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ISOLATION OF Leishmania sp. FROM AQUEOUS HUMOR OF A PATIENT WITH CUTANEOUS DISSEMINATED LEISHMANIASIS AND BILATERAL IRIDOCYCLITIS (PRELIMINARY REPORT)[1]

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SUMMARY

The Authors report an uncommon case of leishmaniasis with disseminated cutaneous lesions, systemic manifestations and ocular involvement, the latter being characterized by bilateral nongranulomatous iridocyclitis. The severity of the ophthalmologic lesions and its unresponsiveness to therapy (in spite of satisfactory regression of both systemic and cutaneous manifestations) lead to a needle aspiration of the anterior eye chamber content. From this material **Leishmania sp** was isolated. To our knowledge this is the first time that **Leishmania** has been shown into the ocular globe.

KEY WORDS: Ocular leishmaniasis; Leishmaniasis; Iridocyclitis.

Although ophthalmologic complications of leishmaniasis have been reported, references on this matter is scarce. The involvement of eyelids, conjunctiva and cornea are the most common ocular findings associated to American leishmaniasis[1, 2, 3, 4, 8, 9, 10]. Chronic unilateral iridocyclitis associated to total symblepharon and fibrotic infiltration of both conjunctiva and cornea was described[7]. Retinal hemorrhage is the most frequent ocular complication associated to kala azar[6], but keratitis, iritis and iridocyclitis as well have been reported as rare events[5].

In this study the Authors report an uncommon case of leishmaniasis, with disseminated cutaneous lesions, systemic manifestations and ocular involvement, the latter being characterized by bilateral nongranulomatous iridocyclitis. The severity of the ophthalmologic lesions and its unresponsiveness to therapy (in spite of satisfactory regression of both systemic and cutaneous manifestations) lead to a needle aspiration of the anterior eye chamber content. From this material **Leishmania sp** was isolated. To our knowledge this is the first time that **Leishmania** has been shown into the ocular globe.

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A 50-year-old male patient was in good health until November 1988 when he presented asthenia, weight loss, and intermitent fever. Four months later he noted a progressive decrease of his visual acuity with concomitant photophobia, bilateral ocular pain and hyperemia. At the same time cutaneous lesions were noted, begining at the lower limbs and disseminated to his trunk and arms. Such lesions were papulosquamous and erithematous, measuring 0.5 to 1.0 cm in diameter, either isolated or coalescing in plaques. Nodular lesions measuring up to 3.0 cm in diameter and covered by crusts were also seen in the patient's legs. The otorhinolaryngological and general physical examination were otherwise unremarkable except for a slight liver and spleen enlargement. The ophthalmological examination revealed a visual acuity of 20/200 for both eyes. The intraocular pressure measured by aplanation tonometry was 10 mmHg in both right and left eyes. The slitlamp examination showed a radiate pattern of deep purple blood vessels extending from the limbus outward and fine, small, white keratic precipitates with a slight corneal edema, as well as the presence of cells and flare in the anterior chamber in both eyes and extensive posterior synechiae in the left eye. The vitreous body and the fundus were normal in both eyes. The patient was admitted to this hospital in June 1989.

Laboratory studies showed a slight normocytic and normochromic anemia; ESR, 40 mm/1 hour; blood glucose, 151 ml/dl; IgG, 4,160 mg/dl; IgA, 572 mg/dl; IgM, 500 mg/dl and microscopic hematuria. WBC, platelet and reticulocyte count, blood urea and creatinine, liver function tests and chest x-ray were normal. VDRL, FTA-ABS and anti-HIV (ELISA) were negative. Indirect immunofluorescence for anti-leishmania antibodies was positive at 1:1,280. Montenegro and tuberculin tests as well as the response to intradermic injection of trichophytine and SK/SD were negative. Candidine injection showed a weak cutaneous reaction. Bone marrow aspiration and biopsy showed no abnormalities. Culture from bone marrow aspirate showed no **Leishmania**, bacteria of fungi growth after 45 days. Liver biopsy was unremarkable and skin biopsies showed a perivascular and perianexial lymphoplasma histiocytic dense infiltrate at dermis and hypodermis. A great number of **Leishmania** were observed either inside the macrophages or free among the infiltrating inflammatory cells.

