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CLINICAL PROFILE OF PATIENTS WITH BEHCETS DISEASE-A HOSPITAL-BASED STUDY

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Abstract:

Introduction: Behcet's disease (BD) is classified among inflammatory vascular diseases, affecting vessels of all kinds and sizes thus affecting every tissue and organ, with unknown aetiology. Considering low frequency with which this condition occurs, variation with the signs of symptoms, lack of specific test for diagnosis, this study was done to understand the clinical behaviour of patients with BD, which will aid in diagnosing and managing patients with BD and also relapses and other associated conditions.

Methodology: A hospital-based study was done in 50 adult patients of either sex, diagnosed with BD in a tertiary care hospital after obtaining ethical committee clearance during February 2020 to January 2023. The diagnosis was based on the diagnostic criteria laid down by the International Team for the Revision of the International Criteria for Behçet's Disease (ITR-ICBD). Results of laboratory tests, including HLA-B5, HLA-B51, and HLA-B27, were recorded. NSAIDS, steroids and immunomodulating drugs were prescribed, either individually or in combination, to treat the disease. Data analysis was done using SPSS 20. Data represented as frequency percentage and bar diagrams.

Results: Majority of the patients with BD belong to age group of 41 - 60 years (84%) with mean age of the patients being 42.3±8.4. BD was seen more in males (68%). Oral apthous (94%) ulcers were the most common manifestations followed by skin lesions (52% includes erythema nodosum, pseudo folliculitis and others) and ocular involvement (50% includes anterior uveitis, posterior uveitis, pan uveitis and retinal vasculitis). Pathergy test was positive in 62% of patients. Out of 50 patients 62% had positive HLA B5, followed by HLA B51 (40%) and HLA B27 (8%).

Conclusion: BD is more common in younger age group with mean age 42.3 years and in males. Most of the patients were positive for HLAB5.

Keywords: Behcets disease, Clinical profile, pathergy test, uveitis, tertiary care.

INTRODUCTION

Behcet's disease (BD) is classified among inflammatory vascular diseases, affecting vessels of all kinds and sizes thus affecting every tissue and organ, with unknown aetiology[1]. It is a systemic multifactorial disorder originally described with the triple symptom complex consisting of aphthous stomatitis, genital ulcers and uveitis[2,3,4,5]. BD is associated with intermittent episodes of relapse and recovery; each episode may involve one or several organs and last for totally variable periods [6,7].

Though the incidence is low (0.57 new cases per 100,000 population has been reported in India)[8], BD is associated with high morbidity rates with eye involvement often leading to the most debilitating outcome, especially in young men. In some studies, the risk of permanent loss of useful vision within 10 years has been reported to be as high as 30–65% [9].

Although the disease rates and the clinical expression vary to some extent by ethnic origin, recurrent mucocutaneous lesions, skin lesions, ocular findings and reactivity of the skin to needle prick or injection (pathergy test) constitute common clinical hallmarks of BD[10,11,12]. Factors favouring disease expression and its severity is yet unclear, also a multidisciplinary approach in collaboration with paediatricians, ophthalmologists, physicians, neurologists and other specialists is mandatory. Several authors describe the treatment of BD as symptomatic, but being an affection of autoimmune origin, the use of immunosuppressive drugs is suggested. Anti-inflammatory drugs and corticosteroids are reported as other medications commonly used.

Considering low frequency with which this condition occurs, variation with the signs of symptoms, lack of specific test for diagnosis, this study was done to understand the clinical behaviour of BD, which will aid in diagnosing and managing patients with BD and also relapses and other associated conditions.

METHODOLOGY

A hospital-based study was done in50adult patients of either sex, diagnosed with BD in a tertiary care hospital after obtaining ethical committee clearance during February 2020 to January 2023. The diagnosis was based on the diagnostic criteria laid down by the International Team for the Revision of the International Criteria for Behçet's Disease (ITR-ICBD).The criteria include six items of vascular manifestations, oral aphthous, genital aphthous, skin manifestations (erythema nodosum, pseudo-folliculitis), ocular manifestations (anterior uveitis, posterior uveitis, and retinal vasculitis), CNS involvement, and positive pathergy test. In these criteria, all items get one score except for oral aphthous, genital aphthous, and ocular involvement, getting two scores. Patients with a score of 4 or higher are diagnosed with BD [1]. Patients with ocular, neural, and cutaneous involvements underwent further examination. Purposive sampling method was used and informed consent was taken.

