Presumed Ocular Histoplasmosis in Europe: A Case Report

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A case of presumed ocular histoplasmosis was diagnosed in a diabetic patient, and an angiographic study of the ocular lesions was carried out. Results of histoplasmin skin test and the specific complement fixation test were negative. The epidemiologic aspects of histoplasmosis in Europe are considered.

The syndrome of presumed ocular histoplasmosis (POH) was described for the first time in 1959 by Woods and Wahlen,[1] who observed hemorrhagic disciform macular lesions and scattered chorioretinal scars in patients with a positive reaction to a histoplasmis skin test. In 1942, however, Reid et al[2] described exudative-hemorrhagic macular changes in a patient affected by systemic histoplasmosis, and Day[3] and Krause and Hopkins[4] suggested that there might be a relation between uveitis and exposure to *Histoplasma capsulatum.*

The typical symptomatological triad of POH consists of macular lesions represented by subretinal neovascularization leading to a sensory retina detachment, disseminated atrophic chorioretinal scars, and circumpapillary changes. In 5% of the cases a fourth sign is present: linear streaks of chorioretinal atrophy in the equatorial region, parallel to the ora serrata.

We describe herein a case of POH and analyze the epidemiologic aspects of histoplasmosis in Europe, where this disease, particularly in its ocular form, is rarely described.

Report of a Case

A 45-year-old man who had been affected from the age of 20 years with insulin-dependent diabetes mellitus came to our Diabetic Retinopathy Service for an ophthalmologic examination in November 1980. His medical history was remarkable for a pulmonary affection. In 1968, after an episode of hemophthisis, he was admitted to the Lung Diseases Department, where a pulmonary infiltration was discovered and considered of tubercular nature. Repeated expectorate examinations were negative for Koch's bacillus. Notwithstanding, antitubercular therapy was begun and gradual recovery obtained. At present the pulmonary situation is represented by diffuse parenchymal scars from the hilus toward periphery with signs of calcification.

On his first visit, the best corrected vision was 20/20 in the right eye and 20/25 in the left one. The results of external and slit-lamp ocular examinations were unremarkable; intraocular pressure was 12 mm Hg.

Ophthalmoscopy of both eyes disclosed circumpapillary atrophic changes, microaneurisms, a few small hemorrhages and a large number of whitish spots, some of them slightly pigmented, of about ½ disc diameter. In addition, we observed a grayish area corresponding to a sensory retina detachment in the macular region of the left eye (Fig 1a, 1b).

The fluorescein angiography of the left eye revealed, in addition to the common lesions of a background diabetic retinopathy, small hyperfluorescent areas (corresponding to the whitish spots we observed) in the early arterial filling phase, without any increase of the fluorescence in the late phases. In the macular region, in the early arteriovenous phase, the angiogram revealed a lacy hyperfluorescence judged to be subretinal neovascularization, with a late subsensory retinal pooling of the dye; a late peripapillary hyperfluorescence was also observed. The fluorescein angiography of the right eye showed the same picture, without any involvement of the macular region (Fig 2a, 2b, 2c).

The tuberculin skin test (1:10,000) was faintly positive; the histoplasma complement fixation test and histoplasmin skin test (1:100) gave negative responses.

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Comment

In this case, the ophthalmoscopic and angiographic features, with scattered chorioretinal scars, circumpapillary atrophic changes, and subretinal neovascularization in the macular region, were consistent with the diagnosis of POH.

In Europe, particularly in the Mediterranean area, *H capsulatum* has been isolated from soil samples and from animals and humans affected with systemic histoplasmosis,[5] but ocular involvement has rarely been described. In fact, except for sporadic reports, only Braunstein and colleagues[6] reported a group of 15 cases of POH; however, none of those patients gave positive responses to the histoplasmin skin test or to the specific serological determinations.

The epidemiologic study on the positivity to the histoplasmin skin test in Europe conducted by Sotgiu *et al.*[7] revealed that the incidence of positive reaction was only 2.58% among sanatorium patients and 0.68% among the general population. These data were confirmed by Ellis and Schlaegel,[8] who evidenced a low but significant positivity to the histoplasmin skin test in the Mediterranean area.

Therefore, we cannot be surprised by our patient's negative reaction either to the histoplasmin skin test (notwithstanding the fact that in the northeastern United States 60% to 90% of the general population gives positive responses[9]) or to the histoplasmin complement fixation test (which is positive in only one third of the ophthalmoscopically verified cases of POH in the United States.[10])

The lung disease that affected our patient, 13 years earlier, without any evidence of isolation of Koch's bacillus, does not allow us to exclude a histoplasmic origin.

In conclusion, the negative responses to the tests aimed at evidencing a previous histoplasmic infection may be explained by the fact that the immune reactivity of our patient could be too weak so many years after infection, or by considering the ocular syndrome as a late, aspecific complication of chorioretinitis of various origins.

