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**INTERNATIONAL JOURNAL OF
 ADVANCED RESEARCH (IJAR)**

Article DOI:10.21474/IJAR01/7144
 DOI URL: <http://dx.doi.org/10.21474/IJAR01/7144>



RESEARCH ARTICLE

SURGICAL MANAGEMENT OF CANINE ORAL TUMORS.

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Manuscript Info

Manuscript History

Received: 19 March 2018
 Final Accepted: 21 April 2018
 Published: May 2018

Keywords:-

Canine Oral tumors, Tumors, Surgical Resection, and Dogs.

Abstract

Five male dogs with age ranging from 5 -9 years, and different breeds viz., Labrador, St. Bernard, Spitz, GSD and Mongrel one each presented to the Department of Surgery and Radiology, CVSc, Rajendranagar, PVNR TVU with a history of difficulty in eating food, after oral examination, tumor mass in the mouth was identified, Oral radiographs did not show clear borders of the mass. Clinically and macroscopically, the mass was painful and had a nodular appearance and was reddish white in color with varying size of length ranging from 5cm - 12cm and width ranging from 5cm – 3cm. After surgical resection of the tumor mass, Histopathologic examination of the mass in all dogs revealed that the tumors were of malignant nature, Ameloblastoma (Labrador), Fibrous Histocytoma (St. Bernard), and others Squamous cell carcinoma. Reoccurrence of tumor growth after 30 day to 60 days was noticed. Further surgical resection was taken up to facilitate for easy passage of food while eating. Four dogs died after span of 3-4 months except one mongrel dog survived without any reoccurrence.

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Introduction:-

Oral tumors arise from the gingiva, buccal mucosa, labial mucosa, tongue, tonsils, or dental elements. Oral cavity is the 4th most common site in dogs and cats for occurrence of tumors. Oral tumors 5% in dogs and 7% in cats are malignant tumors. Malignant oral tumors are higher relative risk of occurring in male than in female dogs as reported by Harvey H J (1985). Metastasis occurs by lymphatics or blood to the regional lymph nodes and lungs. The most common oral malignancies in dogs are melanomas, squamous cell carcinomas, and fibrosarcomas as reported by Harvey H J (1985). Wide surgical excision of the tumor along with adjuvant therapy. Fossum T.W. (2013)

Clinical Signs:-

Oral tumor cases in five dogs aged between 5-9 years in different breeds are Clinically and macroscopically, the mass had a nodular appearance and was reddish white in color with varying size of length ranging from 5cm - 12cm and width ranging from 5cm – 3cm, in St. Bernard dog, the growth at the junction of hard and soft palate (Fig.1), in German shepherd dog, growth on the left hard palate (Fig.2), in Mongrel Dog growth on the Right side of upper Jaw (Fig.3) and in Labrador Retriever the Growth on the Right side of the upper Jaw Hard Palate (Fig.4) and clinical signs observed are Oral bleeding, Difficulty eating, halitosis, Anorexia, weight loss, loose or displaced teeth, Salivation, Presence of a mass in the oral cavity, Swelling of the face or bulging of an eye, Bloody nasal discharge and Pain on opening the mouth.

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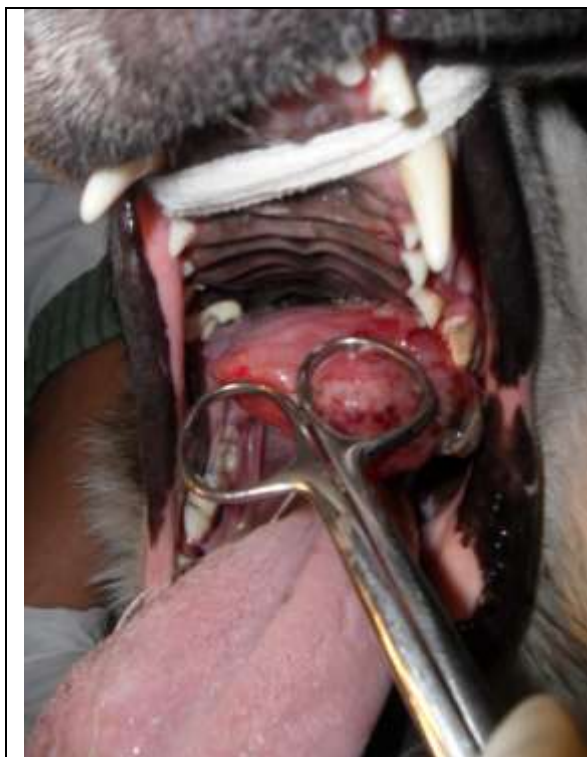


