Inflammatory markers and their correlation with disease activity In Behçet's disease

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Introduction

Behçet's disease is an autoimmune systemic vasculitis whose activity is difficult to assess due to the lack of biomarkers. Various markers, such as anti-TNF-α, IL-6 and IL-1β, have been associated with this disease. In addition, certain ratios such as platelets/lymphocytes (PLR), neutrophils/lymphocytes (NLR), neutrophils/albumin (NAR), C-reactive protein (CRP)/albumin and lymphocytes/monocytes (LMR) have been proposed as inflammatory markers. However, these markers are not specific to Behçet's disease, as they can be influenced by various physio-pathological conditions. Few studies have examined PLR and LMR, CAR and NAR values in patients with this disease.

Aim

The aim of this study is to gain a better understanding of these inflammatory parameters in the context of Behçet's disease and to assess their association with disease activity and certain clinical manifestations.

Methods

Eighty-one patients were included in our study, which was carried out in the internal medicine department of the Mohammed VI University Hospital. Their BDCAF scores were recorded, and patients were classified according to their activity, which was considered active if the BDCAF score > 2.

Blood samples were then taken, and statistical models were applied to analyze the relationships between clinical results and biological parameters.

Results

The study involved 81 patients, 74 of whom were in the active phase and 7 in the inactive phase. Of these patients, 52.3% were women and 47.7% men, with a mean age of 37.8 years and a standard deviation of 10 years. The various clinical manifestations observed are illustrated in Figure1

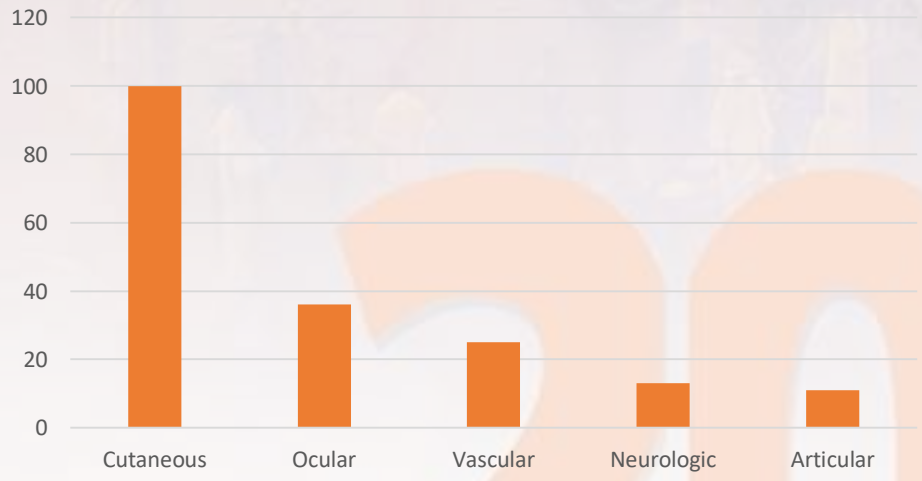

Fig.1 :Incidence of different clinical manifestations

Comparing these parameters between active and inactive BD patients, the active patients showed a non-statistically significant increase in mean PLR, NAR and CAR compared with the inactive group, according to the BDCAF score. On the other hand, the LMR was higher in inactive patients (Table 1).

Table 1 :Comparisons of studied laboratory data as regards Behcet's activity index.

Laboratory Data	Behcet's disease activity index: Inactive patients (8)	Behcet's disease activity index: Active patiente (74)	P value
PLR	104.58	136.25	0.23
LMR	4.76	4.34	.744
NAR	226.48	173.76	.330
CAR	0.04	0.66	0.41

With regard to the clinical correlation with paraclinical results, it was observed that PLR levels were generally higher in patients with vascular and neurological disorders than in those without. In addition, CAR and NAR ratios were significantly higher in patients with ocular, vascular and articular disorders than in those without. In addition, the MRL rate was high in patients with ocular and vascular disease, but low in patients with other types of disease (see Table 2).

Table 2 :The relation between the clinical presentations of BD patients and the studied laboratory data

Clinical presentation		PLR	NAR	LMR	CAR
Eye Involvement	Yes	155.29	161.18	4.61 *	2.20
	No	178.50	139.23	4.02 *	1.47
Major vessel Involvement	Yes	161.69	150.46	4.94	2.15 *
	No	165.90	146.44	4.38	.76
Nervous system Involvement	Yes	181.97 *	117.62	3.64	1.24
	No	162.48	151.24	4.59	2.00
Articular Involvement	Yes	173.52	153.40	3.97	1.19
	No	172.88	145.29	4.63	2.08

**** Significance defined by p<0.05***

Conclusion

Although our results were not statistically significant, they were consistent with previous studies. Thus, PLR, LMR, CAR and NAR ratios emerge as potential inflammatory markers that can be used to assess inflammatory status and disease activity in BD patients. These markers are easy to measure and could contribute to the management of this disease, which has sometimes serious and potentially fatal multisystem damage.