KAWASAKI MED. J. VOL. 14 : NO. 4, 171-175 (1988)

Presumed Ocular Histoplasmosis and Histoplasmin Skin Test

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Accepted for publication on November 16, 1988

ABSTRACT. Ocular histoplasmosis has been reported to be rare in Japan. This was demonstrated in a 48-year-old man with a peripapillary scar, a disseminated small atrophic spot and a macular lesion.

Histoplasmin skin tests were carried out on 24 outpatients with uveoretinal disease and 31 patients with other ocular diseases. Nine of the 24 patients with uveoretinal disease and 3 of the 31 patients with other ocular diseases showed a positive skin reaction.

It is to postulated that histoplasmosis may be a factor for producing some ocular diseases, such as exudative maculopathy and uveoretinitis.

Key words : presumed ocular histoplasmosis — skin test — exudative maculopathy

The presumed ocular histoplasmosis syndrome (POHS) is so named because the causative organism, histoplasma capsulatum, has never been found in the eye lesions.

Histoplasma capsulatum is a fungus, living in the soile.

Histoplasmosis is known to be an endemic disease and has been reported to be rare in England and Japan. The diagnosis of POHS is made largely on the appearance of the fundus, namely a haemorrhagic disciform macular lesion and both peripheral and peripapillary choroidal atrophic scars.

The histoplasmin skin test appears to be reliable. We diagnosed a case of POHS.

We studied the histoplasmin skin test in patients with uveoretinal disease and other ocular diseases. The relation between POHS and the histoplasmin skin test was discussed.

REPORT OF A CASE

A 48-year-old male complained of metamorphopsia in the left eye for two days. He raised a dog and ducks. On the day of admission, his best corrected visual acuity was 0.01 in the right eye and 0.8 in the left. Intraocular pressure was 17 mmHg in both eyes. The anterior segment was normal. Fundus

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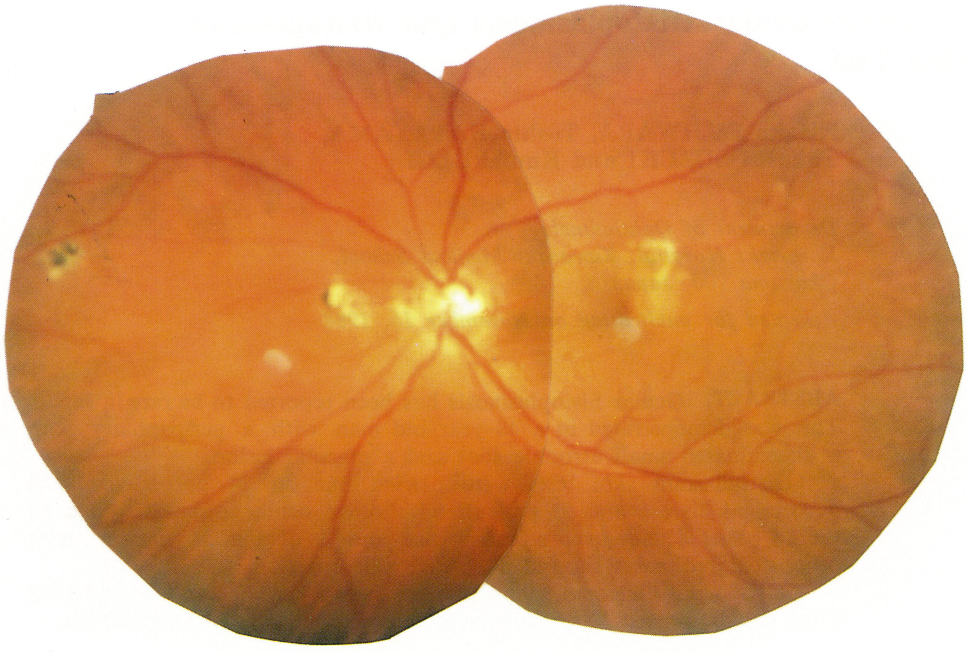

Fig. 1. Fundus photograph of the left eye. The lesion consisted small atrophic (punched out) spots with pigments, peripapillary scar and haemorrhagic disciform detachment of the macula.

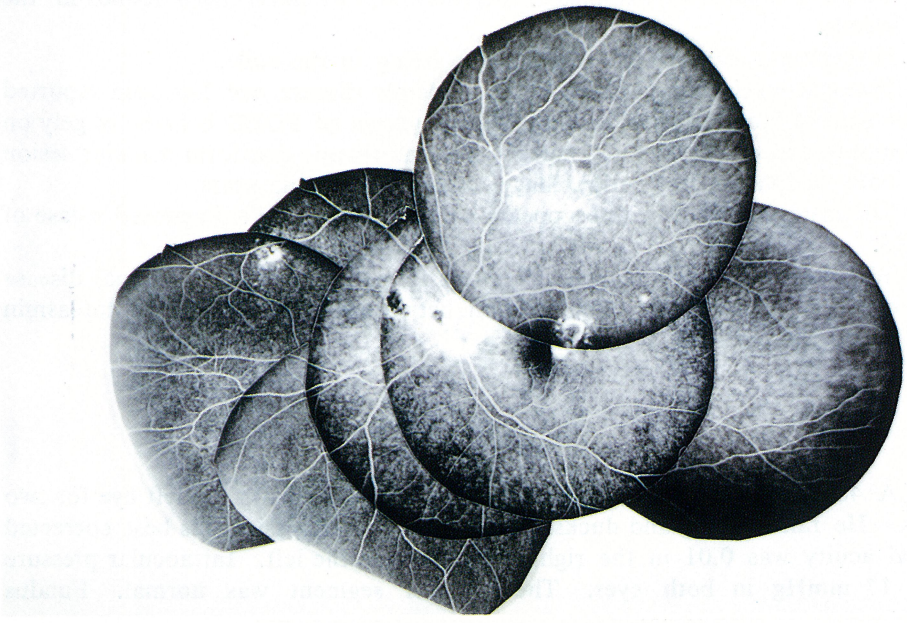

Fig. 2. Fluorescein angiogram. In the macular area, choroidal neovascularization was seen. Histo spots demonstrated so-called window defect.

examination revealed hemorrhagic disciform retinal detachment of macula and both peripheral and papillary atrophic spots in the left eye (Fig. 1). The right fundus was invisible because of a traumatic cataract.