Fig.1:-St.Bernard Dog : Growth at the junction of hard and soft palate



Fig.2:-German shepherd : Growth on the left hard palate



Fig.3:-Mongrel Dog: Growth on the Right side of upper Jaw

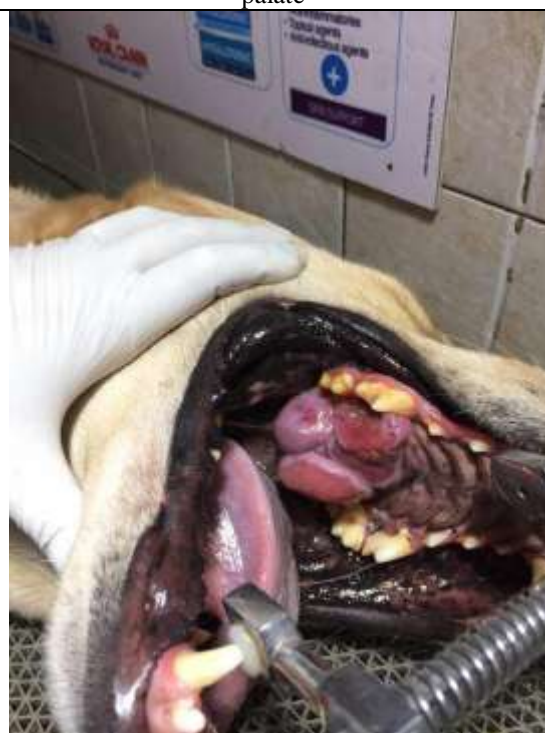


Fig.4:-Labrador Retriever: Growth on the Right side of the upper Jaw Hard Palate

Materials And Methods:-

All the Five male dogs with age ranging from 5 -9 years, and different breeds viz., Labrador, St. Bernard, Spitz, GSD and Mongrel were done oral examination and clinical parameters like Complete Blood Pictures were obtained, and the Aspiration/biopsy of the oral mass was done to diagnose the type of tumor mass. Radiography of the skull to determine the degree of bone invasion to assist in surgical planning and Thoracic radiography for ruling out for metastatic lesions in lungs. The dogs were selected for surgical resection of the tumor mass under with standard surgical procedure under general anaesthesia (Fig.5 to Fig. 8) and post operatively supported the dogs with antibiotics and NSAIDS along with regular cleaning and antiseptic dressing. The resected tumor mass sent for histopathological examination.

**Fig.5:-**After surgical resection in St.Bernard dog**Fig.6:-**After surgical resection in Labrador Retriever dog**Fig.7:-**After surgical resection in Spitz dog**Fig.8:-**After surgical resection in Mongrel dog.

