

# Acromegaly In Cats:



- Chronic Disease that causes over growth of connective tissue, bones, and viscera
- Functional adenoma of the pars distalis
  - Commonly macroadenoma
  - Chronic Growth Hormone causes increase in IGF – 1
    - Anabolic effects from IGF - proliferative tissue
    - Catabolic effects from GH – blocks glucose from going into cells

# Common Signalment

- Older Males
  - Mean age – 10 years
- domestic short hair or long hair cats



# Clinic presentation



- Early signs – PU/PD and polyphagia (Diabetes mellitus)
  - Uncontrolled Diabetes mellitus (>2 U/kg/dose)
- Weight loss varies – usually lost at first then gained over time
- Prognathia in lower jaw, increased dental spaces, large paws, stertor/snoring.
- Abnormal mentation, mydriasis, gait abnormalities
- Cardiovascular – systolic murmur, gallop rhythm, cardiomegaly, hypertrophic cardiomyopathy (septal and left ventricular hypertrophy)

# Testing

- Growth Hormone unreliable and depends on the stage of the disease
  - Not currently available in the States
- Insulin-like Growth Factor – 1:
  - best screening test
  - Greater than 100nmol/L diagnostic
    - 70 – 100nmol/L is undiagnostic
- CT or MRI confirmed



# Treatment:



- Medical management shown unresponsive
  - GH suppression via selegeline or octreotide
- Radiation therapy proven the best treatment
  - One study found 13 out of 14 cats showed improvement of DM after fractionated radiation
  - 5 cats showed insulin independence – took an average of 3 months to achieve and lasted on average of 25 months
  - Side effects are minimal and acute signs are not commonly seen.
    - Long term – may see mental dullness or neurologic signs related to demyelination (early-delay side effects)
    - Treated with prednisone and spontaneously resolve
    - less common in cats

# Punkin's Update

- Doing great at home and glad to be there



# References

- Feldman, Edward C., and Richard W. Nelson. *Canine and Feline Endocrinology and Reproduction*. St. Louis, MO: Saunders, 2004. 69-79, 572-575. Print.
- Dunning, M.D., C.S. Lowrie, N.H. Bexfield, J.M. Dobson, and M.E. Herrtage. "Exogenous Insulin Treatment after Hypofractionated Radiotherapy in Cats with Diabetes Mellitus and Acromegaly." *Journal of Veterinary Internal Medicine* 23.2 (2009): 243-49. Print.
- Mayer, Monique N., Deborah S. Greco, and Susan M. LaRue. "Outcomes of Pituitary Tumor Irradiation in Cats." *Journal of Veterinary Internal Medicine* 20.5 (2006): 1151-154. Print.
- Sellon, R.K., J. Fidel, R. Houston, and P.R. Gavin. "Linear-Accelerator-Based Modified Radiosurgical Treatment of Pituitary Tumors in Cats: 11 Cases (1997-2008)." *Journal of Veterinary Internal Medicine* 23.5 (2009): 1038-044. Print.

Questions?

