

SCIENTIFIC COMMUNICATION

Intraocular porcupine quill in a dog

Espinho de ouriço intra-ocular em cão

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Abstract

Ocular foreign bodies are responsible for multiple injuries with various functional consequences depending on their nature, shape, location, velocity and way of penetration. We report here a boxer bitch with a 1.7 cm long intraocular foreign body lying in the cornea, through the anterior chamber and lens. The case was presented at the Ophthalmology Unit of the "Governador Laudo Natel" Veterinary Hospital, Faculdade de Ciências Agrárias e Veterinárias, Universidade Estadual Paulista, Jaboticabal Campus, SP/Brazil. After removal, the foreign body was found to be a porcupine (*Coendou prehensilis*) quill. The animal was submitted to topical antibiotic, antiinflammatory and antihypertensive therapy for 30 consecutive days, which permitted preservation of the eye despite the loss of visual function.

Keywords: intraocular foreign body, porcupine quills, dog.

Resumo

Corpos estranhos oculares são responsáveis por múltiplas lesões com conseqüências funcionais proporcionais à sua natureza, formato, localização, velocidade e forma de penetração. Neste trabalho, relata-se o caso de uma cadela da raça boxer, fêmea, com corpo estranho de 1,7cm de comprimento que adentrava a córnea, permeando a câmara anterior e o cristalino, apresentado junto ao Serviço de Oftalmologia do Hospital Veterinário "Governador Laudo Natel", da Faculdade de Ciências Agrárias e Veterinárias da Universidade Estadual Paulista - Campus de Jaboticabal - SP/Brasil. Após a remoção, verificou-se tratar de espinho de *Coendou prehensilis* (ouriço caxeiro). O animal, submetido à terapia antibiótica, antiinflamatória e anti-hipertensiva tópicas durante 30 dias consecutivos, após os quais o olho pôde ser preservado, não obstante a perda da função visual.

Palavras-chave: corpo estranho intra-ocular, espinho de ouriço, cão.

Intraocular foreign bodies are the ones that perforate the cornea or sclera and become lodged in any of the structures of the ocular globe (Chaudieu, 1994). They can be subdivided into two categories, i.e., inorganic and organic. Among organic, porcupine quill usually penetrate the mouth and face but rarely the eyes (Grahn, 1995).

When porcupine quills penetrate the eye globe, rupture of the lens capsule commonly occurs. If the cortex of the lens is identified in the anterior chamber, facetectomy is indicated in order to prevent facoclastic endophthalmitis. This occurs when the injuries reach dimensions exceeding 1.5 mm (Grahn, 1995; Davidson and Nelms, 1999). Minor injuries may spontaneously close, with no need for surgical procedures (Collins and Moore, 1999).

The treatment of ocular perforations by foreign bodies and its complexity vary according to the nature, size, location and extension of tissue damage, as well as the significance of

uveal inflammation. The chances of secondary infection in ocular traumas with perforation by foreign bodies are important and should be considered, together with the inflammation installed (Collins and Moore, 1999; Davidson and Nelms, 1999).

The authors report the occurrence of photophobia, blepharospasm, epiphora, severe ocular discomfort and slight buphthalmos in an adult boxer bitch seen at the Ophthalmology Unit of the "Governador Laudo Natel" Veterinary Hospital, Faculdade de Ciências Agrárias and Veterinárias, Universidade Estadual Paulista, UNESP, Jaboticabal Campus, SP/Brazil.

During examination with a direct spot light followed by slit-lamp biomicroscopy, a foreign body was observed which layed in the cornea, through the anterior chamber and lens. There were corneal and conjunctival edema (Figure 1 and 2) and posterior synechiae resulting in dyscoria, paralyzed iris and traumatic cataract.