Results:-

Five male dogs - 5-9 years, Breeds viz., Labrador, St. Bernard, Spitz, GSD and Mongrel with the History of difficulty in eating food, after oral examination, tumor mass in the mouth, Grossly appear painful, nodular /reddish white in color; varying size of length 5cm - 12cm and width 5cm – 3cm, as the Oral radiographs did not show clear borders of the bone mass involvement.. Surgical resection of the tumor mass followed under General Anaesthesia. All dogs shown reoccurrence of the tumor except one mongrel dog. Further surgical resection was taken up to facilitate for easy passage of food while eating. And Four dogs died after span of 3-4 months except one mongrel dog survived without any reoccurrence. Histopathology examination revealed Ameloblastoma in Labrador (Fig.9 & Fig.10) (Aydogan 2014), Fibrous Histocytoma in St. Bernard, (Fig11 & Fig.12) and in others Squamous cell carcinoma (Fig.13 & Fig.14) Signalment tabulated below.

| S. No | Breed | Sex | Age | Location of the tumor | Surgery | Nature of the tumor | Reoccurrence |
|-------|--------------------|-----|-------|---------------------------------|--------------------|-------------------------------------|--------------|
| 1 | Labrador Retriever | M | 5 yrs | Upper Jaw left side Hard Palate | Surgical resection | Malignant (Ameloblastoma) | Yes |
| 2 | St. Bernard | M | 5 yrs | Upper jaw Hard/soft palate | Surgical resection | Malignant (Fibrous Histocytoma) | Yes |
| 3 | Mongrel | M | 8 yrs | Right side of upper Jaw | Surgical resection | Malignant (Squamous cell carcinoma) | No |
| 4 | Spitz | M | 7 yrs | left side of Lower Jaw | Surgical resection | Malignant (Squamous cell carcinoma) | Yes |
| 5 | German shepherd | M | 9 yrs | Upper Jaw left hard palate | Surgical resection | Malignant (Squamous cell carcinoma) | Yes |

