Retinal Granuloma Caused by *Sporothrix schenckii*

Andre L.L. Curi, MD, Sebastião Félix, Kátia M.L. Azevedo, MD, Rogério Estrela, MD, Enoí G. Villar, MD, and Giani Saraça, MD

PURPOSE: To describe an unusual case of disseminated sporotrichosis with intraocular involvement.

DESIGN: Interventional case report.

RESULTS: An 18-year-old man presented with disseminated ulcerated skin lesions. Fundus examination showed fluffy opacities in the vitreous and a retinal granuloma in the left eye. Biopsy of the skin lesion and lymph node showed the presence of numerous fungus cells. Culture was positive for the diagnosis of disseminated sporotrichosis.

CONCLUSION: Although intraocular infection due to *Sporothrix schenckii* is uncommon, it can occur in case of disseminated sporotrichosis. Systemic therapy is a successful means to control skin and ocular sporotrichosis.

*Sporothrix schenckii* is a dimorphic fungus found worldwide that affects humans in three distinct forms: cutaneous, pulmonary, and disseminated sporotrichosis. Most cases of intraocular involvement of disseminated sporotrichosis have been endophthalmitis, which shows poor response to therapy. We report an unusual case of disseminated sporotrichosis with vitreoretinal involvement that showed good response to specific systemic therapy.

An 18-year-old male patient was referred to the infectious disease department with a 5-month history of disseminated skin lesions. There were numerous ulcerated red lesions over the body (Figure 1A). A skin biopsy was performed and the specimens sent for histologic analysis.

Histologic examination revealed numerous small fungus cells resembling *Paracoccidioides brasiliensis*, and histologic study was negative for Leishmaniasis. The patient was...
treated with amphotericin B with the assumption of a diagnosis of disseminated Paracoccidioides brasiliensis infection. After 1 week, the medication was discontinued because of side effects and replaced with trimethoprim-sulfamethoxazole combination. Complementary examinations were ordered, including chest and brain computed tomography, abdominal ultrasound, anti-human immunodeficiency virus, and radiologic study, which showed several lytic lesions in the skull, tibia, femur, and arms. Culture of the skin lesion and lymph nodes was positive for Sporothrix schenckii (Figure 1B). Amphotericin B was begun a second time.

The patient was referred to ophthalmologic examination for a red eye and blurred vision. Visual acuity was 6/6 in both eyes. There were no signs of inflammation in both anterior chambers, and intraocular pressures were within normal limits. Ophthalmoscopy revealed +1/+4 cells and whitish, fluffy opacities in the vitreous of the left eye. There was a retinal granuloma of approximately 2.0 disk diameters close to the disk of the right eye (Figure 1C). Examination of the right eye was unremarkable.

The skin and intraocular lesions (Figure 2A,B) resolved after 50 days of treatment with intravenous amphotericin B. Visual acuity remained 6/6 in both eyes. No cause for immunosuppression was found despite the patient’s diagnosis.

Few cases of ocular sporotrichosis have been described; most of those cases showed conjunctival or eyelid involvement secondary to trauma with contaminated material.1 Our patient did not have conjunctival or eyelid involvement and presented with one-eye vitreoretinal involvement, suggesting hematogenous dissemination. In addition, he had arthritis and bone loss, which occurs in approximately 90% of disseminated sporotrichosis.

Cases of intraocular inflammation secondary to Sporothrix schenckii infection have been described.2 Most of the cases initially presented with granulomatous uveitis with no response to therapy and evolved to endophthalmitis.3 Font and Jakobiec4 reported a case in which fundus examination initially showed fluffy retinal lesions but, despite aggressive therapy, the eye had to be removed because of an untreatable endophthalmitis. Our patient presented with the same clinical features described by Font and Jakobiec; however, he responded well to therapy. Vieira-Dias and associates5 reported a case in which aqueous humor was obtained from an anterior chamber paracentesis, and Sporothrix schenckii was found. In our case, we did not perform anterior chamber paracentesis because there was no inflammation in either anterior chamber, and the patient was already in treatment for disseminated sporotrichosis. Kurosawa and associates6 reported a case in which aqueous humor and vitreous cultures were negative for Sporothrix schenckii, and the diagnosis was made later by histopathologic examination. Although we did not isolate the fungus in the eye, the patient presented with simultaneous disseminated lesions affecting skin, bone, and eye, without any sings of other systemic infection. Histologic examination with Hematoxylin-eosin, periodic acid Schiff, and Grocott methenamine silver stains indicated a fungus infection, and culture confirmed the diagnosis of sporotrichosis.

The case we describe here shows the importance of a rapid and correct diagnosis of a systemic infection. Aggressive therapy allowed control of systemic and intraocular infections.

