43. BASELINE INFLAMMATORY MARKERS DO NOT INFLUENCE RATE OF PROGRESSION OF KNEE OSTEOARTHRITIS OVER 10 YEARS: RESULTS FROM THE HERTFORDSHIRE COHORT STUDY

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Background: OA is now well recognized to involve an inflammatory component. Inflammatory cytokines produced by the synovium and chondrocytes appear to play pivotal roles in cartilage destruction. Some studies suggest that this local inflammation may be reflected systemically, and might be associated with the development or rate of progression of OA. We investigated whether baseline inflammatory markers predicted the rate of structural progression of OA in a cohort of healthy older adults unselected for joint disease.

Methods: 396 men and women (60–70 years) from the Hertfordshire Cohort Study underwent knee radiographs in 1999–2003 and again a mean of 10.3 years later. Tibiofemoral joint Kellgren and Lawrence (K&L) score was assessed by an experienced reader at both time points in both the left and right knee. Stored blood samples taken at baseline were available for measurement of a high-sensitivity CRP (hsCRP) and IL-6; anthropometric and lifestyle information was also available from baseline questionnaires.

Results: The mean (±SD) age of participants was 65.7 (2.6) years. hsCRP concentrations were normally distributed and fell in the normal range in over 99% of subjects; 75% subjects had an IL-6 concentration <1.5 pg/l at baseline. OA progression (an increase in K&L score of ≥1) occurred in 51.4% of knees (395 of 768). In 276 knees, the K&L grade increased by 1, in 109 it increased by 2, and in 10 by 3. While there was a trend toward higher hsCRP concentrations in those participants with progressive radiological OA, this was non-significant in this cohort; there were no clear relationships between baseline IL-6 concentration and OA progression.

Conclusion: Baseline inflammatory markers were not shown to be associated with rate of OA progression in older men and women. Larger prospective studies are required to confirm these findings.

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