

Apocrine Secretory Adenoma in a 2.5 Year Old Male Great Dane Dog

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Abstract

A 2.5-year-old, male Great Dane dog was presented to the surgery clinic of the Faculty of Veterinary Medicine, Cairo University with a history of multiple skin swellings distributed in many regions. Macroscopy, the swellings had soft and rubbery consistency, and showed grey pink tissue pieces on cut section. Histopathology showed lobulated growth pattern, made up of many small round cells intermixed with lymphocytes. The condition was diagnosed by as apocrine secretory adenoma. Treatment was by surgical excisions of the presented cutaneous swellings.

Keywords: Apocrine glands; Eccrine glands; Adenoma; Monocytosis

Introduction

The sweat or sudoriferous glands are classified into eccrine (merocrine) and apocrine (odor) glands. The eccrine glands are usually coiled, unbranched tubular glands and occur in the dog only on the foot pads. The apocrine sweat tubular glands are present over wide areas of the skin surface and usually open into the hair follicle. Their thick secretion is responsible for the individual species odor [1,2].

Apocrine excretory gland tumors are rather common in dogs and tend to occur on the head, neck and limbs. The Golden Retriever is a breed that shows a predisposition to such tumors [3]. The tumors greatly resemble its human counterpart and originate in the secretory part of eccrine sweat glands [4].

Sweat gland tumors were accounted for a 0.7 - 2.2% in all skin tumors in dogs, and occur as a solitary or rarely as multiple small painful nodules. They are commonly localized in inguinal and axillary region of the body [3,5-8].

The presented case is reported due to its rare occurrence as well as being the first local report.

Case Report

A 2.5 year-old, male, Great Dane, was presented at the surgery clinic of the Faculty of Veterinary Medicine, Cairo University, with a history of skin swellings localized on the shoulder, thorax and preputial areas for 45 days. They were 3 - 4 cm in diameter and painful. Some of the swellings were ulcerated (Figure 1).

Clinical Examination

The dog was alert and responsive with normal temperature, pulse and respiration. The skin swellings were painful on pressure and attached

to the skin. Few swellings were ulcerated. Blood sample was collected for Complete Blood Count (CBC). Radiography and ultrasonography were performed for any evidence of metastasis. One intact nodule was surgically excised for macro/microscopic examinations. The excised mass was fixed in 10% neutral-buffered formalin and processed by conventional methods, embedded in paraffin, sectioned at 5 µm and stained with H & E for histopathology.

Results

Radiography revealed no evidence of pulmonary metastasis, mediastinitis or pleuritis. Ultrasonography revealed enlarged inguinal lymph nodes. CBC showed marked monocytosis (1.69 m/mm^3) of the total WBC (6.89 m/mm^3).

Macroscopic examination of the excised mass measured 3 X 4 X 3 cm and exhibited soft to rubbery consistency and mammilated grey pink

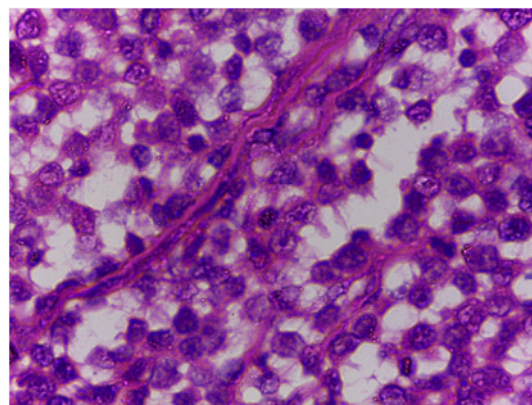


Figure 2: Apocrine excretory adenoma; 2.5-year-old male, Great Dane dog X 100, H & E. Note multiple nodules of neoplastic cells which had a moderate amount of eosinophilic cytoplasm, separated by fibrovascular stroma.

A

B



Figure 1: 2.5-year-old Great Dane male dog with multiple skin neoplastic lesions, A- (white arrows), B- (black arrow).

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tissue pieces on cut section. Histopathological examination revealed lobulated growth pattern, made up of highly cellular population of small round cells with modest cytoplasm arranged in sheets and lobules intermixed with lymphocytes. The growth was highly vascular with intervening fibrous tissue septa (Figure 2).

Definitive diagnosis was consistent with features of apocrine excretory adenoma. Surgical excision of all swellings was the only recommended treatment.

Discussion

Macroscopic and histopathological results of the neoplasm described in this report was identical to the canine sweat gland neoplasms described by [4-6,8-10]. Sweat gland tumors of dogs are usually benign, however, on rare occasion, they can undergo malignant transformation and prone to metastasis to regional lymph nodes and other organs by lymphatics [3,5,11]. In this report, treatment was by surgical excision of all lesions. Clinical follow-up information for 3 months post operation indicated neither recurrence nor metastasis. Similar treatment was recommended by [7]. There are conflicting studies regarding the risk of post-excisional recurrence or generalized metastasis of such tumors [3,6,12].

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