One cat had a soft tissue sarcoma arising at the level of the nasal planum.

In all cases, apart from one Sr90 was used as adjuvant treatment to surgery. Different types of protocol were used. Seven of the ten cases received a protocol involving five fractions of 30-40 Gy each, administered on alternating days; three cases received Sr90 as a single fraction of 80 Gy. In two cases Sr90 plesiotherapy was repeated after tumour recurrence. The treatment was overall very well tolerated with minimal side effects.

The overall outcome was good. Two cases experienced recurrence of the neoplasia in the radiation field or adjacent areas (two cats: one sarcoid and one progressive dendritic histiocytosis). The rest of the cases showed no evidence of recurrence of the disease on a follow-up period of 10 to 839 days.

In conclusion, this study showed that Sr90 plesiotherapy is a valid and well-tolerated alternative for the control of local disease for different types of tumours arising in difficult areas, where other treatment options (e.g. external beam radiotherapy) may not be feasible.

Assessment of an in vitro lymphocyte response to chemotherapy agents as a guide to treatment in canine lymphoma

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INTRODUCTION

The ability to identify a tumour's potential sensitivity to chemotherapy pre-treatment, or at relapse, might guide selection of chemotherapy protocol and thereby improve outcome. In the human field, assessment of the in vitro response of individual patient's tumour to chemotherapy has proved controversial. This study aimed to develop an assay for canine lymphoma, assessing pre-treatment in vitro lymphocyte responses to chemotherapy drugs and to correlate this with clinical outcome. In addition, we aimed to try to identify evidence of chemotherapy resistance at the point of relapse.

METHODS

Eleven dogs with multi-centric lymphoma were included in this study with informed consent; all were treated with a standardised CHOP protocol. The average age of the dogs included was 93 months, with 6 males (2 entire, 4 neutered) and 5 females (2 entire, 3 neutered). Eight dogs

had T-cell, and three had B-cell lymphoma (grade III (n=6), IV (n=2) and V (n=3), sub-stage a (n= 5) and b (n=6)). Fine needle aspirates of the most prominent peripheral lymph nodes were collected pre-treatment and cultured in 96 well microplates in serum free DMEM under conditions previously shown to favour growth of malignant cells. In an attempt to predict cells' in vivo sensitivity to chemotherapy, vincristine, cyclophosphamide, L-asparaginase and doxorubicin were added to test wells at concentrations equivalent to each drugs reported serum cMax. After five days culture, cell viability was measured using the ATP bioluminescence technique. Percentage inhibition occurring in response to the drugs was calculated with reference to drug-free control wells. Correlation between percentage inhibition, time to relapse and subsequently overall survival time was calculated.

RESULTS

The results showed no correlation between cell inhibition and both, time to relapse and overall survival. There was no difference in the predictive value of response to treatment in naïve dogs compared with dogs that had received several doses of chemotherapy. Repeat samples were taken from two dogs at relapse (at weeks 18 and 39) and there was no clear evidence of chemotherapy resistance in either dog.

CONCLUSION

This in vitro assay in its current form appears to add no additional information on an individual's response to chemotherapy. Further study, including analysis of longer culture periods and the effect of different drug concentrations on cell growth, is needed to better determine and correlate in vitro response to chemotherapy.

Evaluation of lomustine for the treatment of canine T-cell lymphoma

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INTRODUCTION

The current first line standard of care treatment for canine T-cell lymphoma is a multidrug doxorubicin-based chemotherapy protocol (eg: CHOP). Use of single agent lomustine has been described as a rescue therapy. Recently, lomustine has been proposed as an alternative first line treatment. The aim of this study was to assess the efficacy of lomustine in a referral population of dogs with T-cell lymphoma as a first line and rescue therapy.

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