Demographic data, including age, gender, and ethnicity, were recorded. A complete history of the current symptoms was obtained, which included type, severity, and duration of symptoms, as well as the family history of BD and drug history. A careful clinical examination including examination of skin, mucosae (oral, genital and conjunctival) was carried out for evidence of any active or healed lesions. Patients were subjected to detailed ophthalmological examination for any evidence of active or healed uveitis and/ or ulcers. Tuberculosis, sarcoidosis and syphilis were excluded based on clinical examination and investigations. Herpes simplex was excluded based on Tzanck smear from oral and/or genital ulcer and by performing Herpes simplex virus (HSV) serology for IgG and IgM antibodies in some subjects. All patients underwent haematological investigations viz complete hemogram, liver function test (LFT), kidney function test (KFT), and Venereal Disease Research Laboratory (VDRL) along with urine microscopy. Mantoux test was done in all patients with 5 units of purified protein derivative (PPD) and reading recorded at 48-72 hours. Pathergy test was performed with a disposable 26 gauge needle injecting 0.1 ml normal saline at the flexor aspect of left forearm, approximately 2 inches below the elbow crease and read at 48 hours by one of the authors. Radiological evaluation included X-ray of the chest and clinically involved joints. Results of laboratory tests, including HLA-B5, HLA-B51, and HLA-B27, were recorded. NSAIDS, steroids and immunomodulating drugs were prescribed, either individually or in combination, to treat the disease.

Data analysis was done using SPSS 20. Data represented as frequency percentage and bar diagrams.

RESULTS

Majority of the patients with BD belong to age group of 41 - 60 years (84%) with mean age of all the patients being 42.3±8.4. BD was seen more in males (68%). Most common comorbidity was Diabetes mellitus type 2 (64%) followed by thyroid disorders (20%). Mean time of diagnosis since symptoms was 4.8 years with median 3 years (table 1)

Table 1: Characteristics of patients with Behcets disease

PARAMETERS	Sub- group	Frequency	Percentage
Age (years)	18 – 40 years	16	32
	41 – 60 years	32	84
	➢ 60 years	2	4
➢ Age (years) Mean±SD		42.3±8.8	
Sex	Male	34	68
	Female	16	32
comorbidities	Diabetes Mellitus type 2	32	64%
	Thyroid disorders	10	20%
	Hypertension	8	8%
Mean of time to diagnosis since symptoms (years)	4.8±5.76 years (mean and SD). 3 (2-8 years) median and inter quartile range		

Oral apthous (94%) ulcers were the most common manifestations followed by skin lesions (52% includes erythema nodosum, pseudo folliculitis and others) and ocular involvement (50%includes anterior uveitis, posterior uveitis, pan uveitis and retinal vasculitis). Genital ulcers (44%), arthralgia (34%), vascular involvement (20% includes deep vein thrombosis, phlebitis and arterial involvement), neurological involvement (8%), epidydimitis (6%), gastrointestinal involvement (4%) and pulmonary involvement (2%). (Table 2)

Table 2: Symptoms of current episode of Behcets disease

Variable	Frequency	Percentage
Oral ulcer	47	94
Genital ulcer	22	44
Ocular involvement	25	50
Anterior uveitis	12	24
Posterior uveitis	10	20
Panuveitis	8	16
Retinal vasculitis	10	20
Skin lesions	26	52
Erythema nodosum	12	24
Pseudo-folliculitis	10	20
Other skin lesions	4	8
Arthralgia/arthritis	17	34
Gastrointestinal involvement	2	4
Neurological involvement	4	8
Vascular involvement	10	20
Deep vein thrombosis	6	12
Phlebitis	3	6
Arterial involvement	1	2
Epididymitis	3	6
Pulmonary involvement	1	2

Pathergy test was positive in 62% of patients. Out of 50 patients 62% had positive HLA B5, followed by HLA B51 (40%) and HLA B27 (8%). Raised ESR was seen in 46%pf patients with abnormally high (>100) in 2% whereas ESR was 20–49 in 36% and 50–100 in 8% of patients respectively. Complete urine analysis shows red blood cells, pus cells and protein in 16%, 8% and 4% of patients respectively. (Table 3)

