Conjunctival Aphthous Ulceration in Behçet's Disease: Report of A New Case

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Abstract

***Purpose*:** To present the conjunctival aphthous ulceration in Behçet's disease (BD)

***Case report*:** A 36-year-old woman with a known history of BD presenting an isolated, monosymptomatic conjunctival bulbar aphthosis. The eye was photophobic and painful. The lesion appeared four days prior to the consultation and measured 3.5 to 1.5 mm, which was totally excised and underwent pathological investigations. The patient was treated with topical chloramphenicol and oral colchicine.

***Results*:** Histological examination revealed conjunctival ulceration with mono and polynuclear infiltration in subepithelial stroma of conjunctiva, and invasion of polymorphonuclear cells in blood vessel walls.

***Conclusion*:** Ocular aphthosis, although very rare, but very typical can be helpful in the diagnosis of BD.

***Keywords*:** Conjunctival Aphthosis, Behçet's Disease

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Introduction

Behçet's disease (BD) is a relapsing inflammatory vasculitis, involving nearly all organs. The mucocutaneous aphthous ulcerations, skin lesions and ocular manifestations are the most common findings in the disease. In the report of Shahram et al[1] of 4,024 BD patients, investigated from 1975 to 2001 at Shariati Hospital of Tehran (Behçet's clinic), oral aphthosis was the most constant manifestation, seen in 96.6% of patients. Genital aphthosis was seen in 65.3% of cases. Skin manifestations and ocular involvement were seen in 70.3% and 55.9% of patients, respectively.

Contrary to the oro-genital aphthous ulcerations, the ocular aphtha, although of the same histopathological nature[2,3] is rarely reported and there were less than 30 cases found in the medical literature,[2-12] and they are mostly single case reports. In Iran, only 0.4% of ocular aphthous ulcerations are indicated on the registry of the Behçet's Unit of Shariati hospital.

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In Turkey 5 out of 540 cases (0.9%)[7,8] are reported, but no details of the kind of ulceration have been given. In Japan, Matsuo et al[3] reported that four of 152 BD patients (2.6%) developed conjunctival ulceration.

In India where BD appears to be rare, and the only major study from India documented 58 cases over a period of 16 years,[13] paradoxically ocular aphthosis would be very frequent, and Rohatgi et al[4] reported five out of nineteen cases of BD patients having ocular aphthosis (26.3%). Although, the histopathology of the palpebro-bulbar aphthous ulcerations are more or less similar to oro-genital aphthosis with infiltration of polymorphonuclear leukocytes, lymphocytes, and macrophages, but in each region and ethnic the ocular aphthosis has some particularities which is noteworthy.

Here, we report a new case of ocular aphtha and analyse some of the cases of literature.

Case report

We present a new case of ocular aphthous ulceration in BD, confirmed by histopathology. We also discuss and analyse twenty cases of ocular aphthosis from the medical literature which are well documented, and including our case. We would particularly emphasize on some particularities and differences of ocular aphthosis and associated lesions in different ethnics and regions.

A 36-year-old Iranian woman of Turkish descent from North-West of Iran (Ahar) referred to our clinic at Shariati Hospital, on July 2005, for a painful, photophobic and hyperemic left eye, since four days ago. She complained of no other general or ocular problem, including blurred vision.

Fourteen years prior to this date, she had presented oral and genital aphthosis, bilateral hyalitis, and retinal periphlebitis of the right eye, but the vision of both eyes had been normal and remained so up to this date.

Twelve years ago, on the basis of the clinical manifestations of BD, positive pathergy test and positive HLAB51, the diagnosis of BD has been confirmed and she has been treated with oral corticosteroids and immunosuppressors. Two years after the initiation of the treatment she has suffered arthralgia and one year later the skin lesions (pseudofolliculitis).

All the general and ocular manifestations have been controlled under the above treatments and the regimen has been changed to oral colchicine 0.5 mg daily, and she has had no problem up to July 2005.

