’s perception of the resolution of clinical signs, average (over 16 hours) blood glucose concentrations < 300 mg/dl, blood glucose nadir < 200 mg/dl, and serum fructosamine concentrations < 450 mmol/L. Glargine insulin is a new human insulin analog that has a slower absorption rate and thus a slower onset of action, as well as a relatively constant, peakless basal insulin supply. Thirteen cats completed this study (lente, n = 7; glargine, n = 6), and all had significant improvement in serum fructosamine and glucose concentrations.

COMMENTARY: This paper compares the use of once-daily glargine to twice-daily lente insulin in diabetic cats on a low-carbohydrate, high-protein diet (Purina DM). Once-daily glargine and twice-daily lente insulin therapy were equivalent in controlling previously uncontrollable diabetes in cats. Previous papers have reported good remission rates in cats receiving glargine insulin twice daily in conjunction with a low-carbohydrate diet. Four of the 13 cats (7 receiving lente, 6 receiving glargine) reverted to a non–insulin-dependent state, underscoring the importance of diet in the management of feline diabetes mellitus.—Deborah S. Greco, DVM, PhD, Diplomate ACVIM