Sebaceous Gland Adenocarcinoma in a Dog

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Abstract

Pathological diagnosis of a surgically excised sebaceous adenocarcinoma in a 6 year old dog is being reported here. The animal revealed greyish white solitary elevated wart like solid growth on the head. The animal was subjected to surgery and the excised mass was collected and subjected to histopathological study. The mass was haemorrhagic in appearance and hard in consistency. Histopathology revealed irregular multilobulated sebaceous glands surrounded by connective tissue proliferation. Pleomorphic cell infiltrations were also observed. Based on the histopathological features, the tumour was confirmed as sebaceous adenocarcinoma.

Keywords: Sebaceous gland; Adenocarcinoma; Dog.

Introduction

Sebaceous glands are microscopic glands found below the skin. They secrete an oily substance called sebum, which lubricates the skin and hair of animals. Sebaceous gland tumors are seen in all domestic animals but are more common in older dogs and cats (Strafuss, 1976). They are the most common epithelial skin tumors and may be observed in the skin anywhere on the body in dogs. The head, abdomen and thorax are the primary sites for sebaceous gland tumors (Halouzka and Nevole, 1976). The exact etiology of sebaceous gland tumors is not known (Jakab, 2003), but it is supposed that hormonal dysfunction may play a significant role in their development (Rungsipipat, 2003). Sebaceous gland tumors can be classified according to the level of cell maturation including nodular hyperplasia, sebaceous adenoma, sebaceous epithelioma and sebaceous adenocarcinoma.

Materials and Methods

A 6 yr old dog was presented to the college clinics with a history of greyish white solitary elevated wart like solid growth on the head. The animal was preanaesthetized with atropine sulphate @0.04mg/kgbwt and sedated with xylazine @1mg/ kgwt. General anaesthesia was maintained with Ketamine and Diazepam@ 5mg and0.5mg/ kg bwt. An elliptical incision was made on the tumor and the mass was excised by blunt dissection. All the bleeding vessels were cauterized and the skin flap was closed after applying subcutaneous sutures. Animal was kept on Inj. Intacef @ 25 mg/kg b.wt and Inj. Melonex @0.2 mg/kg b.wt.for 5 days. The excised tumor mass was collected in 10 % neutral buffered formalin and then washed thoroughly under running tap water overnight, dehydrated in different grades of alcohol, cleared, embedded in paraffin wax and blocks were prepared. The cut sections of 4 - 5 microns were stained by routine Haematoxylin and Eosin (H & E) staining method.

Results and Discussion

In the present study, greyish white solitary elevated wart like solid growth was observed on the head region. Grossly, the mass was haemorrhagic in appearance (Fig. 1) and covered with hairy skin. Cut surface revealed proliferative regions on the back with crusty surfaces (Fig. 2). Microscopically, multi lobules formation (Fig. 3) was observed along with pleomorphic cells infiltration. These lobules are separated by connective tissue proliferation (Fig. 4). No reoccurrence of growth was noticed over a period of six months.

Fig.1 haemorrhagic mass

Fig. 2 proliferative regions on the back with crusty surfaces

Strafuss (1976) reported sebaceous gland carcinomas are more common in older dogs and it is observed in the skin anywhere on the body. The head, abdomen and thorax are the primary sites for sebaceous gland tumors. In the present study, the tumor was observed in the older dog and it was observed on the head region. Earlier workers, Halouzka *et al.*, 1976 and Suvaneeth *et al.*, 2015 opined that histopathology varies depending on the differentiation of the tumor. In well differentiated lesions, there is a lobular arrangement. Neoplastic sebaceous undifferentiated cells revealed variation in size and shape of the nucleus with high mitotic

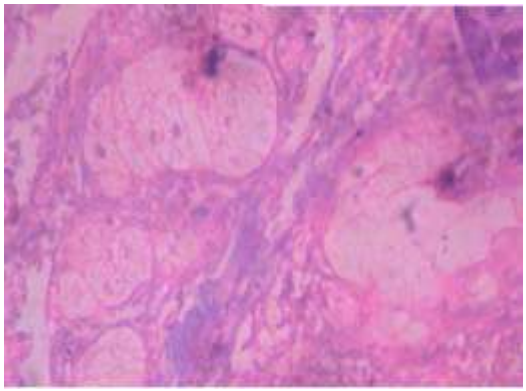

Fig. 3 multi lobules formation H & E x 400

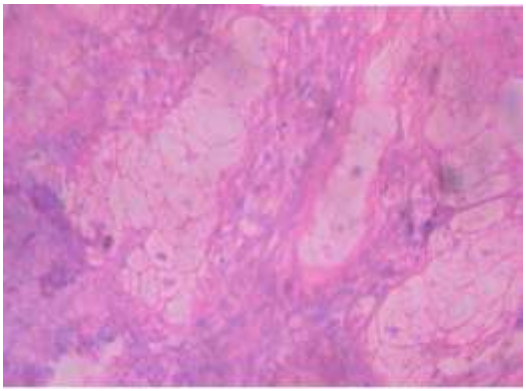

Fig. 4 Pleomorphic cells infiltration and interlobular connective tissue proliferation H& E x 400.

activity. In the present report also similar microscopic lesions were observed. Based on gross and histopathological features the case was diagnosed as sebaceous gland adenocarcinoma.

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