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**Cigarette smoking is not linked to the progression of radiographic changes in psoriatic arthritis.**

**Background/Purpose:**

The relationship between smoking and radiographic damage has been established in axial spondyloarthritis and rheumatoid arthritis, but remains unexplored in psoriatic arthritis (PsA). This study was designed to examine this association in PsA.

**Methods:**

We included patients with psoriatic arthritis (PsA) from our prospective observational cohort. Smoking status was assessed from the baseline visit until the first occurrence of radiographic progression, defined as an increase of ≥1 point on the modified Steinbrocker score (mSS). Patients were classified as non-smokers, past smokers, or current smokers. To identify factors associated with the time to progression of peripheral joint damage, we conducted Cox regression analysis. To account for potential collider bias from uncontrolled confounding, we evaluated the following covariates at baseline only (not longitudinally): swollen joint count (SJC), dactylitis, mSS, and abnormal erythrocyte sedimentation rate (ESR).

**Results:**

Frome 56 patients included in the study, 37 (65%) were male, with a mean age of 48.1 (SD 12.7) years and a mean PsA duration of 4.3 (SD 5.2) years at baseline. Of these, 16 (28.5%) were non-smokers, 20 (35.7%) were past smokers, 30 (53.5%) were current smokers. At baseline, 19 (37%) patients had erosions, and the median [interquartile range] modified Steinbrocker score (mSS) was 1.6 [0.0, 10.0]. In the multivariate regression analysis, young age (HR 2.11, p < 0.01), long duration of psoriasis (HR 1.59, p = 0.002), higher baseline swollen joint count (SJC) (HR 1.02, p = 0.02), higher mSS (HR 1.01, p < 0.002), baseline enthesitis (HR 1.49, p < 0.001), and hight CRP rate (HR 1.92, p = 0.003) were all associated with a shorter time to progression of joint damage. In contrast, smoking (both current and past) (HR 0.89, and HR 0.77, respectively) and the use of any advanced therapy (DMARDs or biologic) (HR 0.71) were associated with a longer time to progression of joint damage

**Conclusion:** Cigarette smoking does not seem to be positively associated with the progression of peripheral joint damage in psoriatic arthritis (PsA). Further studies are needed to validate these findings.

