

INTERNAL MEDICINE NEWS

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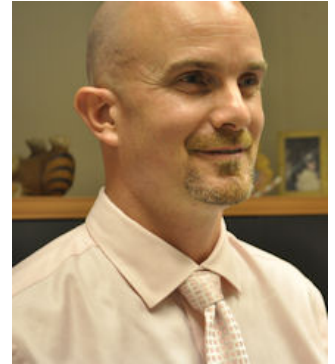
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PREDNISONE THERAPY IN DOGS AND CATS – Dr. Doug Mason

Prednisone is a synthetic glucocorticoid that is used to treat a number of diseases in veterinary medicine. Many clients are scarred when they hear that we want to use this drug but truly when it is used correctly it is quite safe. In our evolving world antibiotics should be considered more dangerous than prednisone due to the development of bacterial resistance.

General rules for using prednisone as a therapy:

1. Corticosteroids can mask other diseases (try not to use them without making a diagnosis)
2. Determine a plan for their usage (dosage and tapering schedule) at the time the drug is started
3. Determine an end-point based on the diagnosis
4. Use the least potent form for the minimal time



Dosage Range:

The clinical dosage range reported can be from 0.2 to 4 mg/kg/day. This range can have varying effects ranging from physiological around 0.2 mg/kg/day, anti-inflammatory between 0.5 and 1 mg/kg/day, and immunosuppressive between 2 and 4 mg/kg/day. Ideally, the immunosuppressive dosage range of 2 to 4 mg/kg/day should be 2 mg/kg/day. This would be due to the fact that there is no additive immunosuppressive effect by increasing above 2 mg/kg/day. The only difference was additional side effects at 4 mg/kg/day.

Frequency of Dosing:

Prednisone is ideally a once a day therapy, although many people use it as a twice daily therapy. By dividing the dosage throughout the day it is believed to reduce side-effects (this has not been scientifically proven).

Tapering of Prednisone:

Ideally, prednisone should be tapered from its initial dosage unless a physiological dosage (0.2 mg/kg/day) is being used as this does not need to be tapered. When immunosuppressive dosages are started, then the plan would be to gradually get to a maintenance dosage of prednisone is 0.5 mg/kg every 48 hours via gradual tapering. In other words, If a dog is started on an immunosuppressive dosage (2 mg/kg/day) the dose of prednisone should be reduced within a 2 to 3 week period to half the initially dosage (1 mg/kg/day) and repeated every 2 to 3 weeks until the dosage reaches the maintenance dosage (0.5 mg/kg every 48 hours). The maintenance dosage should then be used for as long as needed to control the disease. For example, in either immune-mediated thrombocytopenia or immune-mediated hemolytic anemia (IMHA) the prednisone should be continued for a total of 9 months from the time of diagnosis (one exception would be Cocker Spaniels or dogs that have relapsed during therapy, where they should be treated life-long). The disease being treated needs to be evaluated prior to each tapering of the dosage (e.g. immune-mediated polyarthritis would be confirming the dog is walking well (ask owners) or with IMHA or ITP it would be a recheck complete blood count).

Example of an immunosuppressive dosing protocol for a 25 kg dog with IMHA: Initial dosage of prednisone would 50 mg daily for 2 weeks, then reduced to 25 mg daily for 2 weeks, then 12.5 mg daily for 2 weeks, and then to the maintenance dosage of 12.5 mg orally every 48 hours.

In cases where the prednisone is not controlling the disease and it needs to be tapered then additional therapies need to be started as the prednisone left at high dosages can cause a multitude of problems including death from gastric ulceration.

Side Effects of Prednisone:

The classic effects that we all see are polyuria, polydipsia, polyphagia, alopecia, and panting. There are occasional dogs that develop behavioural issues including aggression. Truly, corticosteroids have a multiple of systemic effects including inhibiting fibroblast proliferation, increased gastric acid secretion, muscle weakness, muscle wasting, and can even lower seizure thresholds. These are only a few of the systemic effects. If the dosage is kept at the immunosuppressive dosage for longer than 4 weeks other side effects will occur including markedly elevated liver enzymes and ulceration within the intestinal tract. In cats however immunosuppressive dosages are tolerated without virtually any complications and do not need to be tapered. The only side effect seen in cats is the development of diabetes mellitus (this can also happen in dogs).

***Dr. Mason's sees appointments Tuesday to Friday,
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