Poster presentations

Radiation therapy for non-resectable neuroendocrine tumour in two dogs

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OBJECTIVES

The aim of this study was to describe clinical presentation, computed tomography (CT) features, cytological and histopathology findings and treatment outcome of dogs with carotid body neuroendocrine neoplasia treated with radiotherapy.

METHODS

Case records of dogs diagnosed with carotid body tumour treated with radiation therapy were reviewed. Inclusion criteria were the presence of tumour non-amenable for surgical resection with a cytological or histopathological diagnosis in conjunction with CT

findings of a soft tissue contrast-enhancing mass at the bifurcation of the common carotid artery. Information regarding survival times, side effects and response to treatment were reviewed.

RESULTS

Two dogs met the inclusion criteria. Clinical signs of unilateral space-occupying lesion were identified. Cytology or histopathology and CT imaging confirmed carotid body tumour. Metastatic lymphadenopathy was identified in one dog. The tumour was surgically unresectable in one dog. Radiation therapy was administered with 38Gy in 10 and 48Gy in 12 fractions, respectively. Toceranib phosphate was also administered in one dog as adjunctive therapy. Acute VRTOG grade I cutaneous radiotoxicity was identified upon completing the treatment protocol and VRTOG grade I late cutaneous radiotoxicity was recognised in both dogs. One dog was diagnosed with primary hypothyroidism 16 months later. One dog has ongoing partial response at 6 months post-radiotherapy, the other dog had complete response with no recurrence at 33 months post-radiotherapy.

STATEMENT (CONCLUSIONS)

The results of this study suggest that for non-resectable carotid body paraganglioma moderate dose radiotherapy provided excellent disease control with mild permanent side effects not affecting the dog's quality of life.

Effect of pre-medication drugs on cardiovascular parameters during anaesthesia and on speed of recovery of patients undergoing daily general anaesthesia for radiotherapy

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OBJECTIVES

To develop a protocol for safe pre-medication of patients undergoing anaesthesia for radiotherapy.

METHODS

A nurse-led observational study using client-owned dogs prescribed radiotherapy for treatment of anal sac adenocarcinoma. Pre-medications were randomly assigned; either 0.02mg/kg buprenorphine, 0.2mg/kg methadone or 0.2mg/kg butorphanol. Cardiovascular parameters, mean isoflurane usage, extubation time and total recovery time were recorded.

A repeated measures MANOVA was used to determine differences between cardiovascular parameters data between groups, and repeated measures ANOVA tests for mean isoflurane usage, extubation time and full recovery time. $P < 0.05$ was significant. Post-hoc paired t-tests with Bonferroni correction were performed where appropriate.

RESULTS

Twenty-four dogs were included, with eight dogs per drug group. There was no difference of cardiovascular parameters between groups ($F = 2.045$, $p = 0.140$). There was a difference of lowest mean isoflurane usage between groups (Wilks Lambda 0.236 $F(7,15)$ 6.85, $p = 0.001$), with butorphanol resulting in highest usage (butorphanol vs buprenorphine mean difference (M.D.) 0.9%, $p < 0.001$, butorphanol vs methadone M.D. 0.6%, $p < 0.001$). For extubation time, there was a significant

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difference between groups (Wilks Lambda 0.167 F(7,15) 10.67, $p < 0.001$), with buprenorphine associated with shortest extubation times (buprenorphine vs butorphanol M.D. -3.1 minutes (mins) $p < 0.001$, buprenorphine vs methadone M.D. -2.3mins $p < 0.001$). There was a significant difference of total recovery time (Wilks Lambda 0.241 F(7,15) 6.75, $p = 0.001$), with buprenorphine associated with shortest recovery time (buprenorphine vs

butorphanol M.D. -16.3mins $p < 0.001$, buprenorphine vs methadone M.D. -9.9mins $p < 0.001$).

STATEMENT (CONCLUSIONS)

Buprenorphine reduced isoflurane usage and recovery times and appears to be the drug of choice for these patients.

Collision tumour of two nodal metastases (apocrine adenocarcinoma and mast cell tumour) in a dog. (A case study)

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An eleven-year-old female neutered Labrador retriever was referred for a large cytologically-diagnosed vulvar mast cell tumour that extended into the vagina. On clinical examination an approximately 1.5cm right anal gland mass was incidentally palpated. Abdominal ultrasound revealed an enlarged right medial iliac lymph node. Fine needle

aspirates were taken from the liver, spleen and bilateral medial iliac lymph nodes. Cytology of the right medial iliac lymph node was consistent with a neuroendocrine tumour. Hepatic and splenic cytology was unremarkable.

Medial iliac lymphadenectomy, right anal saccullectomy and marginal vulvar mass resection were performed. Histopathology was consistent with an incompletely excised right anal sac adenocarcinoma and an incompletely excised vulvar subcutaneous mast cell tumour. The mast cell tumour exhibited a mitotic index of <1 per 10hpf, with minimal anisocytosis/anisokaryosis and an absence of multinucleated cells (Kiupel low grade). The right medial iliac lymph node showed metastatic collision of both the adenocarcinoma and the mast cell tumour. Adjunctive chemotherapy and radiotherapy were recommended to address the risk of local recurrence and further metastasis but were declined by the owner. The dog remains alive and asymptomatic with no visible evidence of recurrence 6 months after presentation.

Collision tumours are rarely reported in animals and there is minimal information regarding treatment and outcome. To the authors' knowledge this is the first report of a collision tumour comprising metastatic mast cell tumour and adenocarcinoma in a lymph node. The report further confirms the aggressive biological nature of vulvar mast cell tumours despite low histological grade.

Computed tomography and magnetic resonance imaging findings in a dog with anal sac adenocarcinoma with vertebral and spinal cord metastasis

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OBJECTIVES

To describe the presentation, computed tomography (CT) and magnetic resonance imaging (MRI) findings in a dog with anal sac adenocarcinoma (ASAC) with vertebral and spinal cord metastasis.

METHODS

A 10-year-old neutered male cocker spaniel presented for further investigation of lethargy with concurrent medial iliac lymphadenomegaly, which was cytologically consistent with malignant epithelial neoplasia and bacterial infection. At referral, initial CT imaging revealed moderate to severe left medial iliac and internal iliac lymphadenomegaly with mild lumboaortic lymphadenomegaly. Extirpation of both iliac and the left lumboaortic lymph nodes was performed, and histopathological analysis confirmed carcinomatous lymph node infiltration. Although there was no gross lesion, carcinoma presence within these lymph nodes raised suspicion of local metastasis of ASAC and the patient was started on carboplatin chemotherapy. 18-days later the dog

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