

## Comparison of activity scores in the follow-up of patients with Behçet's disease.

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### Introduction

Behçet's disease (BD) is a multisystemic vasculitis whose activity remains complex to assess due to its intermittent course and unpredictable involvement of prognostic organs, irrespective of previous involvement and despite adequate treatment. The absence of precise biological markers to predict disease activity makes expert clinical judgement essential. Accurate assessment of disease activity using clinical scores such as the IBDDAM, BDCAF and Turkish score is essential for better management. These scores represent different approaches to achieving this goal.

### Aim

This study aims to determine two main aspects: firstly, how significantly variations in the values of different scores reflect changes in disease activity, and secondly, the concordance between the IBDDAM, BDCAF, Turkish score, and the global assessment by an expert (PGA) in evaluating changes in disease activity.

### Methods

In a prospective study, 86 patients meeting the international criteria for Behçet's disease were selected. The different activity scores were assessed at their two consecutive follow-up visits, which were 3 to 6 months apart. In addition to the assessments made at the second visit, disease activity was determined (changed, unchanged) according to the PGA. We used the ROC curve to determine an appropriate cut-off point for change in disease activity. To determine the agreement between the different scores and the PGA, the comparison was performed by kappa analysis.

### Results

Eighty-six patients were assessed at their two consecutive follow-up visits. Of these, 52.3% were women and 47.7% men. The mean age of the patients was 37.8 years, with a standard deviation of 10. All patients had skin lesions. Ocular involvement was noted in 36% of cases. Vascular lesions affected 25% of patients, while neurological and joint lesions were present in 15% of patients.

For each possible rate of change in disease activity values, the sensitivity and false positive rate (1-specificity) were calculated in comparison with the PGA (Figure1). Thus, it was shown from the area under the curve (table 1) that there was a statistically significant difference ( $p < 0.001$ ) between the 3 scores and that the area under the curve for IBDDAM was larger compared to the other scores; suggesting that this score gives greater sensitivity compared to the other scores, and is more useful for showing change in disease activity. The best cut-off for assessing change in activity was 1.5 for all 3 scores, with better sensitivity (82%) and specificity (66%) for IBDDAM.

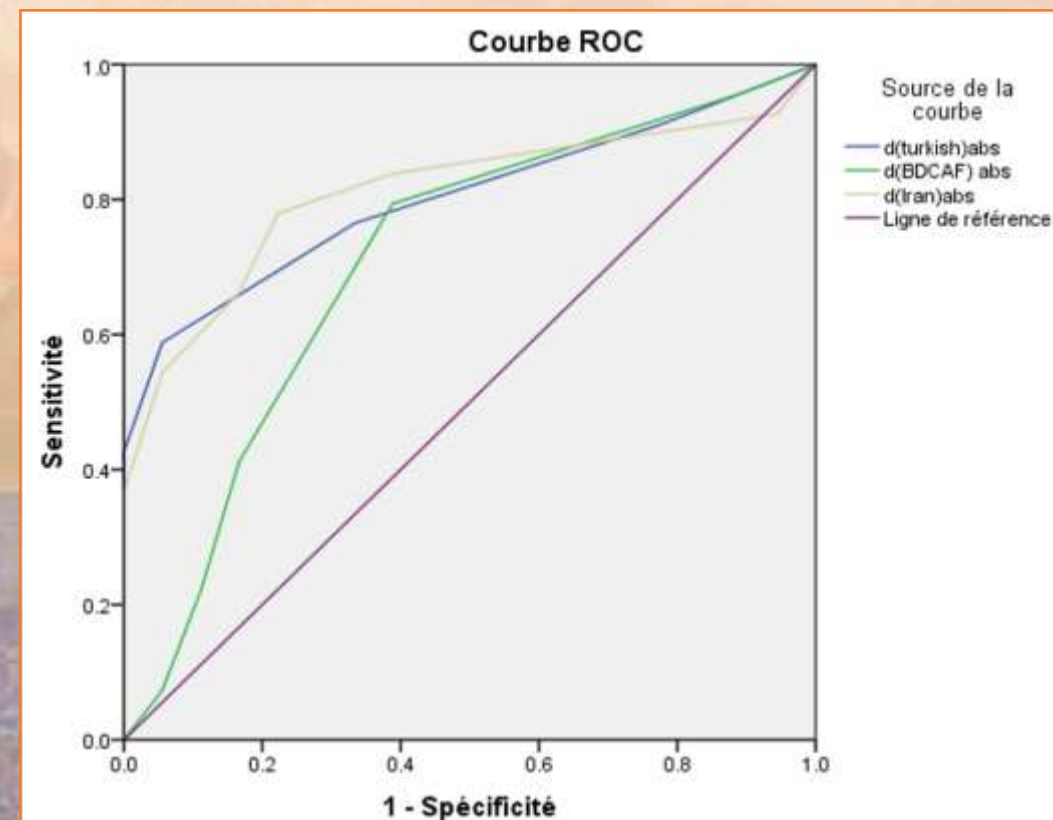


Fig.1 : Receiver operating characteristic (ROC) curve for disease activity change by various methods (IBDDAM ,BDCAF , Turkish score)

Table 1 : The area under the curve of the different activity scores.

Variable(s) de résultats tests	Zone	P Value	95% asymptotic confidence interval	
			Borne inférieure	Borne supérieure
d(Turkish)abs	.801	.000	.708	.894
d(BDCAF) abs	.708	.007	.565	.851
d(Iran)abs	.811	.000	.717	.904

Table 2 : Concordance between different disease activity indices and expert physician global assessment.

Assessment method	Activity score	Agreement rate (%)	Comparaison (Kappa)	P value
Any change	<b>IBDDAM</b>	<b>74</b>	<b>0.34</b>	<b>0.04</b>
	BDCAF	79	0.04	0.28
	Turkish Score	76	0.1	0.11
20% change	<b>IBDDAM</b>	<b>79</b>	<b>0.42</b>	<b>0.003</b>
	BDCAF	78	0.04	0.28
	Turkish Score	74	0.1	0.13
Cut-off point	<b>IBDDAM</b>	<b>81</b>	<b>0.5</b>	<b>0.0001</b>
	BDCAF	75.5	0.37	0.001
	Turkish Score	74.4	0.35	0.001

Comparison of the concordance between the different scores and the PGA expert in the assessment of changes in disease activity by kappa analysis revealed a better statistically significant concordance of the IBDDAM with the PGA compared with the other scores. This agreement was even better when both parameters were considered, with a better rate when the cut-off was taken into account (table 2).

### Conclusion

Assessment of disease activity is currently based on the clinical judgment of the doctor. This study seeks to determine whether disease activity indices can be used as substitutes, despite their acknowledged limitations. IBDDAM was identified as the most effective method for assessing variations in disease activity. More prolonged studies with larger sample sizes are needed for a better assessment.