

Transmissible venereal tumor: eyelid localization and blepharoplasty in a dog

Tumor venéreo transmissível: ocorrência palpebral e blefaroplastia em cão

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Abstract

Sebaceous gland adenoma, histiocytoma, mast cell tumor, papilloma, fibrosarcoma and melanoma are the most common eyelid tumors. Eyelid venereal transmissible tumor (TVT) or Sticker's tumor is not usual. This case reports a TVT in a lower eyelid dog. There was purposed a modified H blepharoplasty with good cosmetic and therapeutic results.

Keywords: eyelid, venereal transmissible tumor, Sticker, dog.

Resumo

Dentre os tumores palpebrais mais comuns no cão sobressaem-se o adenoma da glândula sebácea, histiocitoma, mastocitoma, papiloma, fibrossarcomas e melanomas, sendo o tumor venéreo transmissível (TVT), ou tumor de Sticker, de rara ocorrência neste local. O presente relato refere-se a um TVT em pálpebra inferior em cão, submetido a blefaroplastia, modificando-se a técnica em "H". Bons resultados cosmético e terapêutico foram obtidos.

Palavras-chave: pálpebra, tumor venéreo transmissível, Sticker, tumor, cão.

Introduction

The eyelid is a common site for neoplastic diseases in dogs (Brightman, 1993; Bedford, 1998). Among the most common eyelid tumors in dogs, the ones that stand out are adenoma of the sebaceous gland (Khehbiel e Langham, 1975; Roberts *et al.*, 1986; Slatter, 1990; Brightman, 1993; Moore e Constantinescu, 1997; Faragoni *et al.*, 1999; Jones e Bedford, 1999), histiocytoma, mastocytoma, papilloma (Khehbiel e Langham, 1975; Moore e Constantinescu, 1997) fibrosarcomas or neurofibrosarcomas, melanoma (Gwin *et al.*, 1976; Miller e Dubielzig, 1996) and basal and squamous cell carcinomas (Moore e Constantinescu, 1997), the latter two being more common in cats (Slatter, 1990; Miller e Dubielzig, 1996; Barnett e Crispin, 1998; Glaze e Gelatt, 1998; Stades *et al.*, 1999).

Transmissible venereal tumor, a neoplasm of mesenchymal origin (Nelson e Couto, 2001), affects the external genitalia of dogs (Peterson e Couto, 1994; McEntee, 2001) although extra-genital localization has been described, such as the oral cavity, skin, sclera, anterior chamber of the eye and the nasal cavity (MacEwen, 1996; Feldman e Nelson, 1996; Costa, 1999; McEntee, 2001). It occurs with greater frequency in areas in which dogs roam freely (Peterson e Couto, 1994). During the

past decades there has been only one report of transmissible venereal tumor of the eyelid in a dog (Abbott, 1966).

Whether eyelid tumors are malignant or benign, the importance of an appropriate therapy should be considered, in view of the ocular discomfort that it causes and because of its potential to impair vision (Miller e Dubielzig, 1996; Willis e Wilkie, 2001).

Case report

A six-year-old, male Miniature Pinscher dog was presented with a neoplasm on the lower left eyelid, showing progressive growth for three months and moderately purulent mucous secretion, and which was intensively pruritic. The dog resided at a country home, and had contact with other animals. The tumor mass had a firm consistency, was hyperemic and ulcerated, and filled all of the extension of the lower eyelid border (Fig.1), adhering to the posterior conjunctiva of the third eyelid. No other clinical incidents were noted. Ophthalmic examination, particularly of the right eye, was difficult in light of the extension of the tumor. There was decided for surgical excision. An aspiration biopsy recommended (McEntee, 2001) was inconclusive, and impression smears were not done, because it is rarely of diagnostic value (Bedford, 1998).

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Figure 1: Tumor mass on the lower left eyelid, in a dog, showing a firm consistency, hyperemic and ulcerated appearance, and muco – purulent secretion, involving all of the lower eyelid margin. The extent of the tumor mass impeded ophthalmic examination.

After prior laboratory exams and X-rays of the chest and abdomen and withdrawal of food and water, the animal was submitted to pre-anesthetic medication such as levomepromazine^a at a dose of 0.5 mg/kg, given intravenously, and subsequently to general inhalation anesthesia with isoflurane^b and oxygen^c, in a semi-closed circuit. After shaving and routine preparation of the surgical field, an incision was made on the lower left eyelid using a No. 11 scalpel^d, a modification of the H-blepharoplasty (Welker, 1995). A vertical incision was made on medial side and another on the lateral side of the lower eyelid margin, extending it to approximately 1.0 cm below the eyelid border, preserving the nasolacrimal duct. At the end of the incision, a triangular flap, as proposed in H-blepharoplasty, was pushed back from the medial side. The procedure was continued with a horizontal incision parallel to the lower eyelid border, following

