Effect of oral diclofenac intake on faecal calprotectin

Zlatica Rendek¹, Magnus Falk²,³, Ewa Grodzinsky⁴,⁵, Karl Wahlin⁶, Stergios Kechagias⁷, Rikard Svernlöv⁸, and Henrik Hjortswang⁸

ABSTRACT

Background

NSAIDs are a known source of increased faecal calprotectin (FC) levels. Currently, there is a lack of knowledge about how long it takes for an increased FC level to return to normal after NSAID intake.

Objective

The aim was to investigate how oral diclofenac intake affects FC levels and assess how long it takes for an increased FC level to return to normal after oral diclofenac intake.

Material and methods

Thirty healthy volunteers received diclofenac 50 mg three times daily for 14 days. Participants provided a stool sample on Days 0, 2, 4, 7, 14 during intake and Days 17, 21, 28 after discontinuation. FC levels were then followed at 7-day intervals until normalization.

Results

During diclofenac intake, eight participants (27%) had FC levels exceeding the upper limit of normal (median, 76 μg/g; range, 60–958 μg/g), corresponding to 8.3% of measurements. FC was not constantly increased and became normal in most participants during diclofenac intake. FC levels were on average significantly higher during intake ($M=9.5$, interquartile range (IQR) =13.4) than on baseline ($M=7.5$, IQR=0.0), $p=0.003$. After discontinuation, two participants had increased FC on Days 17 and 21, respectively. No significant differences in FC levels were found between baseline and measurements after discontinuation. Two weeks after discontinuation, all participants had normal FC levels.

Conclusions

Short-term oral diclofenac intake is associated with increased FC levels. However, the likelihood of an increased test result is low. Our results suggest that 2 weeks of diclofenac withdrawal is sufficient to get an uninfluenced FC test result.