The ophthalmic examination at this date, July 2005 revealed that the temporal and superior part of the bulbar conjunctiva and episclera of the left eye were hyperemic, the vessels were tortuous. The ocular aphthosis was oval, white and flat, located at the 1.5-o'clock of the eye, and very close to the limbal zone. It measured 3.5 to 1.5 mm (Figure 1). The vision of both eyes was $^{20}/_{20}$. The cornea, anterior chamber, lens, vitreous and retina were aproblematic. She presented no other inflammation concomitant to the ocular aphthous ulceration.

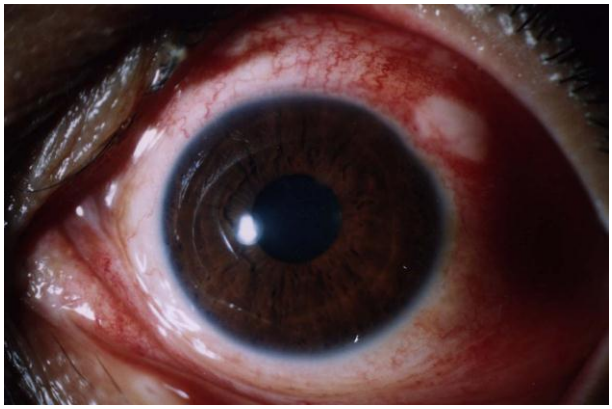

Figure 1. An ulcer in the upper bulbar conjunctiva of the left eye

The lesion was totally excised under local anesthesia. The swab from the lesion did not detect growth of any bacteria or fungi. The specimen was sent for histopathology investigation. The patient was treated by topical betamethasone 0.1%, topical chloramphenicol and the colchicines were continued. She has had no further problem up to this date.

The results of the histology are the followings: ulcerative conjunctivitis with squamous metaplasia of conjunctival surface epithelium with mono and polynuclear infiltration in subepithelial stroma of conjunctiva, and invasion of polymorphonuclear cells in blood vessel walls (Figure 2).

