

Common complications of Behcet's Disease in Baghdad Teaching Hospital

Barq Wameedh Azeez¹, Atta AH Al-Sarray², Ali H. Al-Hafidh³

¹Post Graduate, ²Professor Dr. Middle Technical University/Iraq, ³Lecturer Dr. Middle Technical University/Iraq

Abstract

Background: Behcet's disease is multi-systemic vasculitis, which usually is frequent oral & genital ulcerations as well as eye and skin lesions.

Objectives: To determine the proportion of complications of BD & associated epidemiological variables.

Patients and Methods : A cross-sectional study was conducted and performed in the Baghdad teaching hospital's Rheumatology unit and Dermatology and Venereology Center, involving (116) patients over the course of six months, beginning November 2nd and ending April 2nd, 2020.

Results: The patients ranged in age from 13 to 64 years old at the time of the study. The mean age and SD was 35.08±10.46 and 70.7% from male while 29.3% from female. Recurrent oral ulceration, Recurrent genital ulceration, Eye lesion, Skin lesion, and Joint symptoms were the most common clinical manifestations of Behcet's disease, with 96.6 percent, 37.9%, 67.2 percent, 62.1 percent, and 75.9%, respectively. The most common Behcet's disease complication was ocular complication (34.5 percent), and the first major symptom of BD (94 percent) was oral ulcer. The age at onset of disease at (20-29) years with higher frequency (38.8%).

Conclusion : Higher percentages of study sample had ocular complications (83%) while the lower percentage (2%) had gastrointestinal complication.

Recommendations: More research is required to determine the etiology, enhance diagnosis precision, and develop new therapeutic strategies. To prevent visceral and ocular involvements, early diagnosis and treatment with the help of a dermatologist with extensive experience is essential.

Keywords: Behcet's Disease, common complications, Iraq, Baghdad

Introduction

The disease is defined as a chronic, relapsing, multisystemic idiopathic inflammatory problem characterized by an episodic occlusive retinal vasculitis with no specific treatment⁽¹⁾. This ubiquitous disorder exhibits a distinct geographic variation and is endemically higher particularly in Turkey, Iraq, Iran, Korea and Japan, the population derived historically from the ancient Silk Road that was used for centuries as a trade-making passage from the East to the West⁽²⁾. Behcet's disease is an inflammatory multisystem disease of unknown etiology with unpredictable exacerbations and remissions. The disease was first described in

1937 by the Turkish dermatologist Hulusi Behcet as a trisymptom complex, characterized by recurrent oral ulcers, genital ulcers and uveitis⁽³⁾.

Behcet's disease usually starts around the third or fourth decade of life⁽⁴⁾. Epidemiological surveys suggest that sex distribution is roughly equal. However, there are some exceptions. BD shows male predominance in some Middle Eastern and the Mediterranean countries, and female predominance in Japan and Korea⁽⁵⁾.

There is no standard test for diagnosing of Behcet's disease, there are multiple criteria sets in use up until 1990. The first evidence-based criteria for Behcet's

disease were introduced by the International Study Group (ISG) in 1990 (6). In most cases, a combination of local and systemic therapy is used. Immunosuppressants, corticosteroids, and colchicine are some of the medications used (7).

Objectives of the Study

To determine the proportion of complications of BD & associated epidemiological variables.

Patients & Methods

Study Design : A cross sectional study .

duration of the study : The data collection continued for the period of (6) months starting on 2nd of November 2019 ending to 2nd of April 2020.

Place of Study : The place of this study was performed in the Rheumatology unit & Dermatology and Venereology Center in Baghdad teaching hospital.

Inclusion and Exclusion criteria of study:

Inclusion criteria: All patients with BD attending to Baghdad teaching hospital in during the period of study

Exclusion Criteria: Patients with Behcet’s disease who visit the Rheumatology unit or Dermatology and Venereology Center in other hospitals in Baghdad and other governorates, as well as patients who visit other hospitals in Baghdad or other governorates.

3.11 Statistical data analysis

Analysis of data was carried out using the available statistical package of SPSS-25 (Statistical Packages for Social Sciences- version 25). Data were presented in simple measures of frequency, percentage, mean, standard deviation, and range (minimum-maximum values). The significance of difference for different percentages (qualitative data) were tested using Pearson Chi-square test (c2-test). Statistical significance was considered whenever the P value was equal or less than 0.05.

