

Surgical Correction of Ankyloblepharon Filiforme Adnatum - A Congenital Abnormality of Eyelids in a Pup

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Abstract

A three months old Spitz pup was presented with history of incomplete opening of eyelids due to a fibrous band connecting the eyelids. The condition was diagnosed as Ankyloblepharon filiforme adnatum and managed surgically.

Keywords: Ankyloblepharon filiforme adnatum; congenital abnormality; eyelid

Introduction

The eyelid opening is almost completely closed at birth in dogs and cats. There is only a pin point opening at medial canthus. Lids open during the first 10-15 days. Delayed or incomplete opening is occasionally seen in dogs (Basher, 2003). Ankyloblepharon filiforme adnatum (AFA) is a rare benign congenital abnormality of eyelids characterized by single or multiple bands of fibrous tissue joining the upper and lower eyelids either unilaterally or bilaterally. These connecting strands were found to consist of vascularized central core surrounded by stratified squamous epithelium (Judge *et al.*, 1929). It is differentiated from pathologic Ankyloblepharon which is reported to occur in pups which is characterized by failure of the eyelids to separate even after 10-14 days and in which there is complete fusion of eyelids (Basher, 2003). It can occur as an isolated finding or as part of well-defined syndromes. It may also be associated with hydrocephalus, imperforate anus, patent ductus arteriosus (Avi Rubinov *et al.*, 2015; Gruener and Mehat, 2009 and Williams *et al.*, 2007). Surgery to free these adhesions should be performed as soon as possible to prevent the risk of occlusional amblyopia (Gruener and Mehat, 2009 and Mohamed *et al.*, 2003).

The aetiology of AFA is unknown, but failure of apoptosis at a critical stage in eyelid development has been suggested (Mohamed *et al.*, 2003).

Clinical Observations and Treatment

A three months old Spitz pup was presented with

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history of incomplete opening of eyelids. Ophthalmic examination of right eye revealed a band of fibrous tissue connecting the eyelids. The band was severed at points of insertion using ophthalmic scissors. Minimal bleeding was noticed which was controlled with pressure with gauze sponge soaked in normal saline. The eye was flushed with warm normal saline. The pup recovered uneventfully. No other congenital abnormalities were noted.



Fig.1: Fibrous tissue band connecting the eyelids

Discussion

Ankyloblepharon filiforme adnatum is a rare benign congenital abnormality of eyelids characterized by single or multiple bands of fibrous tissue joining upper and lower eyelids either unilaterally or bilaterally. In the present case, there was a single band of tissue connecting the eyelids. The aetiology of AFA is unknown, but failure of apoptosis at a critical stage in eyelid development has been suggested. Surgery to free these adhesions should be performed as soon as possible to prevent the risk of occlusional amblyopia (Avi Rubinov *et al.*, 2015).

Summary

Ankyloblepharon filiforme adnatum is a rare benign congenital abnormality of eyelids characterized by single or multiple bands of fibrous tissue joining upper and lower eyelids either unilaterally or bilaterally. It has been reported to occur rarely in humans. A rare case of ankyloblepharon filiforme adnatum in a Spitz pup is reported. To our knowledge this is the first known report of this condition in dogs. The fibrous band was severed at points of insertion leading to uneventful recovery. The vision was normal and pup appeared healthy and no other congenital abnormalities were noted.

Conclusion

Ankyloblepharon filiforme adnatum a rare benign congenital abnormality of eyelids reported to occur rarely in humans was reported in a three months old Spitz dog. Surgery to free these adhesions should be performed as soon as possible to prevent the risk of occlusional amblyopia. Its presence should also

alert the clinician to look for other congenital abnormalities.

References

- AviRubinov, NirSeider, EedyMezer, LironBerkovitz, Eytan Z. Blumenthal and Imad R. Makhoul. (2015). Ankyloblepharon filiforme adnatum. *IMAJ*. 17: 16.
- Basher, T. (2003). Surgery of the eyelids. *Textbook of Small Animal Surgery*, 3rd ed. Douglass Slatter, Saunders. p.1304.
- Gruener, A.M. and Mehat, M.S. (2009). A newborn with Ankyloblepharon filiforme adnatum - A case report. *Cases J*. 2: 8146.
- Judge, H., Mott, W. and Gabriels, J. (1929). Ankyloblepharon filiforme adnatum. *Arch Ophthalmol*. 2: 702-8.
- Mohamed, Y.H., Gong, H. and Amemiya, T. (2003). Role of apoptosis in eyelid development. *Exp Eye Res* 76:115-23.
- Williams, M.A., White, S.T. and McGinnity, G. (2007). Ankyloblepharon filiforme adnatum. *Arch Dis Child* 92: 73-74.

3rd Regulators - Industry Interactive Meet at IVRI

On 6th December, Division of Standardization, Indian Veterinary Research Institute (IVRI) organised the 3rd consecutive 'Annual Interaction Meet' between Regulators and Veterinary companies engaged in manufacturing and imports of Veterinary biologicals for food producing and companion animals. The interactive meet was held under the leadership of Dr. Ashok K. Tiwari, Head, Biological Standardisation Division, IVRI and with the joint efforts of Indian Federation of Animal Health Companies (INFAH). The meet was attended by around than 70 members representing private Veterinary biological industry; Indian Pharmacopeia Commission (IPC), Ghaziabad; State Biological production units and other associated stakeholders. Dr. Rishendra Verma; Dr. R.P. Singh, Dr. Pranab

Dhar and Dr. D.K. Dey, eminent Veterinarians in the history of development and standardization of Veterinary biologicals in India also graced the occasion and interacted during the discussion on monographs of Veterinary biologicals for inclusion in Indian Pharmacopeia.



Participants of interactive meet