

Meibomian Gland Carcinoma in a Labrador Dog*

K. Gopal¹, S. Vairamuthu, C. Balachandran and Ravi Sundar George

Department of Veterinary Pathology, Madras Veterinary College, Chennai – 600 051.

(Received : 19-04-2017 136/17 Accepted : 02-06-2017)

Abstract

An eight year old male Labrador dog had a history of swelling on the left eyelid for the past one month. Cytological evaluation revealed individual to cluster of pleomorphic neoplastic cells with foamy background. Histopathological examination revealed basaloid cells differentiating into polyhedral cells. Cluster of cells showing anisocytosis and anisokaryosis with fatty cyst formation were seen. The case was diagnosed as Meibomian gland carcinoma.

Key words: Meibomian gland carcinoma, dog, cytology, pathology.

Meibomian glands (Tarsal glands) are modified sebaceous glands present at the rim of the eyelid inside the tarsal plate. Meibomian gland adenomas are common in dogs but carcinomas are exceedingly rare in dogs and other species (Goldschmidt and Goldschmidt, 2017). The eyelid is not reported as a site for sebaceous gland carcinoma in animals although this is the most common location in humans (Gross *et al.*, 2005). The present paper reports on the Meibomian gland carcinoma in a Labrador.

Materials and Methods

An eight year old male Labrador dog was presented at the Madras Veterinary College Teaching Hospital, Chennai with the history of growth on the left eyelid and ocular discharge for a month. The tumour was excised and impression smear was taken and fixed in 10 percent formalin. Paraffin embedded sections were stained with Hematoxylin and Eosin (H&E).

Results and Discussion

Clinical examination revealed a firm irregularly nodular brown mass in the outer canthus of the left upper eye lid (Fig. 1). Cut section of the tumour mass was brownish. This may be due melanization and imparting brown to black colour to the tumour mass (Gross *et al.*, *loc cit.*)

Impression smears revealed large number of individual to cluster of neoplastic cells. Basaloid cells differentiated into polyhedral cells with foamy cytoplasm and anisocytosis. The nuclei were round, vesicular and contained one or two nucleoli with coarse chromatin. Mild anisokaryosis was observed.

Histologically, the mass showed multiple lobules with locust stroma. Well differentiated areas showing basaloid cells differentiating into polyhedral cells. Cluster of cells showing anisocytosis and anisokaryosis with fatty cyst formation were noticed (Fig.2). The cytoplasm was vacuolated. The nuclei were pleomorphic containing one or two prominent nucleoli. Mitotic figures were seen. The case was diagnosed as Meibomian gland carcinoma. This correlated with earlier report of Tavasoli *et al.* (2012).



Fig 1. Dog – Labrador – Tumour mass at the outer canthus of the left eyelid.

*Part of M.V.Sc thesis work approved by Tamil Nadu Veterinary and Animal Sciences University, Chennai.

¹Corresponding author : Email : drvetpal@gmail.com

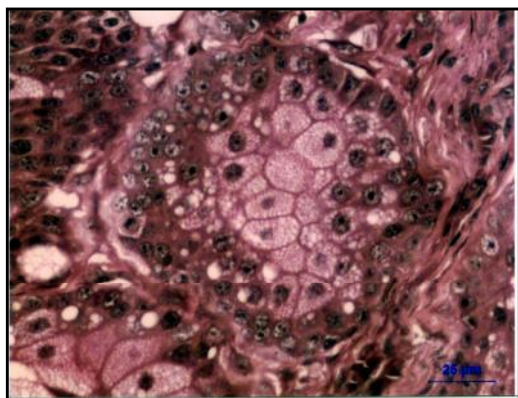


Fig 2. Dog – Labrador – Meibomian gland carcinoma – polyhedral cells – Mitotic figure H & E scale bar 25 μ m.

Meibomian gland tumours have a characteristic exophytic, pedunculated, cauliflower surface appearance and are based at the Meibomian gland opening or over Meibomian gland itself. (Westermeyer and Hendrix, 2012). These tumours are reported to be more frequent in aged dogs and cats when compared to other domestic animal species and also females have a higher number of adenomas compared to males (Yuksel *et al.*, 2005). In the present case the tumour cells showed the tendency of fat cyst formation. This is in accordance with

the observations of Goldschmidt and Hendrick (2002). They reported that Meibomian gland carcinomas are composed of tumour cells that have varying amounts of intracytoplasmic lipid vacuoles.

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Indian Vet. J., January 2018, 95 (01) : 82 - 84

Antioxidant Effect of *Gyrocarpus Asiaticus* on Paracetamol Induced Hepatotoxicity in Zebra Fish

Baisakhi Moharana¹, S.P. Preetha, C. Balachandran, M. Parthiban, M.R. Srinivasan, Parag Acharya and Swati Choudhury

Department of Veterinary Pharmacology and Toxicology, Madras Veterinary College, Chennai-600007.

(Received : 18-03-2017 92/17 Accepted : 16-05-2017)

Abstract

This study was conducted to evaluate the potential of aqueous extract of *Gyrocarpus asiaticus* (100mg/ml) on paracetamol (20mM) induced hepatotoxicity in zebra fish. Result of this study showed that, *Gyrocarpus asiaticus* treated group has got marked reduction in oxidative status.

¹Corresponding author : Email : baisakhimoharana@gmail.com

Key words : Paracetamol, hepatotoxicity, *Gyrocarpus asiaticus*, zebra fish.

The zebrafish is a promising animal for assessing drug induced toxicity in variety of organ systems including liver as zebrafish metabolize drugs using similar pathways as human (Vliegenthart *et al.*, 2014). *Gyrocarpus asiaticus* belongs to family Hernandiaceae and found in various parts of India including Eastern