O – Oncology
SURGERY OF ORAL TUMORS

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INTRODUCTION

Canine and feline tumours are relatively common and often amenable for surgical therapy. Early recognition and aggressive extirpation may lead to significant increases in survival times. This manuscript will discuss the most common oral neoplasia in dogs and cats and review the surgical options.

DIAGNOSIS

Diagnosis is obtained using the regular methods of diagnosing a tumour (see principles of surgical oncology and biopsy). Use of early surgical biopsy specimen submission and CT/MRI scanning are noteworthy in regard to these types of tumours

ORAL NEOPLASIA

Oral neoplasia are common (up to 6-7% of all cancers) in dogs but to a lesser extent also observed in cats (3%?). The most common canine oral cancers include epulids, malignant melanoma (MM), fibrosarcoma (FSA) and squamous cell carcinoma (SCC). In cats, oral SCC is the most common (in 75% of the cases) tumour type.

Common types

Malignant melanoma: A frequent tumour of the gingival, buccal and labial mucosa, palate and tongue. This tumour of the melanocytes affects older animals (average age 11 years). The tumour is locally aggressive and metastasises quickly to lymph nodes and lungs. The metastatic rate is dependent on the size (< 2cm is better), site and tumour grade and is estimated up to 80-90%. Bone involvement is common. Wide surgical excision is the therapy of choice for local disease. Adjunctive therapy is necessary for distant metastases and in case of incomplete removal of the primary tumour.

Fibrosarcoma: These are locally aggressive tumours that metastasise in less than 20% of the cases. Metastatic rate depends mainly on tumour grade. An exception to this rule is the histologically low grade-biologically high grade tumour of the large breed dog. These tumours tend to be very aggressive, and have a poor prognosis. Local recurrence is the most common cause for therapy failure (up to 50%).

Squamous cell carcinoma: This is the easiest tumour to diagnose. The behaviour is locally aggressive and the metastasis rate depends on the location of the tumour. SCC located rostrally are associated with lower metastatic potential. SCC are the most common tumours in cats and are rarely amenable to surgical cure. Photodynamic therapy cured 8/11 dogs with SCC and is an interesting alternative to surgery. Other adjunctive therapy protocols have not been successful so far.

Epulids: Epulids are non metastasising tumours of the dental tissues. There are four forms: the fibrous (FE), ossifying (OE), acanthomatous (AE) and giant cell epulis (GCE). The latter is more common in cats that in dogs. The GCE and AE are locally aggressive and can invade bone. Surgical and radiation results are excellent in these types of tumours.

Therapy

Surgery is the first and most important part of your therapeutic plan. Wide excision of the local tumour can be performed by several surgical techniques depending on the location of the tumour. Surgical excision can include: partial, rostral or total mandibulectomy, partial, rostral or caudal maxillectomy, and partial or total orbitectomy. Cryosurgery is limited to very superficial tumours and seldom indicated. Radiation therapy is indicated for tumours that are sensitive to radiation (AE or SCC) or for palliation. The use of chemotherapy for MM is currently under investigation. Carboplatin is mentioned as chemotherapeutic of choice in MM.

Immunotherapy is an alternative to chemotherapy, however, the results are conflicting. Surgical or adjunctive therapy for oral tumours in cats have been unrewarding. Surgery in combination with radiotherapy or immunotherapy is worth further research.

PHARYNGEAL/LARYNGEAL TUMOURS

The most common pharyngeal tumour is the tonsillar squamous cell carcinoma. Other tumour types, such as laryngeal rabdomyosarcomas are rarely described. A pharyngeal tumour must not be confused with a middle ear polyp. These polyps originate in the middle ear and are attached to the middle ear on a stalk through the Eustachian tube.

Tonsillar carcinoma

This SCC has a poor prognosis compared with the rostral oral variant. Systemic spread is present in 90% of cases but is visible on radiographs in only 10-20%. Local surgical excision is rarely possible and in cases of large tumours palliative radiation is the therapy of choice. Because of the high metastatic rate most dogs will die within a year. A significant correlation with urban living and TSCC may be a clue to pollution as a factor in this disease.

CONCLUSION

Oral cancer is common in dogs and cats but tumour behaviour and tumour diagnostics and therapy are not significantly different compared to other body locations, making a separate division of these tumours debatable. Surgery is often the first step in the therapy protocol and should often be followed by other adjunctive therapy modalities.