The treatment was initially made with N-methyl glucamine (850 mg of Sb^{v} per day) and topical ocular corticosteroids and atropine. Remarkable improvement of the systemic manifestations was noted and the papulosquamous cutaneous lesions showed a gradual improvement acquiring a liquenified appearance. It was also noted a restoration of RBC count, complete disappearance of urine blood loss, and decrease in the IgG, IgA and IgM to nearly normal range. In spite of this improvement the ophthalmic manifestations stayed unaltered at the begining but worsened with time with an increasing cell number and flare, fibrin deposition, hypopyon and hyphema in the anterior chamber of both eyes. Cells were noted in the vitreous bodies. The intraocular pressure dropped while the visual acuity worsened. At that time it was decided to start with i.v. high doses of methylprendnisolone, lg/day during three days followed by a second course after one week. Since no therapeutic response was observed, a fine needle aspiration of the anterior chamber of the right eye was performed. The aqueous humor collected was centrifuged for 15 minutes in 600 G; ultracentrifugation was not used. A Giemsa staining of the aqueous humor smear revealed a large number of **Leishmania** (Fig. 1). **Leishmania sp** was isolated from the same cultured material (Fig. 2). After two-15-day series, N-methyl glucamine was stopped and substituted by i.v. amphotericin B. Systemic and local ocular corticosteroids and atropine continued.

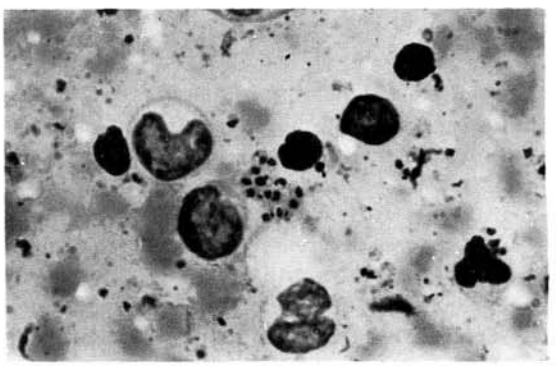

Fig. 1 — **Leishmania sp** amastigotes in the aqueous humor smear stained by Giemsa.

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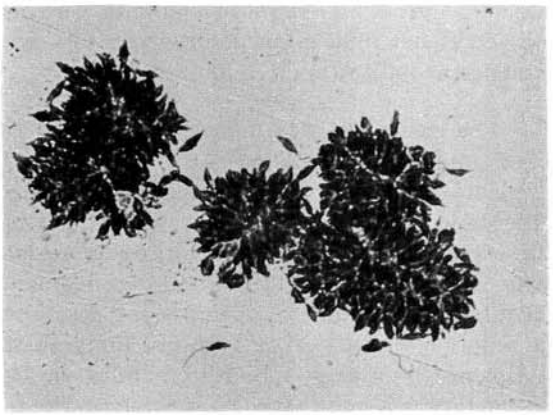

Fig. 2 — **Leishmania sp** promastigotes isolated from the aqueous humor cultivation in N.N.N. -Lit medium.

A complete regression of the hepatosplenomegaly was noticed besides additional improvement of the cutaneous lesions. These lesions acquired a macular, slightly erythematous and dyscromic aspect. Histopathologic findings included disappearance of the skin infiltrate, a bandlike disposition of lichenoid aspect of the upper dermic mononuclear infiltrate and a remarkable reduction in the number of **Leishmania**. The ophthalmologic inflammatory manifestations showed a slow but significant improvement. However, both eyes presented complications: hematic impregnation of corneal endothelium, goniosynechia, seclusio pupillae, iris bombé and cataract. The visual acuity improved a little, returning approximately to the levels registered at the time of admission. The fundi stayed normal at examination. The patient is still in treatment and up to now received 1,7 g of amphotericin B.

RESUMO

Isolamento de Leishmania sp **a partir do humor aquoso de paciente portador de Leishmaniose cutânea disseminada e iridociclite bilateral (nota prévia).**

Os autores descrevem um caso raro de leishmaniose com lesões cutâneas disseminadas, manifestações sistêmicas e comprometimento ocular, sendo este caracterizado por iridociclite bilateral não granulomatosa. A gravidade do quadro oftalmológico e a ausência de resposta ao tratamento, a despeito da melhora das manifestações cutâneas e sistêmicas, levaram à realização de punção propedêutica da câmara anterior ocular. A partir do humor aquoso isolou-se **Leishmania sp**. Os autores desconhecem na literatura qualquer outro caso onde tal achado tenha sido demonstrado.

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