the contour of the eyelid and another at approximately 0.5 cm below the preceding one, extending from the vertical incision at the lateral palpebral commissure. This flap was removed together with the palpebral conjunctiva, by means of extirpation of the tumor mass. The remaining skin was sutured to the medial portion, as in the blepharoplasty H-technique. Simple interrupted sutures were performed employing atraumatic needle-sutures of polyglactin 910^e, n^o. 5.0. Although utilization of a non-absorbable monofilament suture was indicated, it was opted to use the non absorbable so as not to traumatize the cornea. In the same way, the latter portion of the skin was pulled back and sutured to end portion of the upper eyelid border of the temporal corner, as with canthoplasty (Fig.2, 3). After surgical excision, the extracted tissue was sent for histopathologic examination (McEntee, 2001) and the result was primary transmissible venereal tumor.

Systemic anti-inflammatory therapy was instituted (flunixin meglumine^f at 1.1 mg/Kg SID, subcutaneous, for 2 days) and topical antibiotic (chloramphenicol ointment^g TID, for 7 days) during the post-operative period. The animal was kept in an Elizabethan collar until complete recovery of the surgical wound and removal of sutures at 10 days post-operative. Chemotherapy with vincristine sulfate^h was instituted, along with hematologic follow-up, in compliance with that recommended in the literature (MacEwen, 1996; Feldman e Nelson, 1996; Costa, 1999; McEntee, 2001; Nelson e Couto, 2001).

Ten days post-operative the sutures were removed and the surgical wound appeared healed. An ophthalmic examination was performed on the right eye, as described previously for the left eye, since it was initially difficult. No changes were found whatsoever. The animal returned at 2, 3 and 6 months after the surgical procedure for clinical and ophthalmic evaluation. At 3 months after surgery, a lower reconstituted tarsus and intact ocular surface was observed. After the passing of 6 months, the animal did not show any signs of residual tumor (Fig. 4). Complementary tests, such as a blink reflex and Schirmer's tear testⁱ (right eye = 17 mm; left eye = 18mm),

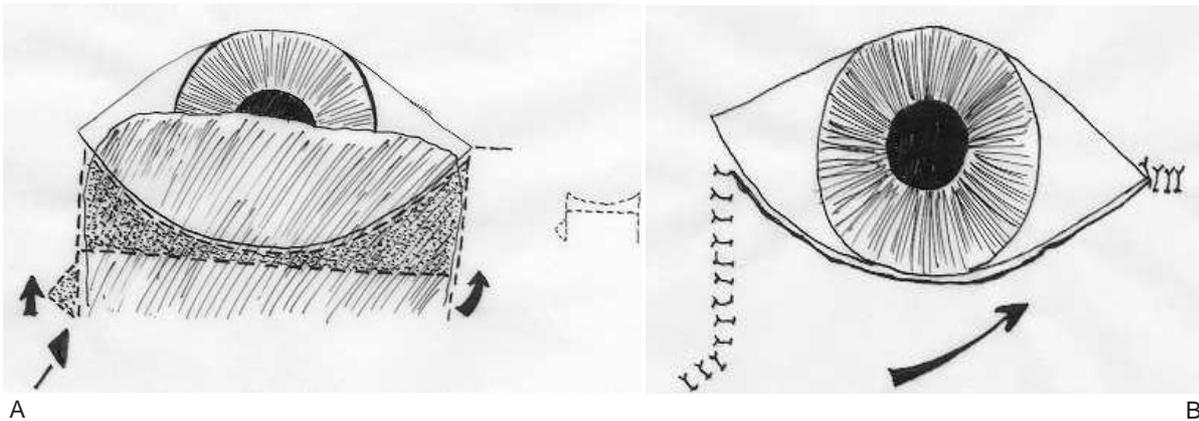


Figure 2: Schematic illustration of the blepharoplasty technique employed. a) vertical incision on the medial and lateral sides of the lower eyelid, followed by excision of a triangular section of the medial incision; parallel horizontal incision at the lower eyelid margin. b) Simple interrupted sutures were performed.

^a Neozineã - Aventis - São Paulo - SP

^b Isoforineã- Cristália - Itapira - SP

^c Oxigênio - White Martins Gases Industriais do Norte - Cuiabá - MT

^d Lâmina de bisturi no. 11ã- Lamedid - Barueri - SP

^e Vicrylã - Ethicon Johnson & Johnson - São José dos Campos - SP

^f Banamine injetãvelã 10mg - Schering - Plough Veterinãria - Rio de Janeiro - RJ

^g Epitezãnã- Allergan - Guarulhos - SP

^h Oncovinã- Eli Lilly do Brasil - São Paulo - SP

ⁱ Schirmer Tear Testã- Schering - Plough Animal Healthy Corp. - Kenilworth - New Jersey - USA

were shown to be within normal values. On the last visit the dog was found to be in good general condition with restoration of the margin of the lower right eyelid. No ophthalmic alterations were observed. X-rays of the chest and abdomen showed no signs of residual tumor.

