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Impact of body mass index on rheumatoid arthritis activity

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Abstract/Objective

Rheumatoid arthritis (RA) is a chronic inflammatory rheumatic disease associated with changes in body composition, characterised by a decrease in muscle mass and an increase in fat mass.

The excess mortality of RA patients is mainly linked to the presence of co-morbidities such as obesity.
The aim of this study was to assess the impact of body mass index (BMI) on RA activity.

Methodology

A retrospective cross-sectional study was conducted in the rheumatology department of the Mohamed VI University Hospital, collecting records of patients with RA meeting the ACR/EULAR 2010 criteria.

RA activity was obtained using the DAS28 score. BMI was interpreted according to the WHO thresholds as follows: thinness < 18.5, normal corpulence [18.5-24.9], overweight [25-29.9] and obesity ≥ 30 kg/m 2 .

The Chi2 test was used to study the relationship between 2 qualitative variables. The P significance level was set at 0.05.

Results

There were 139 patients, 14 men and 125 women.

The mean age was 53.7 ± 12.7 years [21-83] and the mean age at onset was 42.2 ± 12.6 years [14-74].

The mean duration of RA was 11.5±8.4 years.

The mean number of painful joints (NAD) was 18±6.9 and the mean number of swollen joints (NAG) was 8±4.2.

The mean CRP was 32.8 mg/L. The mean DAS28 was 5.04±0.8.

Corticosteroids were taken in 91.4% of cases.

The mean BMI was 26.4 ± 5.5 kg/m2.

Thirty-five patients were of normal weight, 32.7% were overweight, 32.7% were obese and 8.4% were lean.

The higher the BMI, the higher the DAS28 (3.06 ± 6 for lean patients, 4.04 ± 8 for normal weight patients and 4.38 ± 5.6 for overweight patients (p = 0.05).

NAD and NAG were not significantly influenced by BMI. CRP was higher in overweight patients, with an average of 36%.

However, no statistically significant relationship was detected between the CRP value and the different BMI categories.

Discussion and Conclusion

High BMI in RA is associated with higher disease activity. Hence the importance of promoting weight loss and maintaining regular physical activity in order to improve disease activity indices.