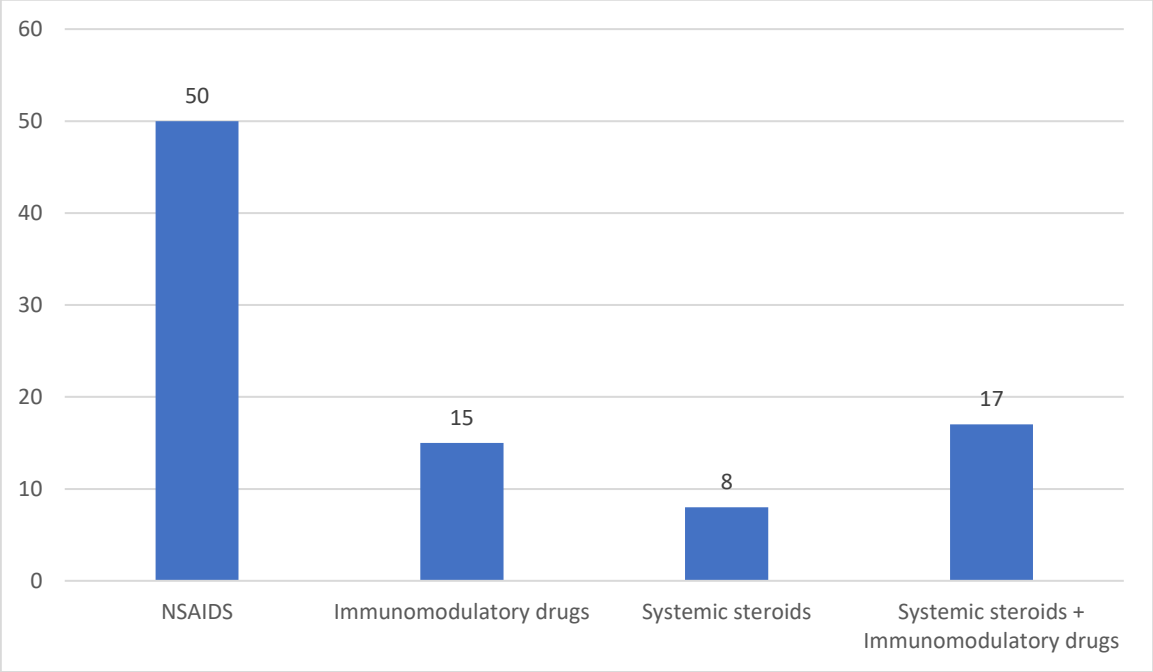
Table 3: Investigations

Variable	Frequency N = 50	Percentage
Positive Pathergy test	36	62
HLA B51 +	20	40
HLA B5 +	34	62
HLA B27 +	4	8

ESR +	23	46
20–49	18	36
50–100	4	8
> 100	1	2
Complete urine analysis showed	14	28
red blood cells	8	16
pus cells	4	8
Proteinuria	2	4

NSAIDS was used in management of all the patients in this study, immunomodulatory drugs to 15 patients, systemic steroids to 8 patients and Systemic steroids + Immunomodulatory drugs to 17 patients.

Figure 1: Drugs used for treatment of Behcets disease



DISCUSSION

Behçet's disease is a chronic relapsing multisystemic inflammatory disorder characterized by four major symptoms (oral aphthous ulcers, genital ulcers, skin lesions, and ocular lesions) and occasionally by five minor symptoms (arthritis, gastrointestinal ulcers, epididymitis, vascular lesions, and central nervous system symptoms) the disease may be triggered by environmental factors, such as infectious agents or pollution, in patients with backgrounds of genetic susceptibility.[11]

In this study majority of the patients with BD belong to age group of 41 - 60 years (84%) with mean age of all the patients being 42.3±8.4.BD was seen more in males (68%).Mean time of diagnosis since symptoms was 4.8 years with median 3 years. Whereas in study by Davatchi F et al, mean age of disease onset was 26.2 years in Iran. The male/female ratio of

disease prevalence was reported to be 1.19 in Iran.[12]Study by Solis Cartas shows Average age ± standard deviation of the group of patients studied was 47±17years, with an age of onset of the symptoms of 42.5years and an average evolution of the disease of 4.5years. There is a greater representativeness of women(75%) [13]. Study by Sadhegi A et al, reported Male/female ratio as 1.47. The age at onset was 27.98 ± 10.47 years, and the mean delay between the onset of symptoms and diagnosis was 5.70 ± 7.16 years. [14]A main reason for such age range might be due to the disease's auto-inflammatory nature that usually occurs more commonly at young ages.[12]

