



Longitudinal cohort study for Statin use and knee osteoarthritis outcomes

SCIENCE

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Key Take-Away:

Statins have significant anti-inflammatory and immune-modulating effects. The study results confirmed that the use of statins specifically atorvastatin significantly lowered the risk of developing knee pain, which could have promising future benefits for knee osteoarthritis management.

Introduction

Statins have various pleiotropic effects, but the literature concerning the possible relationship between statins use and outcomes in knee osteoarthritis (OA) is scarce. The study investigated whether statins use associated with a lower risk of radiographic (ROA), radiographic symptomatic knee OA (SxOA) and pain in North American people.

Methods

In this longitudinal cohort study, a total of 4,448 community-dwelling adults from the OA Initiative were followed-up for 4 years. Statins use (including the time from baseline and the type) was described through self-report information and checked by a trained interviewer. Knee OA outcomes encompassed incident (1) ROA, (2) SxOA, as the new onset of a combination of a painful knee and ROA, (3) knee pain worsening, i.e. a Western Ontario and McMaster Universities Osteoarthritis Index difference between baseline and each annual exam $\geq 14\%$.

Results

At the baseline, 1,127 participants (25.3%) used statins. Any statins use was not connected with the decreased risk of pain worsening (relative risk, RR=0.97; 95%CI, confidence intervals, CI: 0.93-1.02), incident ROA or SxOA as per the multivariable Poisson regression analysis with the robust variance estimators. But, statins use for more than 5 years (RR=0.91; 95%CI: 0.83-0.997), and atorvastatin use (RR=0.95; 95%CI: 0.91-0.996) were connected with a reduced risk of developing pain, while rosuvastatin to higher risk (RR=1.18; 95%CI: 1.12-1.24). The adjustment for the propensity score checked these results.

Conclusion

The effect of using the statins on knee OA outcomes remains doubtful. Although, in this study, it was found out that those patients who used statins for over 5 years and those using atorvastatin described a significantly lower risk of developing knee pain.

Source	Arthritis Care & Research
Link:	https://onlinelibrary.wiley.com/doi/pdf/10.1002/acr.23735



Original title of article:	Statin use and knee osteoarthritis outcomes: A longitudinal cohort study
Authors:	Nicola Veronese et al.

Therapeutic, Atorvastatin, Rosuvastatin, Statins, Pain, Osteoarthritis, Knee, Longitudinal cohort study, Poisson regression analysis