

Successful Treatment of Nasal Osteosarcoma in a Cat with Lomustine and Prednisolone – A Case Report

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Abstract

An eight year old domestic female cat presented with history of inappetance and epistaxis, and was treated since 6 months with hemostatics suspecting trauma, with relapsing episode. X ray revealed shortened, incognito nasal bone on left lateral view. Tentatively suspecting nasal osteosarcoma, the animal was orally given. Lomustine 2.5 mg once in 3 days and Prednisolone 5 mg daily for 21 days. Remarkable and complete recovery observed on 9th and 21st day respectively. No adverse effect noticed.

Keywords: Cat; Osteosarcoma; Lomustine; Prednisolone

Introduction

Osteosarcoma is the most common primary bone tumour in cat. The flat bones affected most frequently are skull, vertebrae, scapula and pelvis. Osteosarcoma of nasal bone in a cat was diagnosed and successfully treated.

Materials and Methods

A non-descript, domestic female gravid cat, 8 years old presented with symptoms of inappetance and frequent epistaxis. It was suspected to be due to trauma and the cat had local treatment since 6 months with relapsing episodes. Clinical examination revealed pain in the nasal region. As the time advanced the cat reduced the food intake and became dull and depressed.

Radiography revealed shortened, incognito nasal bone on left lateral side (Figures 1 and 2). Tentatively diagnosed as nasal osteosarcoma.

Treatment and Results

The cat was orally treated with Lomustine (Moostin–Miracalus Pharma) 2.5 mg once in 3 days and Prednisolone (Wysolone–Wyeth Pharma) 5 mg daily, for 21 days.

Gradually epistaxis reduced, showed increased appetite and remarkable recovery noticed on 9th day onward. Complete recovery on 21st day. No adverse effect noticed, except mild cellulitis in frontal region which subsided within 10 days of cessation of treatment. Also the cat queened healthy kittens normally on 18th day of treatment commencement.

Discussion

Osteosarcoma is the most frequently reported (70–80%) primary bone tumor in cats, accounting for 70–80% of all primary malignant cancer of cats [1,2]. Osteosarcoma was reported to occur in older cats, with a mean age of approximately 10 years and in aged, female domestic short hair cats [3,4]. Symptoms are epistaxis (40–94%), bilateral or unilateral nasal discharge, airflow obstruction, facial deformity and sneezing, while weight loss is less common [5].

The radiographical features are variable and there may be predominantly osteolysis, characterised by radiolucency of the bone with thinning and loss of the cortices [4].

In general, osteosarcomas metastasise slowly in cats and treatment by surgical excision has been apparently successful [4]. The type and duration of chemotherapy can have a bearing on the survival post-surgery, although the differences between published protocols are not great [6]. The animals are most likely to be euthanized due to inability to achieve good palliative care and pain control.

In this study, Lomustine and Prednisolone oral therapy is followed. The use of Lomustine and Prednisolone is also reported for mast cell tumor in dog [7]. Lomustine is an alkylating nitrosourea compound used in chemotherapy and one of the most commonly used agent in veterinary medicine [8,9]. It is used to treat some types of cancer [10,11]. It disrupts the growth of cancer cells, which are then destroyed [12]. It is a highly lipid soluble, non-ionized drug that rapidly crosses blood-brain barrier, available only in oral dosage form [13,14]. Lomustine is a less toxic drug and has been used with some success in feline lymphoma [15,16].

Oral daily Prednisolone therapy has a long term success rate of about 25%, and oral Prednisolone and Lomustine therapy has a slightly higher success rate (40%) [17]. The administration of prednisolone resulted in a reliable decrease in the number of osteosarcomas [18]. Prednisolone is used as a part of chemotherapy treatment; it is known to have anti-inflammatory action which allows tumour shrinkage by virtue of removal of the inflammatory component of the tumour [19]. Lomustine usual recommendation dose is 2.5 mg once in 6 weeks but we followed 2.5 mg once in 3 days found to be highly effective, safe, with mild adverse effect and may be safe during pregnancy [20].

Summary

Nasal osteosarcoma in a cat successfully treated with oral Lomustine and Prednisolone, with pregnancy safe and without any adverse effects.

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