In this study oral apthous (94%) ulcers were the most common followed by skin lesions (52% which includes erythema nodosum, pseudo folliculitis and others) and ocular involvement (50% which includes anterior uveitis, posterior uveitis, pan uveitis and retinal vasculitis).As per study by Sadhegi A et al, the most common clinical manifestation was found to be mucosal involvement (85.1%), followed by the ocular lesions (55.3%) and skin manifestations (44.7%). Additionally, lung and gastrointestinal involvements showed the least prevalence (1.1%, two patients). [14]As per study by Davatchi F et al, clinical manifestations included oral aphthosis in 95% of patients, genital aphthosis (60-90%), skin (pseudofolliculitis/erythema nodosum, 40-90%), eyes (uveitis/retinal vasculitis, 45-90%), gastrointestinal (diarrhea/hemorrhage/perforation/pain, 4-38%), vascular (venous/arterial thrombosis, aneurysm, 2.2-50%), neurological (all kinds, especially meningo-encephalitis, 2.3-38.5%), and articular (arthralgia/arthritis/ankylosing spondylitis, 11.6-93%).[10]Thus mucocutaneous lesions and ocular involvement are among the common manifestations of BD which was reported by other previous studies also. [10,15]

Skin lesions in this study included 52% with erythema nodosum, pseudo folliculitis and others which was similar to findings from study by Davatchi F et al where, Pseudo-folliculitis and erythema nodosum are the two common skin manifestations of BD. Skin manifestations have been reported in 66% of patients with BD in Iran.[10]

Ocular involvement in this study was seen in 50% of patients with anterior uveitis, posterior uveitis, pan uveitis and retinal vasculitis in 12%, 10%, 8% and 10% of patients respectively. Study by Davatchi F et al reported ocular involvement was seen in 40% of BD patients in Iran is another common and important manifestation of the disease with anterior uveitis being the most common type. The ocular lesions are among the most important morbidities of BD patients that even can lead to blindness.[15]

In this study Pathergy test was positive in 62% of patients. As per study by Sadhegi A et al. Pathergy test was positivein 98 patients (52.1%). [14]In this study out of 50 patients 62% had positive HLA B5, followed by HLA B51 (40%) and HLA B27 (8%). Study by Sadhegi A et al, 45.2% had positive HLA B5, followed by HLA B51 (35.1%) and HLA B27 (12.2%). Davatchi et al. investigated 7187 patients with BD in their study, in which the highest frequency was reported to be for HLA-B5+ (54%), followed by HLA-B51+ and HLA−B27+.[16]

In this study raised ESR was seen in 46% of patients with abnormally high (>100) in 2% whereas ESR was 20–49 in 36% and 50–100 in 8% of patients respectively. In study by

Mahale R R et al, mean erythrocyte sedimentation rate was 10.1 ± 8.2 (range- 4–45).Pathergy test was positive in 6 patients (50%). Human leucocyte antigen (HLA) B51 positivity was seen in all patients[17].Other studies have suggested that elevated levels of ESR and CRP are associated with newly-formed erythema nodosum, superficial thrombophlebitis, and articular involvement[10,18].

NSAIDS was used in management of all the patients in this study, immunomodulatory drugs to 15 patients, systemic steroids to 8 patients and Systemic steroids + Immunomodulatory drugs to 17 patients. Gulzar Mashani used steroids and immunomodulatory drugs in management of BD[19].

CONCLUSION

BD is more common in younger age group with mean age 42.3 years and more common in males. Oral apthous (94%) ulcers were the most common followed by skin lesions and ocular involvement. Pathergy test was positive in most of the patients. Most common marker positive in patients with BD was HLA B5, followed by HLA B51 and HLA B27.NSAIDS, immunomodulatory drugs and systemic steroids were used in management of the patients with BD.

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