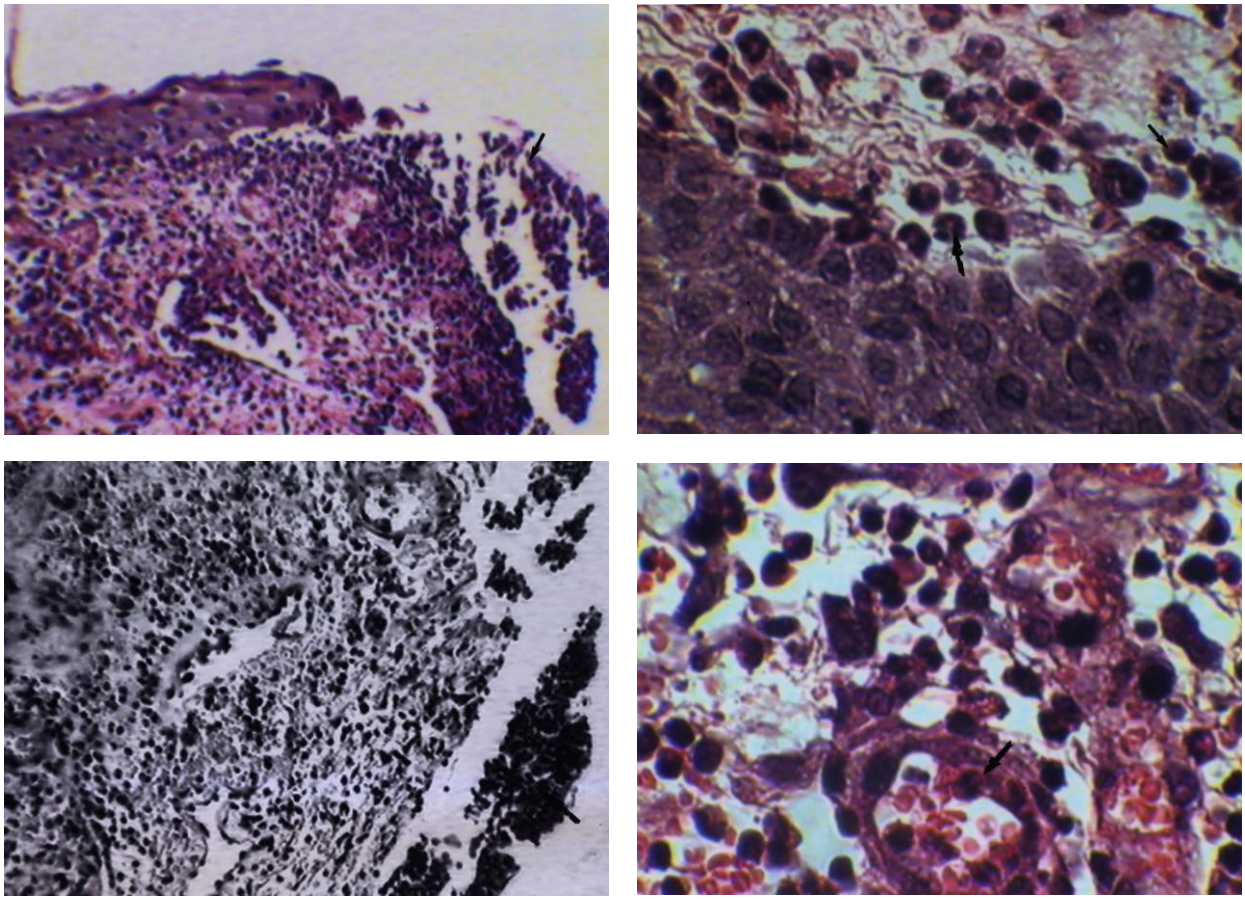

Figure 2. Light micrographs of the biopsy specimen of the conjunctival ulcer in the left eye

Discussion

Twenty patients with ocular aphthosis (Table 1) and the characteristics of the patients and the ocular and accompanying manifestations are discussed.

The mean age of the patients was 32.2±12.5 years (range, 8-55). 65% of the cases were female.

Only in one case (N=20) the ocular aphtha preceded the onset of all other manifestations of BD.

In 30% of cases the diagnosis of BD was confirmed following the appearance of ocular aphtha. Although, enough evidence existed for the diagnosis prior to this event.

Only in two cases (Ns=1, 7) intraocular inflammation existed concomitant with ocular aphtha (9.52%).

In 57.14% of cases (Ns=7, 10-19, 21), mainly the Indian and Japanese patients ocular aphtha arose during an exacerbation of the disease and was accompanied by muco-cutaneous and articular inflammation.

In seven cases (Table 1) the ocular aphtha was isolated and non-concomitant with other manifestations of BD.

Nearly in all cases (except case 13) the lesion was painful, hyperemic and the eye was photophobic and tearing.

In 15 cases the lesion was unilateral, in six cases multifocal, in 16 eyes it was bulbar, in two palpebral, in one case bulbo-corneal and in the last palpebro-bulbo-corneal. In six cases (18.6%) it was recurrential.

The ocular aphtha was round or oval, flat or elevated with a distinct border and surrounded by an edematous and erythematous zone.

The size of the lesions was 5 to 5 mm to less than 2 mm. They disappeared in three days to six months. In most cases they disappeared in less than 10 days and leaving no scar except one case (N=1).

They were treated with local or general anti-inflammatory + immunosuppressive or immunomodulating drugs.

In Indian patients (cases 14-20), ocular aphthous ulcerations were very frequent, 26.3%.[6] The mean age of the seven Indian cases was 21.8±9.3 years (range, 8-34), compared to the other 14 non-Indian patients with ocular aphtha, mean age 36.6±11.5 years, t=3.26, p≤0.00, indicating that the age of the Indian BD patients with ocular aphthosis was significantly lower than the others. All Indian patients had bulbar aphthosis, two were multifocal and two recurerential. In 61.9% (N=13) of cases the ocular aphtha appeared during a flair-up of the disease concomitant with other mucocutaneous lesions and arthropathy. Four Indian patients (57%) had fever vs. only one non-Indian patient (7.1%), the difference was statistically significant, p=0.02. None of the Indians presented uveitis.

