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Surgical management of conjunctivo-palpebral dermoid cyst in a German shepherd puppy

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Abstract

A young German Shepherd puppy was presented to the clinic with signs of epiphora, chronic eye irritation, restlessness and some abnormal growth from left eye since birth. All the physiological and haemato-biochemical parameters were within normal range. Thorough ocular examination revealed conjunctivo-palpebral dermoid cyst as etiological factor. Surgical excision of dermoid cyst was performed under general anaesthesia. The dog recovered uneventfully with no signs of recurrence of dermoid cyst in next 6 months' period.

Keywords: conjunctivo-palpebral dermoid cyst, German shepherd puppy, surgical excision

Introduction

Dermoid is a congenital choristoma affecting eyelids, conjunctiva (palpebral and or bulbar), nictitating membrane and or cornea ^[1], characterized by the presence of heterotrophic cutaneous tissue in an inappropriate place ^[2]. In dogs, the most frequent form is the conjunctivo-corneal dermoid, which was opined to be resultant of a genetic predisposition ^[3]. German shepherd, Dalmatian, and Saint-Bernard breed dogs were found to be more predisposed ^[4]. The dermoid tissue has all of the characteristics of skin: an epidermis, dermis, fat tissue, sebaceous glands, hair follicles, and hairs ^[8]. Numerous types of ocular surface dermoids have been described in dogs ^[4-7], cats, horses, calf ^[10] and anecdotally in various other species corneal dermoid, conjunctivo-corneal dermoid, conjunctivo-palpebral dermoid and dermoid of the nictitating membrane. Surgical excision is the best option in many instances and common signs include excessive tear formation (purulent or clear).

Case history and Clinical Observations

A seven months old, German shepherd puppy was presented to the Department of Veterinary Surgery and Radiology, Veterinary College, Hebbal, Bangalore with a complaint of abnormal hair growth in left eye since birth. The patient suffered from chronic epiphora and ocular discharge. Ocular examination of left eye revealed mild conjunctival hyperemia and a typical skin like structure at the lateral conjunctivo-palpebral area was observed (Fig 1). Fluorescein staining for corneal ulcer was negative in the affected eye. It was diagnosed as congenital conjunctivo-palpebral dermoid cyst and was decided for surgical excision.

Treatment and Discussion

The dog was fasted for food and water, 12 and 6 hours respectively. It was pre-medicated with Inj. Ceftriaxone @ 25 mg/kg body weight intramuscularly, preemptive analgesic Inj. Meloxicam @ 0.2 mg/kg body weight intramuscularly. Pre anesthetics Inj. Atropine sulfate @ 0.04 mg/kg body weight intramuscularly and Inj. Xylazine hydrochloride @ 1 mg/ kg body weight intramuscularly was administered. Surgical site was prepared aseptically and general anesthesia was induced and maintained with Inj. Thiopentone sodium (2.5% w/v) @ 12.5 mg/kg body weight intravenously. After the eye ball was fixed, abnormal tissue at the conjunctiva was removed using the BP blade (No. 11) and microsurgical instruments under operating microscope (Fig. 2). Hemorrhage over eyelids was controlled using thermocautery and forcipressure by adrenaline soaked swab and Wound edges were sutured using chromic catgut no. 4-0 by simple interrupted suturing technique (Fig. 3). Post-operatively advised to instill Ciprofloxacin eye drops four times a day for 15 days after surgery. A course of per oral antibiotics was also prescribed post-operatively. The dog had an uneventful recovery without any recurrence as reported by the owner after one month.

The Pathophysiological mechanism for the dermoid cyst formation is not known. An abnormal differentiation of the surface ectoderm during embryonic development is said to be the most likely hypothesis [8]. The conjunctivo-palpebral dermoid in dogs is an uncommon form which has previously only been described in veterinary textbooks [3, 8] and not in peer reviewed clinical case reports. The most frequent location of dermoid cyst is at the external canthus, where the newly formed extra tissue interrupts the continuity of the lid margin and continues into the conjunctival fornix [3]. The treatment is always surgical and obviously requires resection of the malformed area, sometimes associated with graft procedures [3]. Though in this case, no complications were faced during the surgery but, particular care must be taken in reconstruction of the palpebral margin in order to conserve palpebral function and remove any risk of iatrogenic ocular irritation [9]. The animal had no recurrence of the dermoid after the surgery.



Fig 1: Photograph showing conjunctivo-palpebral dermoid



Fig 2: Photograph showing excision of dermoid



Fig 3: Photograph showing area after removal of dermoid



Fig 4: Photograph showing sutured edges of incised wound.



Fig 5: Photograph showing excised dermoids

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