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AMOUNT OF NONSTEROIDAL ANTI-INFLAMMATORY DRUGS INTAKE AND ITS RELATION TO RENAL FUNCTION IN PATIENTS WITH SPONDYLOARTHRITIS: AN 18-YEAR FOLLOW-UP STUDY

Victória Carneiro Dal Moro^{1,*}, Ricardo da Cruz Lage¹, Larissa Maria Oliveira Gonzaga¹, Ana Luisa Bagno de Almeida¹, Anna Carolina Faria Moreira Gomes Tavares¹, Olívio Brito Malheiros¹, Júlio Silvio De Sousa Bueno Filho², Carlos Alexandre de Sousa Bontempo¹, Marco Antônio Parreiras Carvalho¹, Gustavo Gomes Resende¹

1.Universidade Federal de Minas Gerais, Belo Horizonte (MG), Brazil. 2.Universidade Federal de Lavras, Lavras (MG), Brazil.

*Corresponding author: vickdalmoro@hotmail.com

BACKGROUND

Nonsteroidal anti-inflammatory drugs (NSAIDs) are still an important tool in the management of spondyloarthritis (SpA), especially axial SpA. Despite the adverse renal effects associated with NSAIDs in other populations, studies describing this potential damage in SpA are lacking. The aim of the present study was to assess if the decline in renal function of patients with SpA could be associated with the amount of NSAID intake in an 18-year follow-up period.

MATERIALS AND METHODS

Adult patients with SpA followed from 2002 to 2020 were included. The amount of NSAID intake was calculated using ASAS-NSAID score, ranging from 0 to 1, with 1 representing daily use of full dose of NSAID for a determined period of time. Creatinine (Cr) level and glomerular filtration rate (GFR) – estimated by CKD-EPI – at baseline and at last time under NSAID use were compared.

RESULTS

Forty patients, 72.5% male, were enrolled. The mean $\pm$ SD age at baseline was 43 ± 10 years. Twenty-four patients (60%) had ankylosing spondylitis, seven (17.5%) psoriatic arthritis, four (10%) undifferentiated SpA, three (7.5%) enteropathic arthritis and two (5%) reactive arthritis. Full dose of NSAID was used for a mean 8.3 ± 3.8 years (average ASAS-NSAID score of 0.52 ± 0.24). The mean baseline GFR was 104 ± 18 mL/min/1.73 m² and the last mean GFR under NSAID use was 94 ± 16 mL/min/1.73 m². The average reduction in GFR was 9.36 ± 12 mL/min/1.73 m² over 18 years (loss of 0.53% per year). Six (15%) patients had a reduction in GFR greater than 1% per year and one patient (2.5%) greater than 2% per year. For each 0.1 increase in ASAS NSAID score, there was an additional decrease of only 0.36% in GFR. In the multivariate analysis, age at baseline ($p = 0.01$), ASAS-NSAID score ($p = 0.008$) and baseline GFR ($p = 0.09743$ – tendency to statistical relevance) were associated with a decline in GFR during follow-up.

CONCLUSION

The amount of NSAID intake was associated to a mild decline in GFR, without clinical relevance. In healthy individuals > 40 years, it is expected a reduction in GFR of 10 mL/min/1.73 m² per decade and a lower decline was observed in this cohort of patients with SpA, despite chronic use of NSAIDs. This result suggests a good renal safety profile of NSAIDs in the management of SpA, although further studies with a larger sample are needed to confirm this finding. To date, caution is still recommended when prescribing NSAID in high-risk patients, e.g.: elderly and those with previous renal dysfunction.