Liquorice and canine Addison’s disease

Hypoadrenocorticism, or Addison’s disease, is an uncommon condition in dogs (Feldman and Nelson 2004). Long-term management of affected dogs in New Zealand involves treatment with oral fludrocortisone acetate (Florinef tablets; Bristol-Myers Squibb (NZ) Ltd, Auckland, NZ), which is a relatively expensive synthetic adrenocortical steroid. Table salt may be added to the food in an attempt to reduce the amount of fludrocortisone required. Despite fludrocortisone therapy, many Addisonian dogs remain hyponatraemic and hyperkalaemic and the required dose of fludrocortisone may need to be increased during the first year of treatment. Increasing the dose of fludrocortisone is not only expensive, but may also have undesirable effects through its potent glucocorticoid action.

‘Natural’ liquorice, made from the root of Glycyrrhiza glabra, contains glycyrrhizinic acid and its metabolite glycyrrhetinic acid, which increase mineralocorticoid activity. Hypokalaemia, sodium retention and systemic arterial hypertension have been reported in humans eating large amounts of liquorice (Ferrari et al 2001). We wondered whether liquorice could be helpful in the management of a ‘difficult’ case of canine Addison’s disease.

A 4-year-old male neutered dog with an established diagnosis of Addison’s disease was persistently hyperkalaemic despite receiving a moderate dose of fludrocortisone. Financial considerations and the potential for adverse effects made increasing the dose of fludrocortisone undesirable. Liquorice was added to the dog’s diet in the hope that the hyperkalaemia would be corrected. Preliminary results are encouraging. The dog is normokalaemic for the first time since diagnosis was made 14 months previously. In this particular case, we have not had the opportunity to discontinue feeding liquorice and observe whether hyperkalaemia recurs.

Given these very preliminary findings, we believe it is possible that liquorice may, in future, prove to be a useful adjunct in the management of canine hypoadrenocorticism. Further study is required.

References
