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Title

Association between traditional and emerging lifestyle risk factors and adverse outcomes in people with rheumatoid arthritis

Priority 1 (Research Category)

Musculoskeletal and rheumatology

Presenters

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Abstract

Context: Traditional lifestyle risk factors, including excessive alcohol intake, poor diet, physical inactivity and smoking, contribute to adverse outcomes in people with rheumatoid arthritis (RA). Less is known about the impact of emerging lifestyle risk factors, including sleep duration and sedentary behaviour, on adverse outcomes and whether such factors interact synergistically. Objective: To investigate the association between individual traditional and emerging lifestyle risk factors and all-cause mortality and major adverse cardiovascular events (MACE; including stroke and myocardial infarction) in an RA population. Study Design and Analysis: Longitudinal data analysis using Cox proportional hazards regression (adjusting for age, sex, socioeconomic status, body mass index, other lifestyle risk factors and additional long-term conditions). Statistical interaction terms between individual lifestyle risk factors were fitted and models compared using an analysis of variance (ANOVA) test. Setting or Dataset: UK Biobank (population-based cohort with N=502,414 participants, aged 37-73 years). Population Studied: 5620 participants (1.1%) self-reported RA (70% female; mean age 59 years [standard deviation 7.12]) and were categorised as "at risk" based on less healthy lifestyle behaviours relating to alcohol intake, diet, physical activity, sleep duration, smoking and television (TV) viewing time.
Intervention/Instrument: None. Outcome Measures: All-cause mortality and MACE. Results: 665 deaths (11.8%) and 366 MACE (6.5%) were recorded over follow-up (median 11 and 8 years, respectively). Smoking was associated with higher risk of all-cause mortality (adjusted hazard ratio 1.92 [95% confidence interval 1.53-2.40]) and MACE (2.00 [1.47-2.73]). Sleep duration (<7 or >9 hours/day) increased risk of MACE (1.36 [1.06-1.74]). TV viewing time (≥4 hours/day) was associated with higher risk of all-cause mortality (1.22 [1.02-1.46]). No significant statistical interactions were found between the individual lifestyle risk factors. Conclusions: Smoking, sleep duration and TV viewing time are important lifestyle risk factors associated with adverse outcomes in people with RA. Identifying lifestyle risk factors that contribute to all-cause mortality and MACE in people with RA may inform future lifestyle recommendations specific to this population, and support patients and healthcare professionals to make optimal shared decisions regarding lifestyle modifications.