Results

Table 1 : The higher percentages of patients (96.6%) in both genders have recurrent oral ulceration while the lower percentages (3.4%) had gastrointestinal lesions and the p value of gender with clinical manifestations show not significant (P value >0.05) except gender with recurrent genital ulceration which find significant (p value = 0.04) .

Table 1 : Clinical manifestations of BD with gender

Clinical Characteristics		Male		Female		Total		P
		No	%	No	%	No	%	
Recurrent oral ulceration	Yes	78	95.1	34	100	112	96.6	0.190
	No	4	4.9	-	-	4	3.4	
Recurrent genital ulceration	Yes	36	43.9	8	23.5	44	37.9	0.040*
	No	46	56.1	26	76.5	72	62.1	
Eye lesion	Yes	56	68.3	22	64.7	78	67.2	0.708
	No	26	31.7	12	35.3	38	32.8	
Skin lesion	Yes	55	67.1	17	50.0	72	62.1	0.085
	No	27	32.9	17	50.0	44	37.9	

Cont... Table 1 : Clinical manifestations of BD with gender

Joint symptoms	Yes	62	75.6	26	76.5	88	75.9	0.921
	No	20	24.4	8	23.5	28	24.1	
Epididymitis	Yes	5	6.1	-	-	5	4.3	0.141
	No	77	93.9	34	100	111	95.7	
Gastrointestinal lesions	Yes	3	3.7	1	2.9	4	3.4	0.847
	No	79	96.3	33	97.1	112	96.6	
Central nervous symptoms	Yes	7	8.5	1	2.9	8	6.9	0.279
	No	75	91.5	33	97.1	108	93.1	
Vascular lesions	Yes	7	8.5	1	2.9	8	6.9	0.279
	No	75	91.5	33	97.1	108	93.1	
						116	100	

Table 2 : Regarding the complications with gender, the higher percentages of patients (34.5%) with ocular complications and the p value not significance (P value >0.05).**Table 2 : Distribution of the complications of BD patients according to gender**

Complications:		Male		Female		Total		P value
		No	%	No	%	No	%	
Ocular	Yes	26	31.7	14	41.2	40	34.5	0.329
	No	56	68.3	20	58.8	76	65.5	
Neurological	Yes	4	4.9	1	2.9	5	4.3	0.640
	No	78	95.1	33	97.1	111	95.7	
Vascular	Yes	2	2.4	-	-	2	1.7	0.358
	No	80	97.6	34	100	114	98.3	
GIT	Yes	1	1.2	-	-	1	0.9	0.518
	No	81	98.8	34	100	115	99.1	
						116	100	

