Background: Other studies have shown the ability of a wearable activity tracker (TAP) to improve physical activity (PA) in different rheumatic diseases. Given the importance of PA in spondyloarthritis, our hypothesis is that the use of a TAP could improve physical activity and thus disease activity.
Objectives: The purpose of this study is to evaluate the impact of a TAP used to encourage PA on disease activity in patients with spondyloarthritis.
Methods: In this randomized controlled trial consisting of three 12-week stages (Figure 1). Patients with spondyloarthritis were randomized to a group with TAP (GT), or a group without TAP (GST). For the first stage, both groups received physical activity counseling. In the second 12-week stage, no patients received TAP. In the third 12-week stage, all patients received supervised PA combined with TAP for GT only. Disease activity, performance (assessed by the TM6 6-minute walk test), and quality of life (assessed by the Short Form 36 Health Survey Questionnaire [SF-36]) were assessed at 12, 24, and 36 weeks. The primary endpoint was the progression of relapses between baseline and 12 weeks.

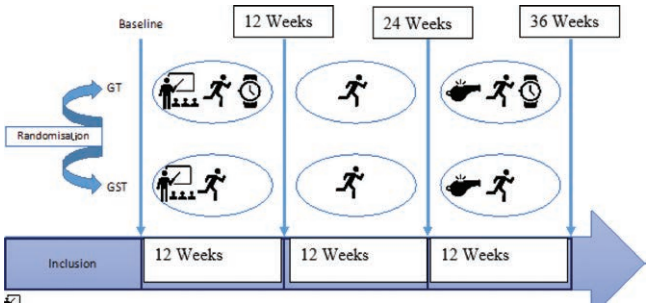

Figure 1.

Results: A total of 108 patients were included in the study. At 12 weeks, both groups showed a non-significant improvement in the number of relapses: mean change (Δ), -0.32 [95% CI-0.68;60.09] in GT and Δ, -0.38 [95% CI-0.68;60.09] in GST. But, differences in outcome between groups were not significant (p=0.87). The TM6 was improved in the GT and GST groups at 12, 24, and 36 weeks ($p < 0.01$, and $p < 0.001$, respectively). We observed improvement in different dimensions of the SF36, mainly in physical function, emotional role, general health, and physical pain at 12 weeks ($p < 0.01$). Multivariate analysis showed improvement over time in performance ($p < 0.01$) and moderate flare-ups ($p < 0.01$) without the influence of a PAR ($p = 0.29$, and $p = 0.66$, respectively).
Conclusion: To our knowledge, our study is the first to explore the impact of TAP use on disease activity in spondyloarthritis. We observed an improvement in disease activity, physical performance and quality of life without significant difference between the two groups. The lack of difference could be explained by the encouragement of physical activity to both groups. But also by the fact that our patients presented a significant number of severe relapses. Indeed, authors have shown the limits of the use of TAP in severe diseases, particularly in pulmonary pathologies [1]. Our study did not show any effect of the use of a connected object on disease activity. However, this study confirmed the benefits of physical activity on disease activity, quality of life and physical performance in patients with spondyloarthritis.
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[1] Bentley CL, Powell L, Potter S, et al. The use of a smartphone app and an activity tracker to promote physical activity in the management of chronic obstructive pulmonary disease: randomized controlled feasibility study. J.M.I.R. MHealth UHealth 2020;8:e16203. https://doi.org/10.2196/16203.
Disclosure of Interests: Guillaume Labat: None declared, Meggy Hayotte: None declared, Olilvier Brocq: None declared, laurent bailly: None declared, Roxane fabre: None declared, manuella Fournier: None declared, Véronique Breuil: None declared, fabienne d'arripe longueville: None declared, Christian Roux Speakers bureau: Pfizer, BMS, Novartis, Lilly, Grant/research support from: Novartis and Lilly
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WHAT DOES IT MEAN – A GOOD RESPONSE TO NSAIDS? A SYSTEMATIC COMPARISON OF PATIENTS WITH AXIAL SPONDYLOARTHRITIS AND CONTROLS WITH CHRONIC BACK PAIN

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Background: A fast response to non-steroidal anti-inflammatory drugs (NSAIDs) is an important finding in the evaluation of clinical findings within the items comprising the ASAS classification criteria but also for the treatment decision for escalation to a bDMARD in patients with axial spondyloarthritis (axSpA). However, the differentiation of NSAID responses between patients with axSpA and degenerative or unspecific back pain is still unclear.
Objectives: To study the differences in the velocity and magnitude of NSAID response velocity in patients with established bDMARD naïve axSpA vs. patients with other, non-inflammatory reasons of back pain.
Methods: Patients with axSpA without degenerative reasons for back pain or patients with degenerative or unspecific back pain presenting due to high levels of back pain (NRS≥4/10) were consecutively recruited. Assessments included clinical examination, laboratory tests and MRI of the lumbar spine.
Previous NSAID intake was allowed only if it was taken in low doses without showing a clinical response, otherwise patients were NSAID naïve. Upon study inclusion, patients were treated with the maximum possible dose of an NSAID that they have reported to tolerate in lower doses in the past, independent of whether this was a Cox-2 inhibitor or a non-coxib. Assessment of response was performed using a standardized questionnaire after 2, 6, 12, 24, 36, 48 hours and after 1, 2 and 4 weeks. Any NSAID response was defined as improvement of pain >2/10 points and a good response to NSAIDs as an improvement >50% from the initial status.
Results: A total of 68 patients with axSpA, 107 patients with degenerative back pain and 58 patients with unspecific back pain were included.
The mean age was 42.7±10.7, 51.2±11.3, and 45.8±10.0 years, the main symptom duration 15.1±11.1, 16.1±12.6, and 11.9 ±10.1 years and the proportion of males was 57.4%, 19.6%, and 19.0% respectively. Inflammatory back pain was reported by 42 (75%), 48 (57.8%), and 29 (60.4%) patients, respectively and the mean pain score was 6.2±2.3,6.7±1.8, and 6.2±1.8, respectively.
In axSpA, the mean BASDAI and BASFI scores were 5.5±1.8 and 4.5±2.5, respectively. There was no difference in the cumulative response to NSAIDs between all three diagnoses, with an overall proportion of 27%-30% of patients showing improvement. However, better but not faster responses were found for the subgroups of patients with nr-axSpA (Figure 1) and for the male patients in the entire axSpA group, while axSpA patients with systemic inflammatory activity defined by increased CRP showed lower rates of response as compared to non-inflammatory reasons of back pain diagnoses. All other subanalyses did not reveal any differences between axSpA patients and other non-inflammatory reasons of back pain.

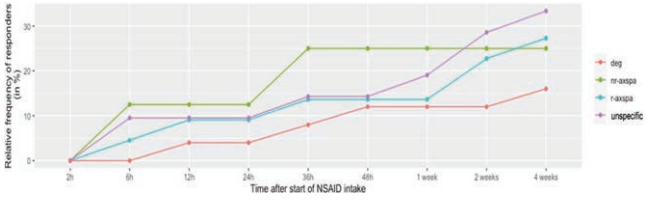

Figure 1.

Conclusion: In this prospective evaluation, the generally proposed better response of axSpA patients to treatment with high doses of NSAIDs as compared with non-inflammatory back pain was not confirmed, although the overall rate of responders was similar to previously reported rates. On the other hand, better responses were found in patients treated in the early (nr-axSpA) stage and in male patients. axSpA patients with increased CRP values showed lower rates of response.
Disclosure of Interests: None declared
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