

IMMUNOMODULATORS IN FELINE ASTHMA

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ABSTRACT

Experimental asthma was induced in 10 cats using Bermuda grass allergen (BGA) and cats were randomly selected to receive either feG (1 mg/kg, PO) or saline for 2 weeks, followed by a 2 week washout period before receiving the alternate treatment. A clinical scoring system was employed and bronchoalveolar lavage fluid (BALF) and blood were collected prior to and after each 2 week treatment. Cytology and cytokine analysis were performed on BALF samples and in vitro cytokine restimulation was performed on peripheral blood mononuclear cells (PBMCs).

There was no significant difference between the treatment groups in BALF total nucleated cell counts or eosinophil percentages. Greater than 40% of the BALF supernatant samples had IL-1, IL-4, IL-6, CXCL-8 and IFN- γ concentrations below the lower limit of detection of the assay regardless of time point or treatment administered. Interleukin-4 and IFN- γ concentrations in the cell culture supernatant from stimulated PBMCs were below the lower limit of detection for all samples. There was no significant difference in BALF or plasma TNF activity or clinical scores between treatment groups.

In cats with experimental asthma, daily use of feG during chronic aeroallergen exposure did not dampen eosinophilic airway inflammation, alter cytokine profiles in the plasma or BALF, or decrease clinical signs associated with allergen challenge. These results support that feG at this dosage can not be recommended as monotherapy for the chronic treatment of allergic asthma in cats.