Benign Growth in Oropharynx Region in a Capitive Sloth Bear (*Melursus ursinus*)

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Abstract

Agra Bear Rescue facility is one of its kinds, which currently houses 241 Indian Sloth Bears and is involved in effective management of rescued Sloth Bears. An abnormal mass growth was observed in the oropharynx region of a rescued female sloth bear during intubation for gas anaesthesia. The growth was removed surgically and subjected to histological examination. The mass was found to be composed of respiratory lining epithelium and squamous epithelium. There was marked oedema and fibrin deposition in sub-epithelium . There was mild lymphocytic infiltrate. Neoplastic lesions were not seen thus suggesting non cancerous / benign growth. The animal recovered well, no abnormality or recurrence of growth was noticed. Animal remains active and is having food normally

Key words: *Benign growth, Oropharynx, Respiratory lining epithelium,Sloth bear, Squamous epithelium.*

Introduction

Any tissue or organ showing abnormality in oral cavity may be due to inflammatory swelling or over growth of tissue. The overgrowth in throat may be benign or malignant in nature or it might be goitre, tonsillitis or neoplasm associated with oesophagus or respiratory tract. Though report exist on clinical conditions encountered in Sloth Bear (Gosselin & Kramer 1984; Ranjan et al,. 1990; Harbola and Arora, 1994; Mehrotra et al., 1999; Arun et al.,2005) there is no report available regarding the benign growth in oropharynx in ursids, especially sloth bear. The authors are thus making an effort to document the benign (non cancerous) growth and its successful treatment in a rescued dancing sloth bear (Melursusursinus).

Methodology

An adult female Sloth Bear was rescued on 08.01.10 from a street performer. The bear was unilaterally blind (left eye) on arrival itself. After successful quarantine we housed the bear with others in separate enclosure. The animal was apparently healthy, active and adapted well to the enclosure surroundings and other fellow bears. There was no marked abnormality noticed except the unilateral blindness to the left eyes due to severe corneal opacity. An effort was made on 10.05.11, to do complete ophthalmic examination by a veterinary eye expert and perform cataract surgery in order to bring back her vision of left eye.

The bear was tranquilized with Injection Xylazine @ 2mg/kg body weight and Injection Ketamine @ 5mg/kg body weight (Page 1986) after estimating the body weight to be 90 kg. After complete sedation we shifted the bear to operation theatre and provided general inhalation anaesthesia with isoflurane. While fixing the Endo tracheal tube (ET), difficulties

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were noticed due to a soft growth (Fig. 1) which was hindering its passage.

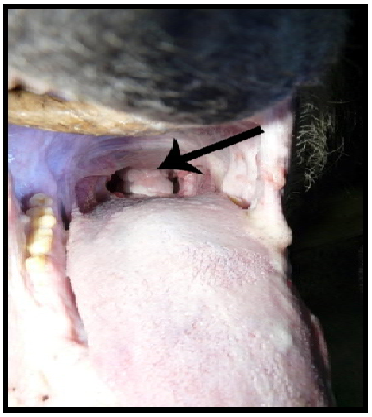

Fig. 1: Showing soft growth in oropharynx region

However the ET was passed in trachea even though with difficulty, after gently surpassing the growth and the animal was maintained under isoflurane general anaesthesia, and the vital parameters were observed throughout the procedure. The detailed ophthalmic examination revealed complete retinal detachment and atrophy of the ophthalmic nerve and blood vessels which was limiting the scope for cataract surgery. So cataract surgery was not performed. After extubation animal recovered well without any difficulties. An elective surgery was carried out on 12.5.11 for removing the tissue growth in oropharynx. The mass (5x2x1 cm) excised from the oropharynx under isoflurane general anaesthesia was sent for detailed histopathological examination. The post operative care was provided with Injection cefotaxime 1gm twice a day, meloxicam 0.5 mg/kg body weight twice a day for five days with vitamin C tablets @ 500mg once in day for five days.

Results

Detailed histopathological examination of a section of the excised tissue showed part of respiratory lining epithelium and part of squamous epithelium (Fig 2).

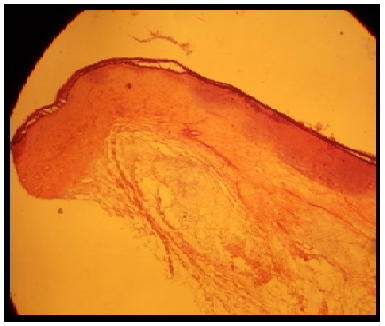

Fig. 2: Part of respiratory lining epithelium and part of squamous epithelium (10 X)

There was marked oedema and fibrin deposition in subepithelium (Fig 3&4).

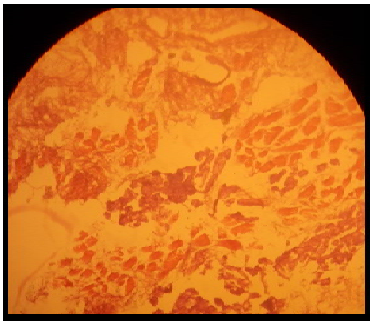

Fig. 3: Oedema and fibrin deposition in subepithelium (10 X)

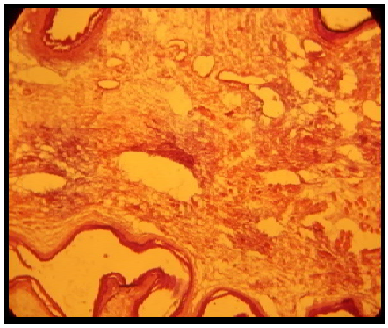

Fig. 4: Oedema and fibrin deposition in subepithelium (40 X)

There was mild lymphocytic infiltrate. Neoplastic lesions were not seen thus suggesting non-cancerous/benign growth. The animal recovered well, no abnormality or

recurrence of growth was noticed. Animal remains active and is having food normally

Discussion

Rotstein *et. al*., (2005) has reported laryngeal squamous cell carcinoma in a North American black bear (*Ursus americanus*). Mylniczenko *et. al.,* (2005) reported mandibular squamous cell carcinoma in a malayan sun bear (*Helarctos malayanus*). Amin and Baciewicz (2009) reported benign endobronchial polyps in a man. Dobson *et. al.,*(2013) Benign gastric neuroendocrine tumors in three snow leopards (*Panthera uncial*)Though neoplasm is also known as a tumour or swelling, all swellings are not neoplasms (Sastry & Rao, 2001). Benign growths in oropharynx region are rare findings that present a diagnostic dilemma not only for the clinician but also for the pathologist.

Conclusion

Since there is no reoccurrence and no evidence of neoplastic cells found in the Histopathological examination thus confirming the Benign nature of the growth. However, the etiology remains unknown as the bear was rescued from a kalandar who was using the bear for Illegal Street performance without proper medical care and record.

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