CASE REPORT

Infundibular keratinizing acanthoma (IKA) in a Terrier dog

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Terier ırkı bir köpekte infundubular keratinize akantoma (IKA)

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Abstract

Infundibular keratinizing acanthoma (IKA) is a benign cutaneous tumor in dog originated from the hair follicle. The present study describes IKA in a 4 year old, male terrier dog. Macroscopically, a cutaneous dome-shaped nodule, 2-3 cm in diameter, with firm consistency, irregular surface and a central pore was located on the back for several months. The histopathological examination revealed a large cyst filled with concentric lamellar keratin that extended into the dermis and hypodermis. The wall of the cyst was lined by the stratified squamous keratinizing epithelium. Cords of epithelial cells had one or two cells thickness expanded outward from the peripheral zone of the cyst wall. The epithelial cells were well-differentiated. Mitosis was rare and there was not polymorphism.

Keywords: Skin tumor, infundibular keratinizing acanthoma, dog

Öz


Anahtar kelimeler: Deri tümörü, infundubular keratinize akantom, köpek
Introduction

In the veterinary medicine, neoplastic proliferations are more prevalent in the small animals with a range from 15-30% in dogs and 26% in cats. Skin is the common site for tumors (Bongiovanni et al 2008, Fajardo et al 2013). Skin tumors are classified as epithelial and mesenchymal tumors. Epithelial tumors compromise tumors without squamous and adnexal differentiation (basal cell tumor and basal cell carcinoma), the epidermal tumor (papilloma, squamous cell carcinoma), adnexal differentiation and the melanocytic tumors. Follicular tumors with adnexal differentiation include infundibular keratinizing acanthoma (IKA), tricholemmoma, trichoblastoma, trichoepithelioma and pilomatrixoma (Goldschmidt and Hendrick 2002).

Infundibular keratinizing acanthoma has been previously called as intracutaneous cornifying epithelioma, intracutanous keratinizing epithelioma and keratoacanthoma. This tumor is a well-differentiated, encapsulated, non-metastasizing tumor that reported only in dog (Donald 2002, Romanucci et al 2005, Aroni et al 2007, Tavasoly et al 2014). However, IKA is known as a common cutaneous tumor, but scarce epidemiologic and pathologic information is available in the literature. In this study, macroscopic and histopathologic characteristics of IKA were described in a terrier dog.

A 4-year-old male terrier dog was referred to the Veterinary Hospital of Shahid Bahonar University of Kerman, Iran; with a cutaneous nodule located at the back for several months. The nodule was 2-3 cm in diameter, dome-shaped, with firm consistency, irregular surface and a central pore (Figure 1). Blood examination and biochemical profile were in the normal range. In radiographs from thoracic and abdominal cavities, no abnormal change or evidence of metastasis was observed. Using local anesthesia (Ring block) with lidocaine 1%, the nodular mass was completely excised. Ceftriaxone (Dana pharma co, Iran, 30 mg/kg, BID) was administered for three days after the surgery. Biopsy sample was submitted to Department of The Veterinary Pathology. It was performed routinely tissue processing and embedding paraffin wax after tissue fixed by 10% buffered formalin solution for 48h. Then sectioned at a thickness of 5 μm and finally stained with hematoxylin and eosin. Tissue sample was evaluated using light microscopy. The histopathological examine showed a simple large cyst that extended into the dermis and subcutis and filled with concentric lamellar keratin. The wall of cyst was lined by stratified squamous keratinizing epithelium. Basophilic keratohyalin granules were present in the cytoplasm of keratinocytes. Keratinocytes had distinct borders, and no desmosomal junctions were seen between them. Cords of epithelial cells with one or two cells thickness extended outward from the peripheral zone of the cyst wall. These cords anastomosed with together and formed variable-sized cysts with concentric lamellar keratin. Islands of mucinous stroma were considerable in the tumor. Collagenous fibers around the tumor produced a pseudocapsule. The epithelial components of the tumor were well-differentiated and few mitosis, and polymorphism was not present. According to the WHO guidelines, the mass was diagnosed as IKA in this case. Sur-
In conclusion, this study described histopathology characteristics of canine cutaneous IKA. More investigations needs for understanding the pathogenesis and the risk factors of this tumor.

References


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Acanthoma in a dog

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