Oral presentations

59% (n=62) had to hide oral medications in treats or food either all, or some of the time.

56% (n=59) of owners intended to pursue medical management, 23% (n=24) radioiodine, 5% (n=5) surgery and 4% (n=4) dietary management.

STATEMENT

Curative treatment of hyperthyroidism is gold-standard, however the majority of owners opted for medical management despite many indicating difficulties in administering medication. Many of these cats were suitable candidates for dietary management.

AAV-8 gene therapy in canine diabetes mellitus; a potential future treatment?

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OBJECTIVES

Gene therapy has been shown to be an effective treatment for conditions such as human haemophilia B, but to date an efficacious gene therapy treatment for diabetes mellitus has been lacking. This abstract reports the first use of AAV-8 gene therapy in a naturally occurring diabetic dog.

METHODS

An 8-year old neutered male naturally occurring diabetic dog was treated with a single intravenous dose of a codon-optimised AAV-8 gene therapy vector containing the human insulin gene. Pre-treatment evaluation showed that the dog had no other co-morbidities. Continuous interstitial fluid glucose monitoring was used over the four weeks following the transfection to monitor glycaemic status followed by regular out-patient assessment. Studies were performed to assess the immunological response to the vector and the transgene product.

RESULTS

No significant adverse effects of the treatment were noted and the dog remains well. Human c-peptide was measurable in serum within 5 days of transfection at concentrations of up to 150 pmol/l, thereby proving successful transduction. Although the dog still requires exogenous insulin to maintain glycaemic stability, his daily insulin dose has reduced by 25%. No immunological response was seen to the transgene product but a mark virus-neutralising antibody response was seen against the vector.

STATEMENT

This is the first report of the use of an AAV-8 gene therapy treatment in a naturally occurring diabetic dog, which although sub-optimal in dose, appears to have led to successful transfection. Further work is now on-going to establish the necessary dose of vector required.