Fluorescein angiography showed choroidal neovascularization in the macular area. Choroidal scar-histo spots demonstrated the so-called window defect.

Routine hematological and blood chemical studies were negative.

A tuberculin skin test, Toxoplasmin and Wasserman's reaction showed negative responses. A histoplasmin skin test was positive with induration. The results of a routine chest X-ray revealed no calcification in the hilum of the lung.

HISTOPLASMIN SKIN TEST

The skin test was performed by injection of 0.1 ml Histoplasmin, diluted (PARKE-DAVIS) intradermally into the flexor surface of the forearm.

The reaction was considered to be positive if the induration was 5 mm or greater.

Among the patients visiting our hospital, 24 patients with uveoretinal diseases and 31 patients with other ocular diseases were given the histoplasmin test.

The results are shown in Table 1 and Table 2 (Tables 1 and 2).

TABLE 1. Data of histoplasmin skin test in the group of patients with uveoretinal disease

Case	Age	Sex	Clinical diagnosis	Reaction
1	53	F	Retinitis centralis	+
2	48	M	Retinitis centralis (Riegel's type)	+
3	40	F	Intermediate uveitis	−
4	41	F	Retinitis centralis (Atypical)	−
5	46	M	Toxoplasmosis suspected	−
6	75	M	Focal choroidal atrophy	+
7	58	M	Retinitis centralis (Riegel's type)	+
8	45	F	Serous iritis	+
9	61	M	Toxoplasmosis suspected	−
10	56	F	Intermediate uveitis	−
11	58	M	Neovascular maculopathy	+
12	64	F	Macular degeneration	+
13	30	M	Retinitis centralis	−
14	69	F	Granulomatous uveitis	−
15	21	F	Neovascular maculopathy	−
16	60	F	Retinitis centralis (Riegel's type)	−
17	68	M	Toxoplasmosis suspected	−
18	75	M	Uveitis	−
19	31	M	Retinitis centralis	+
20	54	F	Macular degeneration	−
21	64	M	Uveitis	−
22	72	F	Neovascular maculopathy	−
23	70	F	Choroidal atrophy	−
24	46	M	Neovascular maculopathy	+

+ : positive − : negative

TABLE 2. Data of histoplasmin skin test in the group of patients with other ocular disease

Case	Age	Sex	Clinical diagnosis	Reaction
1	27	M	Myopia	+
2	51	F	Myopia	−
3	21	M	Open angle glaucoma	−
4	69	M	Diabetic retinopathy	−
5	73	F	Senile cataract	−
6	60	F	Senile cataract	−
7	74	F	High myopia	−
8	75	F	Retinal detachment	−
9	72	M	Senile cataract	−
10	68	M	Senile cataract	−
11	72	M	Senile cataract	−
12	68	F	Corneal ulcer	−
13	74	F	Diabetic retinopathy	−
14	76	F	Senile cataract	−
15	31	M	Retinal detachment	−
16	60	F	Senile cataract	+
17	78	F	Senile cataract	−
18	58	F	Senile cataract	−
19	77	F	Senile cataract	−
20	73	F	Senile cataract	+
21	70	M	Narrow angle glaucoma	−
22	58	M	Open angle glaucoma	−
23	85	F	Senile cataract	−
24	29	M	Myopia	−
25	39	F	Myopia	−
26	36	F	Normal	−
27	30	F	Normal	−
28	29	F	Normal	−
29	45	F	Optic disc melanoma	−
30	69	F	Herpetic keratitis	−
31	37	M	Vitreous haemorrhage	−

+ : positive − : negative

Nine out of 24 patients with uveoretinal diseases and 3 out of 31 patients with other ocular diseases showed positive responses to the histoplasmin skin test. The histoplasmin skin test was significantly useful for diagnosis of uveoretinitis ($X^2=4.616$; $p<0.05$).

DISCUSSION

POHS is a disease complex probably caused by infection with fungus, histoplasmosis capsulatum.

The clinical trial of the POHS consists of multiple atrophic spots with occasional pigment dots, peripapillary atrophy of the retinal pigment epithelium and a macular subretinal neovascular membrane.[1)]

Infection is localized to endemic areas — the northeastern United States, South America, Africa and India. In Europe and Japan, POHS has been reported to be extremely rare.[2,3)]

Araki *et al.* suggested, histoplasmosis capsulatum might to be transported into Japan from foreign countries.[4]

Recently, we reported a typical case of POHS.[5]

Here, we add another case of POHS to our series. In various reports, it has been indicated that histoplasmosis is not important cause of uveoretinitis in Japan. But Japanese eating habits have changed a great deal in the last 10 years and many people are travelling abroad. Therefore, the possibility of histoplasmosis infection has increased gradually among Japanese.

In our study, the histoplasmin skin test was demonstrated to be significantly useful for diagnosis of POHS. The clinical picture and positive histoplasmin skin-test reaction are important to make a definitive diagnosis. The causes of endogenous uveitis have changed with the times.

Histoplasmosis also might be the cause of some other ocular diseases in Japan such as exudative maculopathy and uveoretinitis.

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