

Fișa suspiciunii de plagiat / Sheet of plagiarism's suspicion

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OA	LAUS, J.L, SOUSA, M.G., CABRAL, V.P., MAMEDE, F.V., TINUCCI-COSTA, M. Uveodermatologic syndrome in a Brazilian Fila dog. <i>Veterinary Ophthalmology</i> . 7(3). 2004. p.193–196. Disponibil la: http://onlinelibrary.wiley.com/doi/10.1111/j.1463-5224.2004.04023.x/full

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Uveodermatologic syndrome in a Brazilian Fila dog

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Abstract

A 5-year-old Brazilian Fila dog was presented with a history of vision loss, alopecia, and generalized depigmentation of the skin and hair. Clinical examination confirmed generalized depigmentation and pyodermitis. On ophthalmic examination there was depigmentation at the eyelid mucocutaneous junction, associated with anterior uveitis, and bilateral posterior synechia at 360°. Both the complete blood count and skin scraping were normal. Skin biopsy showed histiocytary lichenoid interface dermatitis with an absence of pigment within the keratinocytes, and a moderate lymphomononuclear infiltrate and predominance of histiocytes in the papillar derma suggestive of uveodermatologic syndrome. Clinical management consisted of oral and topical administration of prednisone, associated with 1% indometacine eye drops. Methylprednisone was also used twice via the subconjunctival route, at an interval of 15 days. To prevent the development of secondary glaucoma due to posterior synechiae, dorzolamide and timolol eye drops were indicated. Both dermatologic and ophthalmic signs showed good improvement, vision was preserved, and some repigmentation of the skin and hair occurred.

Key Words: Brazilian Fila, depigmentation, dog, uveitis, Vogt–Koyanagi–Harada

INTRODUCTION

Uveodermatologic syndrome was described in man by Vogt (1906), Harada (1926) and Koyanagi (1929) as a granulomatous uveitis associated with vitiligo, poliosis, alopecia and neurological signs.¹ The disease was first reported in 1977 in two Akita dogs by Asakura *et al.* (1977).² Since then, several other affected breeds including the Siberian Husky, Dachs-hund, Fox Terrier, Shetland Sheepdog, Saint Bernard, Irish Setter, Old English Sheepdog, and Chow-Chow have been reported.^{3–10}

The cause of the disease is still undetermined but a role for the immune system has been suggested, with melanocytes being the target cells. In man, the syndrome is described as being of genetic origin, involving multiple hereditary factors.¹¹ In dogs, the highest incidence appears among the Akita, suggesting breed predisposition and perhaps genetic transmission.^{12–14}

Clinical signs are characterized by depigmentation of the skin at the scrotum, nasal planum and mucocutaneous junctions of the mouth, eyelids and perianal region.^{6,10,15} Neurological signs in dogs have been reported only twice.^{16,17} Ophthalmic signs include diminished or absent pupillary light reflexes, blepharospasm, photophobia, anterior uveitis,

keratic precipitates, hyphema, chorioretinitis, and in some cases retinal detachment.¹² Secondary events include cataracts, iris bombé, secondary glaucoma and loss of vision.^{6,12,14,15}

History, clinical and ophthalmic signs, and complementary laboratory examinations are important for diagnosis. Management of the disease consists of the administration of systemic and topical corticosteroids in high concentrations and, whenever necessary, more potent immunosuppressive drugs. The prognosis is guarded, especially for long-term control and the maintenance of vision.^{4,10}

We present a case of uveodermatologic syndrome in a Brazilian Fila dog, which is the first report of this disease in this breed.

CASE REPORT

A 5-year-old male Brazilian Fila dog was referred with a 3-month history of gradual vision loss associated with alopecia and cutaneous depigmentation in the thoracic region. A general examination revealed generalized depigmentation, with eminence to the scrotum, nose and mucocutaneous junctions of the mouth and eyelids. The hair was also diminished in several parts of the derma, with some alopecic areas and secondary pyodermitis (Fig. 1a–f). Ophthalmic



Figure 1. Initial presentation of a 5-year-old male Brazilian Fila dog. (a) Note generalized depigmentation and poliosis, pyodermitis and alopecia. (b) Note depigmentation of the mouth, nasal planum and around the eye. (c) Note depigmentation of the nasal planum. (d) Note depigmentation in the mucocutaneous junctions of the mouth. (e) Note depigmentation of the scrotum. (f) Note alopecia, depigmentation and poliosis at the scrotum.

examination indicated depigmentation of the mucocutaneous junctions of the superior and inferior eyelids, severe conjunctival hyperemia, and congestion of the episcleral vessels. Menace and pupillary light reflexes were decreased. The Schirmer Tear Test I (Teste de Schirmer Ophthalmos, Ophthalmos Farmácia Oftálmica, São Paulo, Brazil) was normal for both eyes. For both eyes, slit-lamp biomicroscopy (Slit Lamp SL-14-Kowa, Tokyo, Japan) showed diffuse corneal edema, keratic precipitates, iridal edema, rubeosis iridis and 360° or annular posterior synechiae, with beginning of iris bombé. Hyphema was also observed in the left eye (Fig. 2).