The Japanese patients (Ns=10-13), all had mucocutaneous lesions, erythema nodosum, accompanying the ocular aphtha, none presented uveitis nor fever. In these patients the ocular aphtha persisted much longer (2 wk, 1 mo, 3 mo, 6 mo) compared with the other 17 patients, mean-duration-eight days (range, 4-14), t=2.3, p≤0.05, which is statistically significant.

Table 1. Characteristics of twenty BD patients with ocular aphthosis

N	Refer	Age	Sex	Ethnics	Lesion concomitant to ocular aphtha	General BD manifest	Ophthalmic lesions
1	Zamir	25	F	Spanish	Mild uveitis	BG ulc, S lesions	Iritis, keratitis
2	Zamir	15	M	Arab	Vitreous hemorrhage	BG ulc, S les, fever diarrhea	Bilat hyalitis, disc edema, vit hemor
3	Zamir	55	F	Turkish	None	BG ulc, rectocolitis	Bilat uveitis
4	Zamir	40	F	Turkish	None	BG ulc, S les, arthralgia	None
5	Zamir	37	M	Turkish	None	BG ulc, S lesion, arthro	None
6	Zamir	48	M	Turkish	None	BG ulc, S lesion	Episcleritis
7	Quertani	45	F	Arab	bilat. Uveitis, BG ulc.	BG ulc	Bilat uveitis Periphlebitis
8	Shenoy	35	F	Arab	None	BG ulc, arthro	None
9	Chams	36	F	Iranian	None	BG ulc, S les, arthro	Bilat hyalites Periphlebitis
10	Toshihiko	40	F	Japanese	B ulc.	BG ulc, S les, EN	None
11	Toshihiko	24	F	Japanese	B ulc.	BG ulc, S les, EN	None
12	Toshihiko	27	F	Japanese	BG ulc, S lesion	BG ulc, S les, EN	None
13	Toshihiko	54	M	Japanese	BG ulc, S lesion	BG ulc, S les, EN	None
14	Rohatgi	28	F	Indian	BG ulc, EN,	BG ulc, S les, EN, fever arthro	None
15	Rohatgi	30	M	Indian	BG ulc, EN	BG ulc, arthr, EN, fever	None
16	Rohatgi	18	M	Indian	BG ulc	BG ulc, arthro	None
17	Rohatgi	16	F	Indian	BG ulc, EN	BG ulc, arthr, EN, fever	None
18	Rohatgi	31	F	Indian	BG ulc, arthro	BG ulc, arthr	None
19	Ebenezer	8	M	Indian	BG ulc, S lesion	BG ulc, S les, arthro, fever	None
20	Merle	34	F	Indian	None	BG ulc, digestive ulc	None
21	Fabian	30	F	Turkish	BG ulc, S lesion	BG ulc, S les, arthro	None

BD: Behçet's disease, B: Buccal, G: Genital, S: Skin, les: Lesion, vit: Vitreous, hemor: Hemorrhage, EN: Erythema nodosum, arthro: Arthropathy, ulc: Ulcer

In the European and Middle-East patients (Ns=1-9), concomitant with the ocular aphtha, one patient presented uveitis, one uveitis and mucocutaneous lesions and one intraocular hemorrhage, but no other inflammatory reaction accompanied the ocular ulceration. 52.4% (N=11) of these cases presented uveitis, during the follow-up period, but none was reported in the Indian and Japanese patients.

Conclusion

Ocular aphthosis has some particularities in different ethnics and regions of the world. In Japan and India the onset of ocular aphtha was concomitant with the exacerbation of BD and extraocular inflammation but never uveitis.

In Indian patients febrile episodes were common in BD patients.

In Japanese patients the ocular aphtha persisted much longer.

In Middle East and Europe the ocular aphtha was often isolated and appeared without other manifestations of BD. Uveitis was common in the course of the disease, (55.5% of the patients) but absent in Indian and Japanese patients.

Ocular aphthosis is rare in BD but is characteristic enough to help us in the diagnosis of BD.

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