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Frequency of ocular involvement in 100 cases of Behcet syndrome in Babol, North of Iran

Abstract

Background: Behcet syndrome is a recurrent inflammatory disorder that frequently involves the ocular system. The purpose of this study was to determine the frequency of ocular involvement in cases of Behcet's disease in Babol, north of Iran.

Methods: From April 2003 to December 2009, 100 cases of behcet's disease who were admitted at the Department of Ophthalmology and Internal Medicine of Babol University of Medical Sciences, in Babol, were studied. The diagnosis of the disease was performed by the Iranian criteria for the diagnosis of the behcet's disease. The demographic data, clinical manifestations as well as the frequency of ocular involvement were recorded and analyzed.

Results: Sixty-one (61%) were male and 31 (31%) were female. The mean age of the male patients was 28.2 and the female patients were 27.5 years. The most common clinical findings were oral aphthos (90%) followed with ocular and genital involvement. In ten cases ocular involvement was the sole initial clinical symptom. Among the 70 cases with ocular involvement, bilateral involvement was seen in 78.6% and unilateral involvement in 21.4% cases. HLA- B5 was positive in fifty two (74.2%) cases with ocular involvement, whereas 18 (25.7%) with ocular involvement had negative HLA- B5.

Conclusion: The results show that the frequency of ocular involvement in patients with behcet's disease is relatively high. Investigation of eye involvement in subjects with recurrent oral or genital ulcers is recommended.

Key words: Behcet's disease, Ocular involvement, Oral ulcer, Uveitis.

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Behcet's disease is a recurrent inflammatory disorder that frequently involves the ocular system. In addition to, the oral, genital ulcers and uveitis (triad of the disease), other parts of the body including skin, articular, neurocerebral, gastrointestinal and respiratory systems may be involved during the course of the disease (1, 2). The prevalence of the disease is different from various parts of the world, but its prevalence in Japan, Korea, China, Iran, Turkey, South Europe and north Africa are higher (3, 4).

The prevalence rate in Iran is estimated to be 68 per 100000 populations which is next to Turkey (4). The disease is an occlusive necrotizing vasculitis involving both artery and vein throughout the body (1, 2). Ocular complication is the most severe complication and is seen in 75-80% cases (5, 6). The typical ocular involvement is recurrent uveitis which involves the anterior or posterior segments of both segment of eyes resulting to complication such as adhesion or scar of retin and lose of visual acuity (7).

Early diagnosis and initiation of treatment may prevent the ocular complication of the disease. The purpose of this study was to determine the frequency of ocular complications on 100 cases of behcet's disease in Babol, north of Iran.

Methods

From April 2003 to December 2009, 100 cases of behcet's disease who were admitted at the Department of Ophthalmology and Internal Medicine of Babol University of Medical Sciences, Babol, Iran were studied. The diagnosis of the disease was performed by the Iranian criteria for the diagnosis of the Behcet's disease (3, 4).

Three of the following findings confirmed the diagnosis. Recurrent oral aphthos, genital ulcer, skin lesions like folliculitis, erythema nodosum, ocular signs and symptoms, positive pathergy test. The demographic data, clinical manifestations as well as the ocular involvement were recorded and analyzed.

Results

Among the 100 cases, 61 (61%) were male. The mean age of the male patients was 28.2 and the female patients was 27.5 years. The most common clinical findings were oral aphthos (90%) followed by the ocular involvement (70%) and genital ulcer (60%). Other clinical findings are shown in table 1. In ten cases, ocular involvement was the sole initial clinical symptom.

Among the 70 cases with ocular involvement, bilateral involvement was seen in 78.6% and unilateral involvement in 21.4% cases. The mean age of male patients with ocular involvement was 27.2 and in female was 30.6 years. The types of ocular involvement are shown in table 2. HLA- B5 was positive in 70 cases. HLA- B5 was positive in fifty two (74.2%) cases with ocular involvement, whereas 18 (25.7%) with ocular involvement had negative HLA- B5.

Table 1. Clinical manifestations and frequency of ocular involvement in 100 cases of behcet's disease

Clinical symptoms and signs	N (%)
Recurrent oral lesion	90 (90)
Genital ulcer	60 (60)
Skin lesion	78 (78)
Ocular involvement	70 (70)
Arthricular involvement	50 (50)
Gastrointestinal involvement	11 (11)
Pulmonary involvement	8 (8)
Combined oral and genital lesion	80 (80)

Table 2. Type of ocular involvement in 70 cases of behcet's disease

Ocular involvement	No (%)
Anterior uveitis	16 (12.8)
Posterior uveitis	31 (24.8)
Pan-uveitis	82 (65.6)
Cataract	25 (20)
Conjunctivitis	14 (11.2)
Macula edema	32 (25.6)
Hypopyon	16 (12.8)

Discussion

Behcet's disease is seen both in male and female. In this study, we found that the rate of male (61%) was higher than the female (39%) and was similar to the report of other investigators (8-12). Oral, ocular and genital involvements were the most findings in our study and were similar to the reports of other researchers (2, 10, 11). Ocular involvement especially in the recurrent forms is very important because of the inflammation process may be destructive to the eyes. The frequency of ocular involving in our study (70%) was higher than 35% reported by Mok et al. and 51% by Houman et al. The severity of ocular involvement may differ from patient to patient and may be related to several factors (12, 13). The age range and the mean age of patients with ocular involvement were similar to the reports in the medical literatures (9, 14-16).

Panuveitis was the most typical ocular involvement in our study like the results of other researchers (9, 14, 15, 17, 18). Hypopyon the key finding of Behcet's disease is seen less than fundus involvement. Hypopyon was seen in 12.8% in our study but Tugal and Barra and Yang reported rates to 12%, 13.4% and 32.4% respectively (5, 9, 8). The rate of cataract (20%) in our study was much lower than that those reported in Turkey, China, Brazil that was 38.5%, 77.4%, and 41.7%, respectively (5, 8, 9). Macula edema is an important reason for reduction of visual acuity in uveitis. Macula edema in our study 25.6% was similar to the report in Brazil (26.5%) and was lower than those reported in Turkey, China which was 44.5% and 38.2%, respectively (5, 8, 19). In this study, HLA- B5 was positive in 70 cases and was higher than the results of other researchers that were positive in 30.9%, 35% and 54% of patients, respectively (11-13).

In conclusion, the results show that the frequency of ocular involvement in patients with Behcet's disease is

relatively high. Investigation of eye involvement in subjects with oral and genital ulcers is recommended.

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