CHEMOTHERAPEUTIC TRIAL BY VINCRYSTINE IN NASAL HAEMANGIOMA IN A DOG

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One 5 years old mongrel dog was presented with hemorrhagic mass protruding from left nostril, with the signs of stertor and difficulty in breathing. The space occupying lesion obliterated theleft nasal cavity with mechanical pressure to the other. The growth originated from the lateral wall and in radiograph no involvement of nasal septum or ethmoid bone was noticed. Microscopically, the mass in the dog showed capillary and cavernosous haemangioma with edema, focal necrosis, cavitations and mega careocytic pictures. In the tumor pleomorphic cells were found without any mitotic figure. This haemangioma was cured by three sorts of vincrystine@0.025mg/kg.b.wt at weekly interval.

Key Words: dog, haemangioma, nasal cavity, vincrystine.

Introduction

In dogs, neoplasms of nasal cavity and Para nasal sinus are mostly of epithelial origin (Patnaik1989) and their incidence rate is 1% of all tumours (Malinowski 2006) or they contribute from 0.3% to 2.4% of all canine tumour occurrences (Fossum 2007). This poster describes the pathological and radiographical features along with chemotherapeutic trials for a nasal haemangioma in a dog.

Case Report

A mongrel adult male pet dog 5 years of age was presented at University Clinics, West Bengal University of Animal and Fishery Sciences,Kolkata- 700 037 with a haemorrhagic and protruding mass that obliterated completely the left nasal cavity up to the nostril (Fig.1). Signs of unilateral epistasis with stertor, anorexia and difficulty in breathing due to mechanical pressure to the normal cavity were evident. The growth originated from the lateral wall and in radiograph (Fig.2) no involvement of nasal septum or ethmoid bone was noticed. Biochemical as well as hematological parameters were almost normal.

Fig.1. Showing haemangioma in left nasal cavity

Fig.2.Shows no involvement of terbinates or nasal septum

Treatment and Observation

Under atropine-xylazine-ketamine (@ 0.04, 1.2 and 3.0 mg/kg b.wt. respectively) anesthesia a true-cut biopsy sample was taken. First dose of vincristine @0.025mg/kg body weight was given intravenously on the same day .In histopathology; the section showed a clear picture of capillary and cavernosous haemangioma consisting formation of multiple blood sinuses in admixture with haemopoitic cells. Some portion of proliferating sinuses pressurized the surrounding parenchyma which

terminated into edema, focal necrosis and cavitations. The proliferating immature haemocytoblast contained remnants of nuclear materials which gave a mega cariocytic picture. Invasion of haemopoitic cells and endothelial linning did not reveal anaplasia or mitotic figure formation (Fig.3).

The chemotherapy responded as the mass of haemangioma gradually disappeared after two more weekly doses (Fig.4).

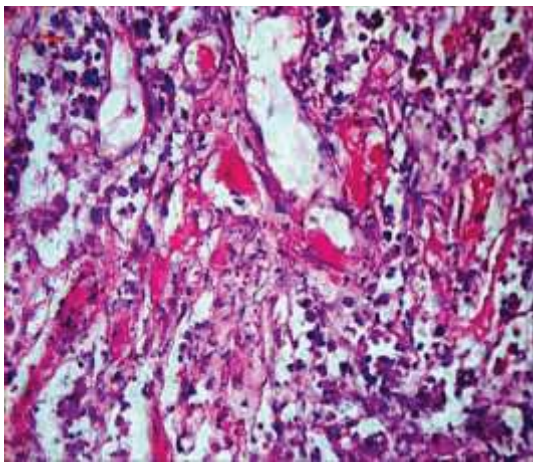

Fig.3.Shows Microphotograph of haemangioma in dog (H & E),40X, Magnification bar 50 µm.

Fig.4. Shows regression of nasal tumour after 15 days

Among nasal cavity tumours in dogs mesenchymal origin is more common (34% of all cases, Hahn and others 1997). The histopathological feature of binucleated cells in the dog was absent. Therefore, analyzing several reports of Chondrosarcoma (Beytut and others 2006), squamous cell Carcinoma (Baniadam and others 2010), malignant mescenchyoma (Puff and others 2011), nasal polyp (Holt and others 2011) in bovine and canine, nasal haemangioma in the dog of this report may be the rarest. Radiograph and physical examination were enough to diagnose for extend of the growth. Thoracic radiograph was negative for metastasis here.

Vincrystine, a mitotic inhibitor arrests the cell division in metaphase. The use of this agent in lymphoid or blood vascular system neoplasms is scarce in animals. Following huge numbers of literature about its therapeutic actions on canine transmissible veneral tumour (CTVT) of mesenchymal origin including one in nasal cavity (Upadhaye and others 2011), vincrystine was tried and effective in dog.

Conclusion

Gross, histopathological and radiological features of this study were consistent with diagnosis of haemangioma in the dog. Small to medium size haemangioma may be tried by vincrystine sulphate without surgery and VAC protocol (Vincrystine, Adriamycin®, and cyclophosphamide) to protect the animals from the "Kiss of death".

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