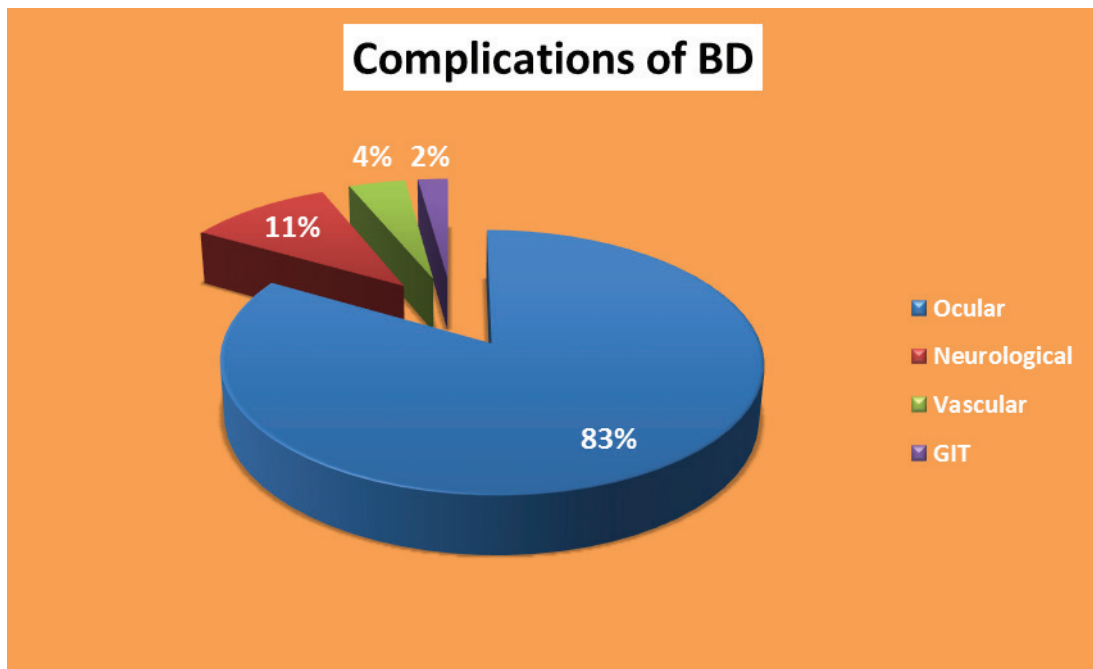


Figure 1 : Complications of BD

Figure 1 : show The higher percentages of patients (83%) with ocular complications while the lower percentages (2%) had gastrointestinal complications .

Table 3 : shows the family history of BD and complications , most cases of all complications (ocular , neurological , vascular , GIT) don't have family history of BD and the higher percentage (35.0% , 4.9% , 1.9% , 1%) respectively of the patients and the association statistically was found to be non-significant (P>0.05).

Table 3 : Relationships between the complications of BD and family history of BD .

Complications		Family history of Behcet's disease				Total		P value
		Yes		No				
		No	%	No	%	No	%	
Ocular	Yes	4	30.8	36	35.0	40	34.5	0.765
	No	9	69.2	67	65.0	76	65.5	
Neurological	Yes	-	-	5	4.9	5	4.3	0.417
	No	13	100.0	98	95.1	111	95.7	
Vascular	Yes	-	-	2	1.9	2	1.7	0.612
	No	13	100.0	101	98.1	114	98.3	
GIT	Yes	-	-	1	1.0	1	0.9	0.721
	No	13	100.0	102	99.0	115	99.1	

Table 4 : show the family history of immune mediated disease and complications , most cases complications (ocular , neurological) have family history of immune mediated disease and the higher percentage

(35.3% , 5.9%) respectively of the study sample and the association statistically was found to be non-significant (P>0.05).

Table 4 : Distribution between the complications of BD and family history of immune mediated disease .

Complications		Family history of immune mediated disease				Total		P value
		Yes		No		No	%	
		No	%	No	%			
Ocular	Yes	6	35.3	34	34.3	40	34.5	0.939
	No	11	64.7	65	65.7	76	65.5	
Neurological	Yes	1	5.9	4	4.0	5	4.3	0.730
	No	16	94.1	95	96.0	111	95.7	
Vascular	Yes	-	-	2	2.0	2	1.7	0.554
	No	17	100.0	97	98.0	114	98.3	
GIT	Yes	-	-	1	1.0	1	0.9	0.677
	No	17	100.0	98	99.0	115	99.1	
						116	100	

Discussion

Regarding the clinical features of patients, this result show a high percentage of patients with oral ulcers (96.6%). This result agree with the results of those published studies (82.1% by⁽⁸⁾ in oman ; 96.3% by⁽⁹⁾ in china ; 91.2 % by⁽¹⁰⁾ in japan ; 100% by ⁽¹¹⁾ in magnolia ; 99% by ⁽¹²⁾ in korea). Regarding the relationship between gender and oral ulcer. this study which finds that females had oral ulcers more than males. this result similar with results of those published studies (⁽¹³⁾ in Russia ; ⁽⁹⁾ in china & ⁽¹⁰⁾ in japan). This study show (37.9 %) of patients with recurrent genital ulceration. this result similar with the result Omani study ⁽⁸⁾ which shows (40%) of patients with genital ulceration and also similar with another study conducted in Iran ⁽¹⁴⁾ that find (47.4%) of patients with genital ulcer. Another study in

china ⁽⁹⁾ that results show differ from this study which finds that (71.2%) of patients had a genital ulcer. The explanation of This difference were probably due to differences in geographic regions, genetics or diagnostic criteria. Regarding the relationship between gender and genital ulcer. This study finds that males had genital ulcers more than females. This result agree with the results of those published studies (⁽¹³⁾ in Russia ; ⁽¹⁵⁾ in Finland). Another study in china ⁽⁹⁾ differ from this study which found that female more than genital ulcer than male. The explanation of This difference were probably due to that the difference in hormonal balance influences the development of clinical manifestation of BD with gender like genital ulcer. Some previous studies conducted in turkey ^(16 ; 17) have reported the possible influence of sex hormones such as testosterone and androgen on BD. Regarding the ocular lesions in this study demonstrated