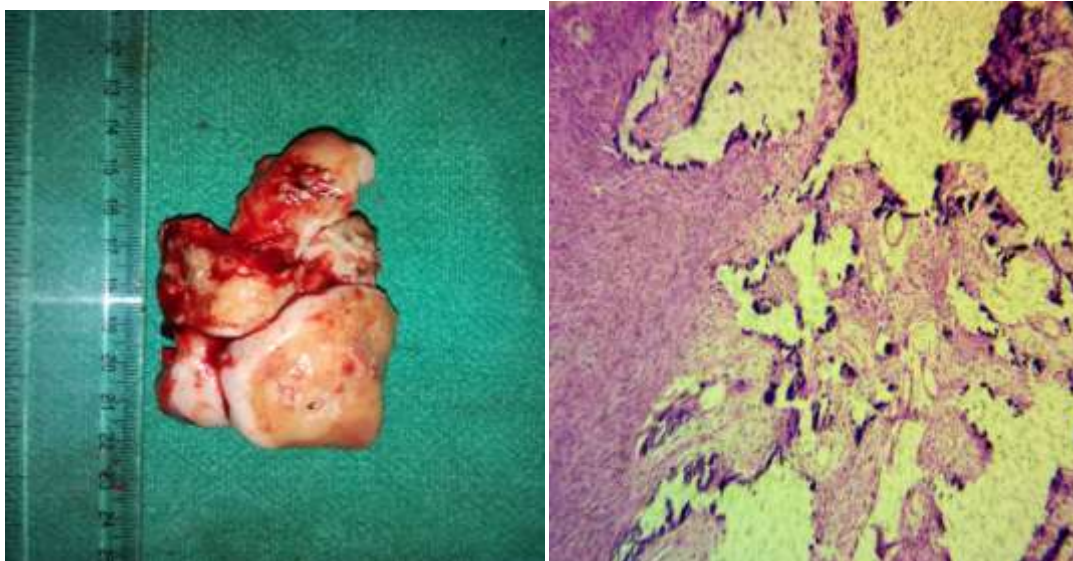
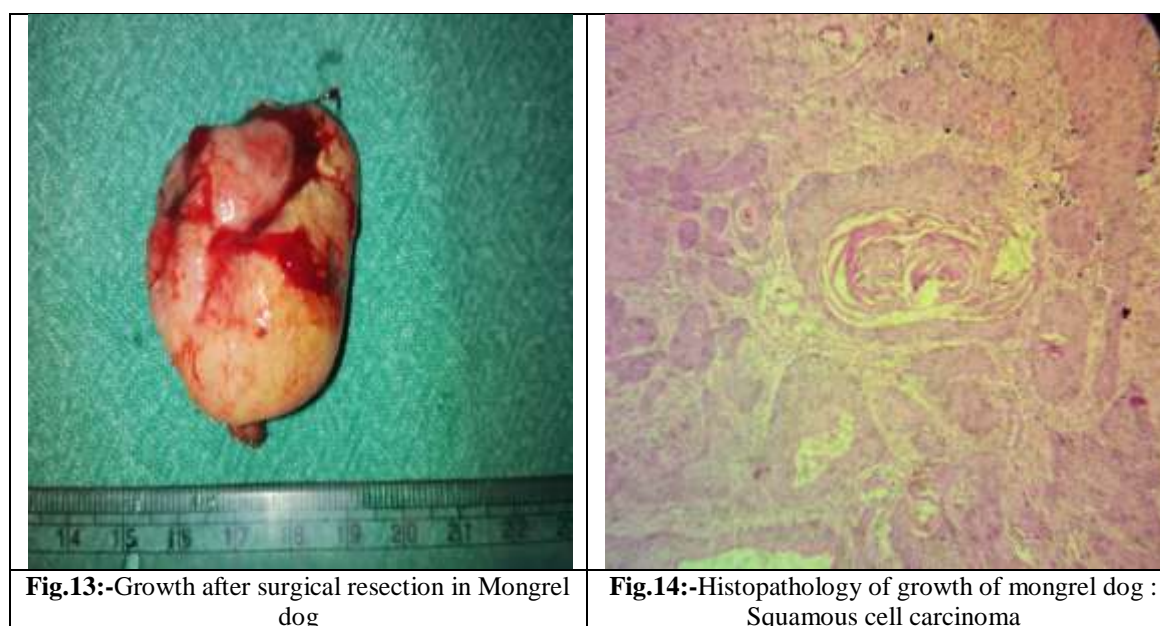
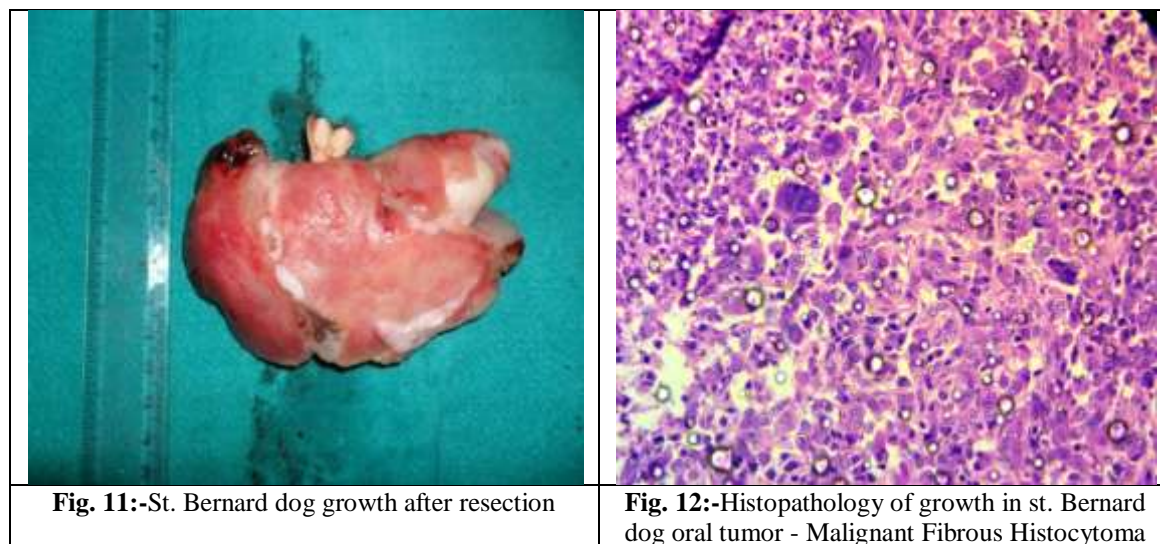