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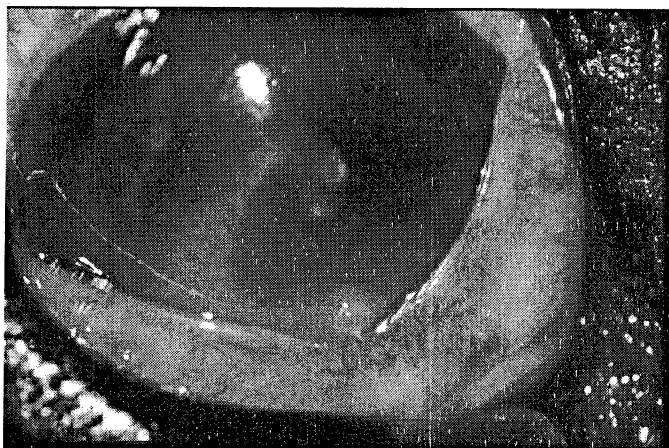


Figure 1: Photographic image of the eye of a boxer bitch with corneal and conjunctival edema. Note granulation tissue with a small projection of the foreign body in the bottom left quadrant.

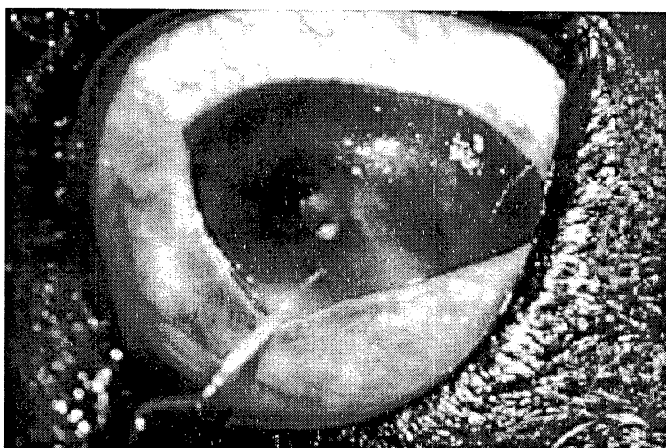


Figure 2: Photographic image of the eye of a boxer bitch illustrating part of the foreign body externally to the cornea.

After topical anesthesia with eye drops containing a 0.5% proparacaine HCL solution, the foreign body was removed with the aid of a cilia forceps and was found to be a porcupine (*Coendou prehensilis*) quill measuring 1.7 cm in length (Figure

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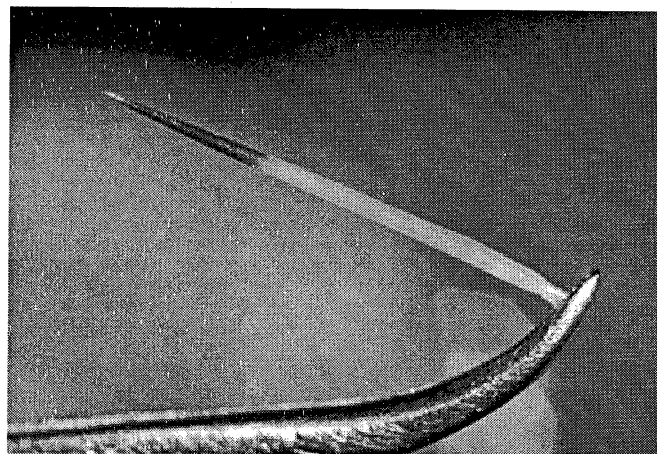


Figure 3: Photographic image of a quill from a prehensile-tailed porcupine (*Coendou prehensilis*) removed from the cornea, anterior chamber and lens of a boxer bitch, measuring 1.7cm in length.

3). After the surgical procedure, the animal was treated with topical 0.1% dexamethasone acetate, polymixin B and neomycin in ointment form, 4 times a day, and with a 2% dorzolamide solution three times a day for 30 consecutive days. Despite the loss of visual function, the treatment permitted successful preservation of the ocular bulb.

Depending on their location and depth, intraocular foreign bodies generate corneo-scleral damage, intraocular hemorrhage, as well as lens, vitreous and retinal lesions of high significance and morbidity (Chaudieu, 1994). The severity of the lesion is assumed to depend on the nature, shape, location, and the velocity and mode of penetration of the foreign body (Chaudieu, 1994; Berdugo, 1995).

A precise and prompt diagnosis of perforating lesions of the ocular globe, the removal of cell debris and fragments of the penetrating material are indispensable for successful maintenance of visual function and eye structure.

It is important to note that, although the presence of foreign bodies in the face is common, in accidents such as the one reported here, the inspection of the ocular globe and its internal structures internal is mandatory. Moreover, the quality of the results obtained is inversely proportional to the severity of the lesions and to its chronicity (Chaudieu, 1994).

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