LOSS OF CONTROL OF A PREVIOUSLY CONTROLLED DIABETIC DOG OR CAT

1. Are any concurrent medications that can cause insulin resistance being administered?
2. Is the insulin being handled and administered correctly?

- Yes
- No

RELAPSED OR NEVER REGULATED DIABETIC

1. Correct the problem
2. Consult with a specialist

*CORRECT HANDLING OF INSULIN
- Using proper syringe
- Storing in fridge
- Shaking vs. rolling as appropriate, depending on type of insulin
- Appropriate injection technique
- Replacing with a new bottle if the current insulin is expired, discolored, cloudy, or flocculent

*UPPER RANGE = highest dose typically used in uncomplicated diabetes, achieved after stepwise dose increases
- Dog: 1–1.5 U/kg*
- Cat: 5 U/cat*

*author opinion

*COMMON PHYSICAL EXAM FINDINGS NOTED IN DIABETICS WHO ARE DIFFICULT TO REGULATE
1. Severe dental disease
2. Intact female
3. Obesity
4. Pot-bellied appearance, panting, bilateral symmetrical alopecia

*BASELINE DIAGNOSTICS
- CBC, chemistry with electrolytes
- U/A, culture, UPC
- Blood pressure
- T4 in cats
- Triglycerides in susceptible dog breeds

*CONCURRENT MEDICATIONS THAT CAN CAUSE INSULIN RESISTANCE
1. Oral or topical steroids (including otic, ophthalmic, and cutaneous preparations)
2. Progestins (including exposure to owners’ skin creams)
3. Cyclosporine

*No
- Yes
- Not sure

Perform PE, baseline diagnostics and BGC (if they have not already been done)

Increase insulin dose by 10% or ½ unit/patient (whichever is greater) then adjust based on BGC and clinical signs

Discontinue medications and re-evaluate in 2 weeks

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If concurrent disease is detected, treat appropriately

Perform ovariohysterectomy in intact females

Did clinical signs of diabetes resolve?

Yes

Refer to “Monitoring Algorithm”

No

Refer to a specialist

Hypoglycemia detected on BGC regardless of high end glucose levels

Consider 2nd level* diagnostics and treat concurrent disease if identified (see text for details)

Try another type of insulin at a “starting dose” (0.25–0.5 U/kg in dogs, 1–2 U/cat)

Is there improvement or resolutions of clinical signs?

Yes

Refer to “Monitoring Algorithm”

No

Consider 2nd level* diagnostics and treat concurrent disease if identified (see text for details)

Re-evaluate q 1–2 weeks until the upper end of the dose is being used (Dog: 1–1.5 U/kg, Cat: 5 U/cat) or until control is achieved

If concurrent disease is detected, treat appropriately

No significant findings on bloodwork

Abdominal ultrasound
Thoracic radiographs
ACTH stimulation/LDDS test
PLI
TLI
IGF-1 in cats

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