Fig. 9:-Growth after resection in Labrador dog **Fig.10:-**Histopathology of the tumor mass of Labrador dog : Ameloblastoma



Discussion:-

Oral tumors in canines frequently go unnoticed-reaches an advanced stage of development, an accurate assessment of the nature and extent of the condition is needed as reported by Verstrate (2005). Survival age after surgery observed in our cases were 4 months, similar observations for Survival age after surgery ranging from 4.6 to 26 months were reported by John Berg (1998).

Type and recurrence shows the high degree of invasiveness and high metastatic propensity, Squamous cell carcinoma tumors occur on the gingiva, lip, tongue, or tonsil. The masses are red, friable, vascular, and sometimes ulcerated as in present study. Most tumors-rostral oropharynx are locally invasive, often invading bone and having a low metastatic potential, Caudal oropharynx tend to be more infiltrative and metastasize more rapidly. Canine gingival squamous cell carcinoma is highly invasive and osteolytic but has a low rate of metastasis. Wide resection is recommended Fossum T.W. (2013)

Most fibrosarcomas are poorly responsive to chemotherapy and Osteosarcomas- 10% of canine mandibular and maxillary tumors-locally aggressive and have a high metastatic potential. General anesthesia is necessary to define the extent of disease. Fibrosarcomas are found primarily in dogs. Similar observations like Oral and/or mucosal

melanoma -malignant tumor with a high degree of local invasiveness and high metastatic propensity were made by Bergman (2007).

They most commonly occur on the maxillary gingiva and hard palate and appear as pink-red, firm, smooth, multilobulated masses that often are attached to underlying tissue. Local infiltration with bony involvement is common, but distant metastasis is uncommon. Local recurrence is, high with any treatment; Wide surgical excision is performed as recommended wide surgical resection, partial maxillectomy/ mandibulectomy/ tonsillectomy/or glossectomy by John Berg (1998).

Regional lymph nodes should be evaluated for evidence of enlargement, nodularity, and adherence to surrounding tissue. The thoracic radiographs will be helpful to rule out pulmonary metastasis and concurrent pulmonary or cardiovascular disease. Fossum T.W. (2013)

Conclusion:-

Histopathology of tumors shows -Ameloblastoma (Laborador), Fibrous Histocytoma (St.Bernard), and in others Squamous cell carcinoma. Reoccurrence of tumour growth after 30 day to 60 days was noticed. Surgical resection was taken up to facilitate for easy passage of food while eating. Four dogs died after span of 4 months except one mongrel dog survived without any reoccurrence. Oral tumours frequently go unnoticed by the animal's owner until the tumour reaches an advanced stage of development. It is important to examine regularly the oral cavity of dogs and cats for detection of tumours for their early diagnosis.

References:-

1. Aydogan, A., Hailgur, M., Ozmen, O., and Esin, E. : Maxillary Ameloblastic Carcinoma in a Dog. Israel Journal of Veterinary Medicine Vol.69(2) 98-101, 2014
2. Bergman P.J : Canine Oral Melonoma Clinical Techniques in Small Animal Practice 22: 55-60, 2007
3. Berg. J: Principles of Oncologic Orofacial Surgery. Clinical Techniques in Small Animal Practice Vol.13 No.1 (February) 38-41, 1998
4. Fossum T.W: Small Animal Surgery, Fourth Edition Mosby, Inc., an affiliate of Elsevier Inc. 2013
5. Harvey H.J : Oral Tumors Veterinary Clinics of North America: Small Animal Practice Vol.15 No.3 : 493-500, 1985
6. Verstrate F J M: Mandibulectomy and Maxillectomy Vet. Clin. Small Animal 35 : 1009-1039, 2005