Discussion and conclusion

Transmissible venereal tumor is a proliferative tumor and it is not usually described among the more frequent eyelid neoplasms (Krehbiel e Langham, 1975; Gwin *et al.*, 1976; Roberts *et al.*, 1986; Jones e Bedford, 1999, McEntee, 2001). An analysis of the removed material showed uniform-sized, round and ovoid cells, with the presence of numerous mitotic figures, distributed in the fine stroma of connective tissue (Fig.5), compatible with transmissible venereal tumor (Peterson e Couto, 1994).



Figure 3: Photographic illustration of lower left blepharoplasty in a dog, immediately post-operative, showing the formation of a new margin of the lower left eyelid.

excision of the transmissible venereal tumor may be effective in animals in which total resection is possible (Grooters, 1994).

Various blepharoplasty techniques have been described, considering the particularities of each lesion (Carter, 1970; Paris, 1979; Peterhans e Keller, 1986; Bedford, 1988; Moore e Constantinescu, 1994; Stabel e Hawes, 1998; Pena e Garcia, 1999; Faludi e Bilkei, 2001). Therefore, when there is involvement of more than 1/4 of the lid, as observed in this case, in which the tumor mass occupied all of the extension of the lower eyelid margin, more elaborate blepharoplasty techniques are required (Brighman, 1993; Welker, 1995; Miller e Dubielzig, 1996; Jones e Bedford, 1999; Munger, 2001). H-blepharoplasty was partially modified in view of the characteristics of the tumor. Following post-operative recuperation, chemotherapy was instituted using vincristine in a typical protocol (MacEwen, 1996; Feldman e Nelson, 1996; Costa, 1999; McEntee, 2001; Nelson e Couto, 2001), as a prophylaxis for eradicating residual disease (Grooters, 1994; Peterson e Couto, 1994; Miller e Dubielzig, 1996). Follow-up of the animal was carried out for up to 180 days post-operative, showing no observed systemic and ocular alterations (Fig.4). At the end of this period, restoration of the margin of the lower right eyelid was observed, and the dog was in good general condition, without signs of residual tumor.

Considering that about 75 to 90% of eyelid tumors in dogs are benign (Krehbiel e Langham, 1975; Gwin *et al.*, 1976; Slatter, 1990; Moore e Constantinescu, 1997; Jones e Bedford, 1999) and that the malignant ones, in this species, are rarely metastatic, surgical resection was preferred to any chemotherapeutic approach, in accordance with the consensus in the literature (Miller e Dubielzig, 1996; Bedford, 1998; Willis e Wilkie, 2001). Appropriate therapy should be considered, in view of the ocular discomfort it can cause and to its potential to impair vision (Bedford, 1998). Wide surgical excision is considered to be the most effective therapy for the majority of tumors involving the eyelid and conjunctiva (Miller e Dubielzig, 1996; Willis e Wilkie, 2001); however, the correction of large eyelid defects, regardless of their origin, is one of the greater challenges of ophthalmic surgery (Munger, 2001). The prognosis in the majority of cases could be viewed as excellent (Miller e Dubielzig, 1996). Although chemotherapy with vincristine sulfate is widely used for these tumors, surgical



Figure 4: Photographic illustration of the left eyelid of a dog submitted to blepharoplasty, at 6 months post-operative. Note the absence of any ocular disturbances.

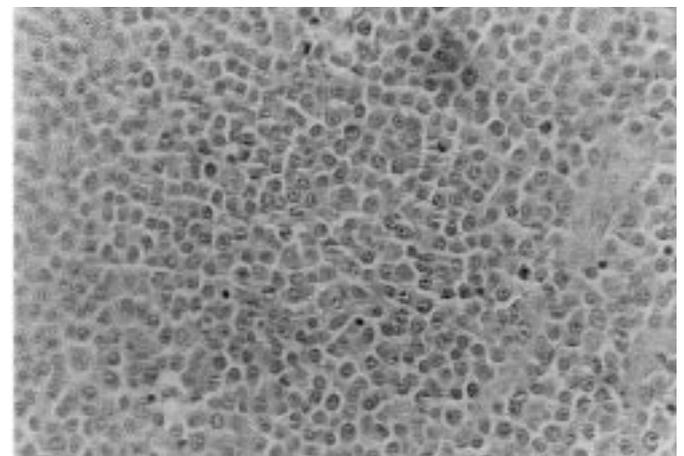


Figure 5: Histologic section of a tumor mass depicting uniform-sized, round and ovoid cells, with the presence of numerous mitotic figures, distributed in the fine stroma of connective tissue, which is compatible with transmissible venereal tumor.

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