Ophthalmoscopy did not show fundic alterations. The intraocular pressure (IOP), measured using applanation

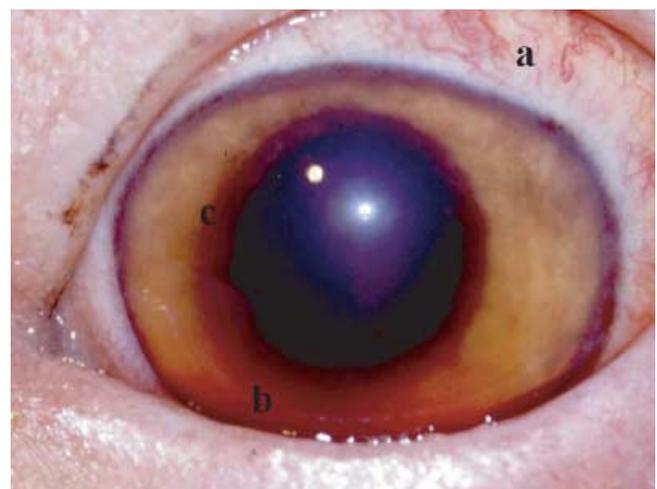


Figure 2. Left eye of a 5-year-old male Brazilian Fila dog. Note the conjunctival hyperemia (a), hyphema (b), and rubeosis iridis (c).

Table 1. Complete blood count results

Parameters	Values	Normal range
Erythrocytes ($10^6/\mu\text{L}$)	6.88	5.5–8.5
Hemoglobin (g/dL)	14.17	12–18
Hematocryte (%)	46.8	37–55
Leukocytes ($10^3/\mu\text{L}$)	8.3	6–18
Basophils (%)	0	Rare
Eosinophils (%)	6	2–10
Band cells neutrophils (%)	1	0–3
Segmented neutrophils (%)	70	60–77
Lymphocytes (%)	22	12–30
Monocytes (%)	1	3–10

tonometry (Tono-Pen XL, Mentor O & O, Norwell, MA, USA) was 7 and 12 mmHg, respectively, for the right and left eye. Fluorescein tests were negative for retention of dye in both eyes (Fluoresceína Strips Ophthalmos).

Laboratory examination

The complete blood count did not show significant changes (Table 1). Skin scrapings collected from affected areas showed an absence of bacteria, fungi or mites.

Histopathologic findings

A skin biopsy of the affected areas was performed under general anesthesia with levomepromazine (Neozine™, Aventis Pharma AS, São Paulo, Brazil), 1 mg/kg IV and propofol (Propofol™, Cristália Ltda, São Paulo, Brazil), 5 mg/kg IV. To maintain anesthesia, isoflurane (Isoflurano™, Cristália Ltda) diluted in oxygen was administered via a closed circuit.

Skin-punch biopsies were placed in 10% buffered formalin for fixation, sectioned in paraffin, and stained with hematoxylin and eosin (H&E) and Masson-Fontana. Results revealed histiocyte lichenoid interface dermatitis, with an absence of pigment within keratinocytes, and a moderate lymphomononuclear infiltrate, with predominance of histiocytes in papillar derma, with infiltrating neutrophils and lymphocytes. Such findings, associated with clinical and ophthalmic signs, suggested uveodermatologic syndrome¹⁸ (Figs 3 and 4).

Clinical management

Oral prednisone (Meticortem™, Schering-Plough, Rio de Janeiro, Brazil), at a dose of 2 mg/kg body weight, every 12 h was initiated. Prednisone eye drops were also used at a 1% concentration (Pred fort™, Allergan Ltda, São Paulo, Brazil), every 4 h, as well as 1% indometacine eye drops (Indometacina 1%™, Ophthalmos Farmácia Oftálmica) every 6 h. A subconjunctival injection of 8 mg of methylprednisone (Depo-Medrol™, Pharmacia Ltda, São Paulo, Brazil) was performed twice in each eye, at a 15-day interval. Owing to posterior synechia, the use of dorzolamide associated with timolol eye drops was started (Cosopt™, Merck, Sharp & Dohme, São Paulo, Brazil), every 12 h, in order to avoid increasing the IOP.