REFERENCES

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Diagnosis of Conjunctival B-cell Lymphoma by Polymerase Chain Reaction Heteroduplex Analysis
Erich C. Strauss, MD, John F. Warren, MD, Todd P. Margolis, MD, PhD, and Douglas S. Holsclaw, MD

PURPOSE: To report a case initially assessed as giant papillary conjunctivitis and subsequently as B-cell lymphoma by the molecular technique of polymerase chain reaction heteroduplex analysis.

DESIGN: Observational case report.

METHODS: Clinical, histologic, immunohistochemical, and polymerase chain reaction heteroduplex analysis findings are presented.

RESULTS: A 32-year-old man developed unilateral blepharoptosis secondary to an extensive palpebral conjunctival follicular-like process. Excisional biopsy showed a dense small lymphocyte infiltrate consistent with benign lymphoid hyperplasia by histology and immunohistologic marker studies. Polymerase chain reaction heteroduplex analysis revealed low-grade B-cell lymphoma, however. Systemic examination was negative. Focal radiation therapy was performed, and preliminary results show no signs of lymphoma.

CONCLUSIONS: Polymerase chain reaction heteroduplex analysis established a diagnosis of conjunctival B-cell lymphoma in the absence of supporting histology and immunohistochecmistry studies. This technique may provide independent, diagnostic distinction between benign lymphoid hyperplasia and low-grade B-cell lymphoma of the ocular adnexa. (Am J Ophthalmol 2003;136: 207–209. © 2003 by Elsevier Inc. All rights reserved.)

Accepted for publication Jan 3, 2003.

From the Francis I. Proctor Foundation and Department of Ophthalmology, University of California San Francisco Medical Center (E.C.S., J.F.W., T.P.M., D.S.H.), San Francisco, California; and Kaiser Permanente Medical Center, Redwood City, California (D.S.H.).

This work was supported by the Heed Ophthalmic Foundation, Cleveland, Ohio (E.C.S., J.F.W.) and the Alta California Eye Research Foundation, Los Altos, California (E.C.S.).

Inquiries to Erich C. Strauss, MD, Proctor Foundation, 95 Kirkham Street, San Francisco, CA 94143; fax: (415) 502-2521; e-mail: strauss@itsa.ucsf.edu

VOL. 136, NO. 1

BRIEF REPORTS

CONJUNCTIVAL LYMPHOID MASSES REPRESENT A SPECTRUM OF LESIONS FROM BENIGN HYPERPLASIA TO MALIGNANT LYMPHOMA.1,2 Differentiating between benign and malignant lymphoid infiltrates may be challenging because neoplastic cells retain many morphologic and functional features of normal lymphocytes.2,3 The diagnosis of lymphoid lesions is achieved by histology, immunohistologic marker studies, and, more recently, molecular diagnostic modalities.3,4 We report a case of conjunctival low-grade B-cell lymphoma in which the diagnosis was determined by the molecular technique of polymerase chain reaction (PCR) heteroduplex analysis.5

A 32-year-old systemically healthy Asian man with a 15-year history of uneventful soft contact lens use presented with “swelling” of his left upper eyelid in the absence of other signs or symptoms. A diagnosis of giant papillary conjunctivitis with associated blepharoptosis in the left eye was established on the basis of initial clinical findings and the history of extended contact lens use. Contact lens wear was suspended, and fluoromethalone 0.25% was initiated without signs of improvement. Further treatment with combinations of topical mast cell stabilizing agents and prednisolone phosphate 1% was attempted without measurable improvement. Three months after presentation, the patient proceeded with bilateral laser-assisted in situ keratomileusis surgery in an effort to obviate further contact lens wear. For the next 6 months, he was treated with a variety of topical mast cell stabilizers and corticosteroid drops; however, the lid asymmetry persisted. The patient was referred to us for further evaluation.

Only a history of mild atopy was obtained. External examination showed blepharoptosis with a prominent eyelid crease in the left eye (Figure 1, left). Anterior segment examination was remarkable for an extensive follicular-like lesion in the left eye that extended beyond the tarsal conjunctiva to the superior fornix (Figure 1, right). The lesion was moderately friable with multiple small hemorrhages. The clinical differential diagnoses included lymphoma, benign lymphoid hyperplasia, amyloidosis, and sarcoidosis. An excisional biopsy of the lesion was performed. Histology showed a dense cellular infiltrate composed predominantly of small lymphocytes, a few scattered histiocytes and plasma cells, and morphologic features consistent with benign lymphoid hyperplasia (Figure 2, left). Immunohistochemistry studies revealed a mixture of CD20 positive B-cells and CD3 positive T-cells; however, there was no evidence of aberrant coexpression of markers that would suggest lymphoma. Moreover, kappa and lambda light chain analyses failed to demonstrate restriction, which refers to a predominance of one light chain and considered presumptive evidence for monoclonality. These histologic and immunohistochemistry findings provided no support for lymphoma and were most consistent with a diagnosis of benign lymphoid hyperplasia. Subsequently, the embedded paraffin biopsy material was submitted for B-cell and T-cell molecular clonality.