(62.1%) of patients with ocular manifestations. This result similar with results of those published studies (57.1% by ⁽⁸⁾ in Oman ; 58.1% by ⁽¹⁸⁾ in Iran ; 54% by ⁽¹³⁾ in Russia ; 63.1% by ⁽¹¹⁾ in magnolia). This study show relationships between ocular lesion with gender. This result find that male had more than female , this result similar to the results of those reported studies (⁽¹³⁾ in Russia ; ⁽⁹⁾ in china ; ⁽¹⁰⁾ in japan ; ⁽¹⁹⁾ in Greek ; ⁽¹¹⁾ in magnolia). Regarding the cutaneous manifestation , this study shows (62.1%) of patients with skin lesions. this result agree with the results of those published studies (63.1% by ⁽²⁰⁾ in china ; 64.4% by ⁽¹⁸⁾ in Iran ; 71.7 % by ⁽²¹⁾ in brazil). Regarding the cutaneous lesion with gender, this study show the male more than female with a skin lesion. this result similar to the results of those reported studies (⁽¹³⁾ in Russia ; ⁽²¹⁾ in brazil & ⁽⁹⁾ in china). This study found (75.9%) of patients with joint symptoms. These result agree with a results of another reported studies (63.2% by ⁽¹²⁾ in korea ; 87.3% by ⁽²²⁾ in southeast America ; 72.4 % by ⁽²³⁾ in Serbia ; 79.5 % by ⁽²⁴⁾ in turkey) . This result disagree with Another results of those reported studies (4.1% by ⁽²⁵⁾ in Iran ; 28.4% by ⁽²⁰⁾ in china) . The probably explanation of this difference that a high frequency of joint involvement might be speculated, because they used the questionnaire to obtain the information regarding joint symptoms, and they also employed a broad concept, “arthropathy”, rather than inflammatory arthritis. In addition, the reason why there is hesitation to use arthritis among the primary criteria, to us, may be because complaints about joints in society are very common, and therefore, investigators hesitate to consider these complaints and findings among the symptoms of the illness.

Regarding the joint manifestation with gender, this study shows the female more than male had joint symptoms. this result agree with the results of those published studies (⁽²⁶⁾ in Korea ; ⁽²¹⁾ in brazil ; ⁽²⁴⁾ in turkey). This study show (3.4%) of patients with a gastrointestinal lesion. This result similar with the results of those published studies (3.8% by ⁽²⁶⁾ in Korea ; 7.1% by ⁽²⁷⁾ in turkey ; 3.3 % by ⁽²⁰⁾ in china ; 7% by ⁽¹⁸⁾ in Iran. Regarding the neurological involvement, this study shows (6.9%) of patients with neurological symptoms. This result agree with the results of those

reported studies (6.1 % by ⁽²⁸⁾ in turkey ; 9.6% by ⁽²⁰⁾ in china ; 10.6 % by ⁽¹⁸⁾ in Iran ; 3% by ⁽¹⁴⁾ in Iran ; 10.2% by ⁽²⁹⁾ in turkey ; 7.8% by ⁽³⁰⁾ in turkey). This study show (6.9%) of patients with a vascular lesion. This result agree with the results of those published studies (9.4% by ⁽¹⁰⁾ in japan ; 6% by ⁽³¹⁾ in japan ; 9.1 % by ⁽¹⁸⁾ in Iran ; 8% by ⁽³²⁾ in japan). The complications of Behcet’s disease in this study in general according to the clinical manifestations of patients that find the higher percentages of is an ocular complication (34.5%) of the complicated cases. There was no previous study on the general complications of Behcet’s disease in Iraq. This study show the relationships of complications with (family history of BD and family history of immune mediated disease) and the associations between them show non significance (P value >0.05). There was no previous study on the complications of BD with family history of BD & immune mediated disease in Iraq .

Conclusion

Higher percentages of study sample had ocular complications (83%) while the lower percentage (2%) had gastrointestinal complication.

Recommendations: More research is required to determine the etiology, enhance diagnosis precision, and develop new therapeutic strategies. To prevent visceral and ocular involvements, early diagnosis and treatment with the help of a dermatologist with extensive experience is essential.

Ethical Clearance: The Research Ethical Committee at scientific research by ethical approval of both MOH and MOHSER in Iraq

Conflict of Interest: None

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