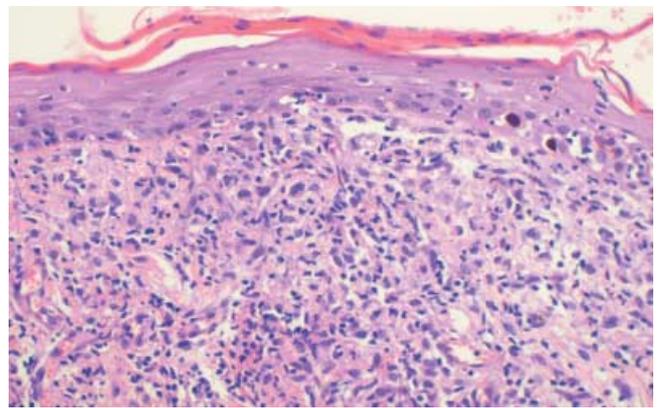


Figure 3. Photomicrograph of the skin biopsy. Note the infiltrate with predominance of macrophagus surrounded by melanophage, leukocyte and neutrophils. The epiderma shows the absence of pigment. (H&E $\times 100$).

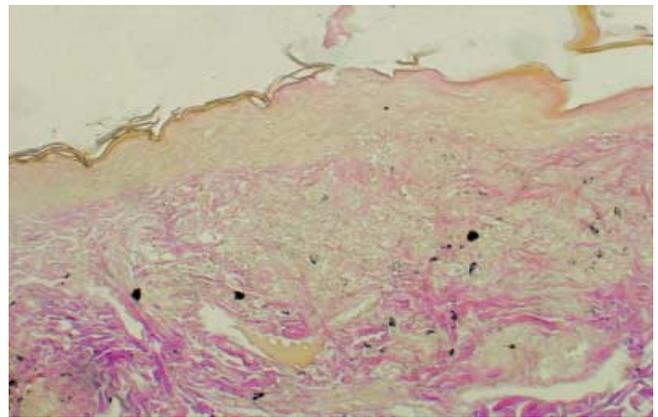


Figure 4. Photomicrograph of the skin showing absence of pigment, with some melanophages in the papillar derma. (Masson-Fontana $\times 100$).

Fifteen days later there was an improvement in clinical, dermatological and ophthalmic signs. There was marked regression of the dermatitis, and some skin and hair repigmentation had begun. The conjunctival hyperemia, congestion of the episcleral vessels, the corneal edema, and the keratic precipitates had diminished. The hyphema showed some resolution. Both systemic and topical therapies were continued.

Following 2 months of treatment, the clinical and dermatological signs showed considerable improvement, with repigmentation of previously affected areas, and hair regrowth. The ophthalmic inflammatory signs had disappeared, with resorption of hyphema. Secondary cataracts had developed in both eyes.

DISCUSSION

After the first report of uveodermatologic syndrome in two dogs by Asakura in 1977, many other breeds have been

shown to be affected.^{2-6,13,14,16,19} However, uveodermatologic syndrome had not been noted previously in the Brazilian Fila.

The cause(s) and pathogenesis of this disorder are not fully known. The immune system plays a role, targeting the melanocytes. Viral infections may also be involved.⁴ To date, some alleles, such as *HLA-DR1*, *HLA-DR2* and *HLA-DR4*, have been reported in humans with uveodermatologic syndrome, suggesting that genetic factors are involved.¹¹ Such alleles have not been identified in affected dogs. However, the high incidence, particularly in Akitas, suggests certain a breed predisposition.¹²⁻¹⁴ There is no gender predisposition, but the mean age of affected dogs ranges between 6 months and 6 years.¹²

Clinical examination may associate the bilateral uveitis with the generalized depigmentation of skin and hair. Toxic and infectious agents, trauma, neoplasia and immune-mediated diseases, as well as idiopathic causes, are recognized as common causes of bilateral uveitis.¹⁴ In case reported here, there was depigmentation of the mucocutaneous junctions of the superior and inferior eyelids, nostrils and scrotal skin, as well as dermatitis and alopecia. A skin biopsy confirmed uveodermatologic syndrome. Histiocyte lichenoid dermatitis, with an absence of pigment within the keratinocytes is the most suggestive sign, as reported previously.³

Treatment to control the inflammation with rapid and aggressive topical and systemic administration of immunosuppressors resulted in marked clinical improvement of both the ocular and skin lesions. Uveitis can be controlled using topical and subconjunctival corticosteroids, associated with mydriatics and cycloplegics.⁴

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