

The relationship between the significant knee and hip pain and use of non-steroid medication in the middle-aged and elderly UK running population: cohort study

Stefan Kluzek 1&2 ; Garrett S. Bullock 2&3; Daniel Simpkins 1; Lea Gayer De Mena 2 ; Benjamin Feakins 2 ; Thomas Bestwick-Stevenson 1; Joanne Stocks1
1. University of Nottingham; 2.University of Oxford 3. Wake Forest School of Medicine

Objectives

Oral anti-inflammatory non-steroidal drugs (NSAID) are used commonly in the general population. Association between knee osteoarthritis (OA) and early cardiovascular mortality is often linked with decreased physical activity. Both running and jogging markedly reduce cardiovascular risk. Although regular exercise is a core treatment of lower-limb osteoarthritic pain, strategic activity pacing to improve compliance and decrease pain is recommended.

It is unclear whether runners with significant and frequent knee and hip pain are more likely to use oral NSAID or pace their running activities.

Material and Methods

Baseline data from 'Running Through' (runningthrough.org), a prospective cohort study of community runners, joggers and Nordic walkers, were collected via electronic survey between February 2021 till February 2022. The National Health and Nutrition Examination Survey (NHANES) questions regarding significant knee and hip pain in the past months have been collected at baseline. Those questions have been previously associated with osteoarthritic pain. Baseline characteristics were compared between those reporting OA knee and/or hip pain and those without significant pain. Logistic regression models were performed calculating an odd ratio between those affected by lower limb OA pain and not, corrected for baseline demographics, comorbidities and other medication use.

Results

The study population included 2010 subjects over the age of 44, with 440 (22%) participants who reported significant frequent knee and/or hip pain (NHANES pain). There were no differences in age (median 56, IQR: 50,64); sex (54% female) or BMI(27.7), or history of diabetes/cardiac problems between the group with and without OA pain. Those affected by lower limb OA pain were more likely to have hypertension (12.7 vs 9.3%, $p=0.036$). Furthermore, there was no difference in running frequency, with >80% of responders running 2-3 or 4-6 times a week, or favorite distance (74% between 5 and 10 km). 15.2% of participants with significant knee and/or hip pain reported regular use of NSAIDs vs only 5% of those without the OA pain. The logistic regression model revealed a significant increase in NSAIDs use after adjusting for baseline characteristics, comorbidities and other medication use with OR of 3.05 and 95% conf. Interval 2.16-4.3.

Conclusions

Over 20% of middle-aged and elderly runners report significant and frequent knee and/or hip pain. There is no evidence they pace their running activities; however, they report three times higher use of NSAID drug; There were no other significant differences between those groups apart from the higher rates of hypertension in a group affected by significant and frequent knee and/or hip pain.



University of
Nottingham
UK | CHINA | MALAYSIA

 **Wake Forest™**
School of Medicine



UNIVERSITY OF
OXFORD

Funded By



EOSCsecretariat.eu
Setup and management of the EOSC Secretariat supporting the EOSC Governance