References

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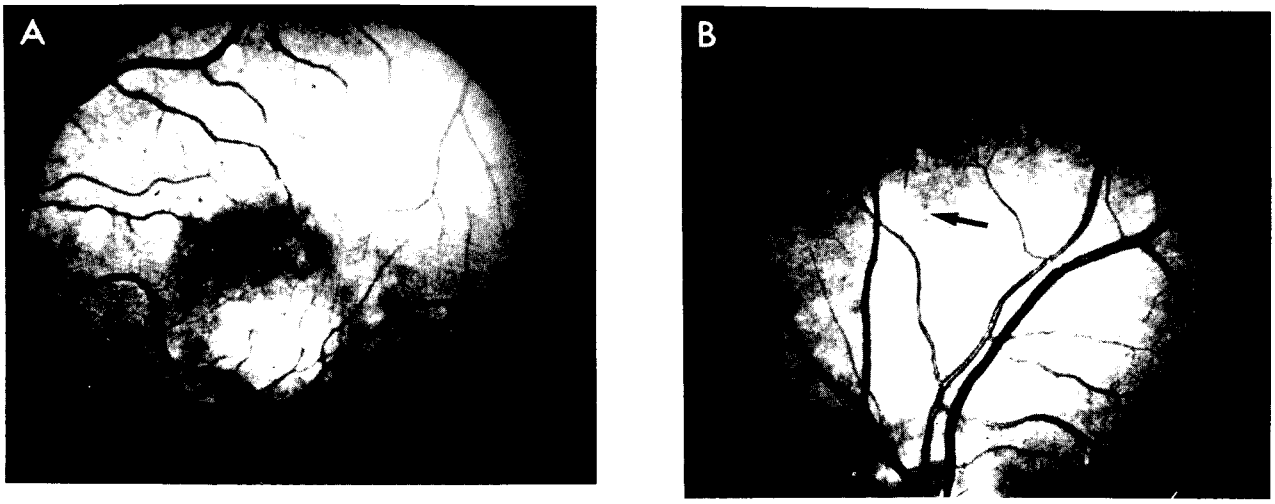

Figure 1 Left eye fundus. (a) In lower part of macula there is a pale gray area corresponding to a sensory retina detachment; (b) ophthalmoscopic view of a histo-spot superiorly to the optic disc (arrow).

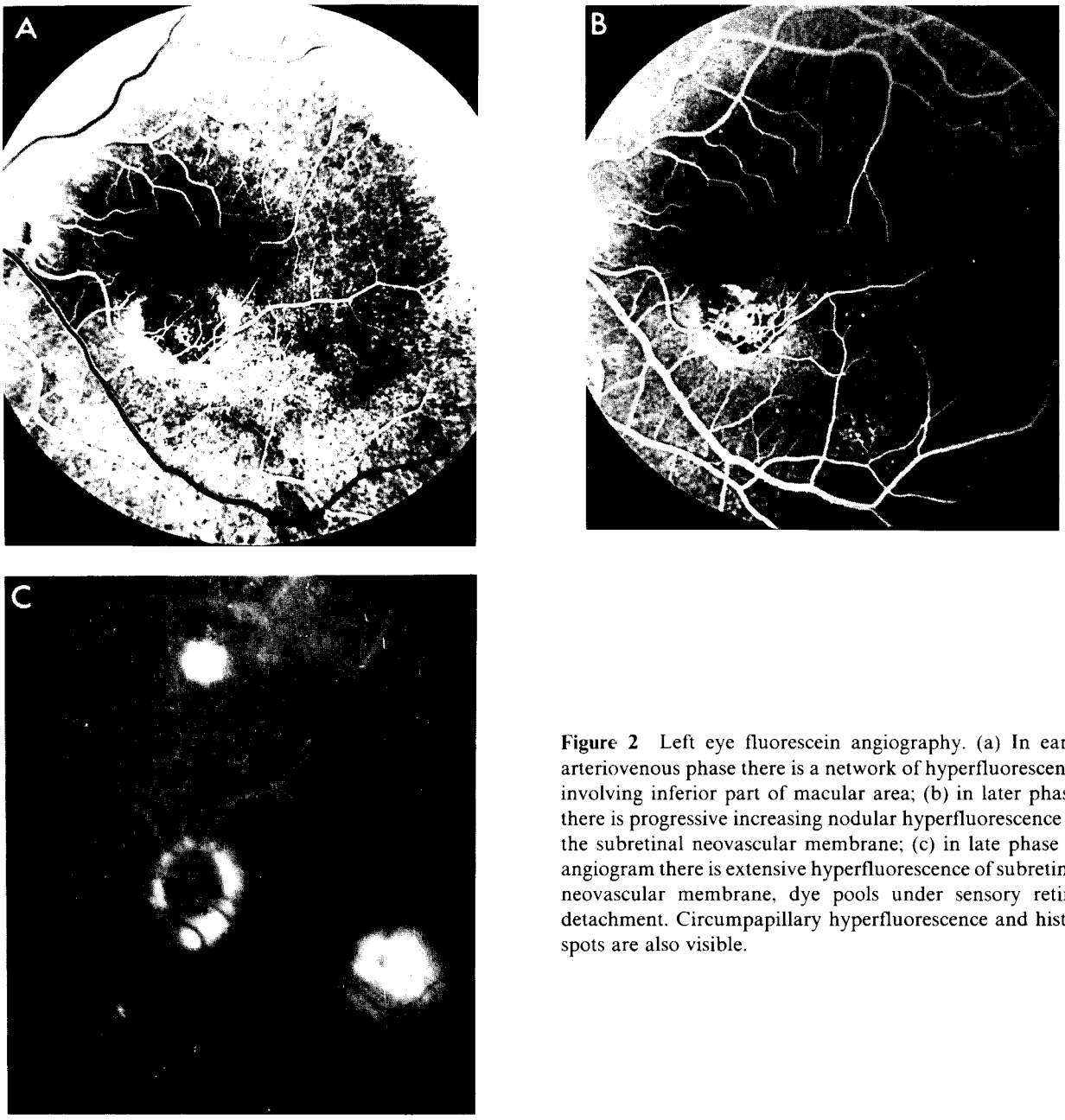

Figure 2 Left eye fluorescein angiography. (a) In early arteriovenous phase there is a network of hyperfluorescence involving inferior part of macular area; (b) in later phase, there is progressive increasing nodular hyperfluorescence of the subretinal neovascular membrane; (c) in late phase of angiogram there is extensive hyperfluorescence of subretinal neovascular membrane, dye pools under sensory retina detachment. Circumpapillary hyperfluorescence and histo-spots are also visible.