

[2002] [THU0197] PAIN RELIEF IS NOT A CONFOUNDER IN JOINT SPACE NARROWING ASSESSMENT OF FULL EXTENSION KNEE RADIOGRAPHS

K. Pavelka¹, L.C. Rovati², J. Gatterova³, O. Bruyere⁴, R. Deroisy⁴, S. Machacek³, G. Giacobelli², C. Gonzalez², J.Y. Reginster⁴¹Rheumatology, Institute of Rheumatology, Prague, Czech_Republic, ²Clinical Development and Medical Affairs, Rotta Research Laboratorium, Monza, Italy, ³Rheumatology, Institute of Rheumatology, Prague, Czech Republic, ⁴Bone and Cartilage Research Unit, University of Liège, Liège, Belgium

Background: Presence of pain may impair knee full extension in weight-bearing antero-posterior radiographs using such patient positioning and view, in osteoarthritis (OA) disease modification studies.

Objectives: To assess whether improvement in knee pain improved the fully extended knee position, resulting in an artifactual increase in joint space width (JSW) in two recent trials showing symptom and joint structure modification with glucosamine sulfate (GS) (1,2).

Methods: 212 and 202 patients with knee OA (ACR criteria), respectively (total 414), were randomised to double-blind treatment with oral GS 1500 mg u.i.d. or placebo for 3 years. JSW was assessed with the aid of a magnifying lens at the narrowest point of the medial compartment of the tibio-femoral joint, and symptoms were assessed by the WOMAC index. For the purpose of this analysis, 3-year completers were selected based on a cut-off of improvement in the WOMAC pain subscale equal to the mean improvement observed in the GS group in each study. The average improvement in WOMAC pain and the mean (ES) change in JSW were calculated for these patient subsets and compared between treatment groups.

Results: Data in the combined analysis reported here reflect the results in each study, that were similar. There were obviously more patients above the selected pain improvement threshold with GS (74 vs 56 with placebo, in the two studies combined), but the two subsets has a similar baseline level of mild to moderate pain and JSW around 4 mm, similarly to the overall treatment groups. Notwithstanding a major decrease in WOMAC pain of comparable size in both patient subsets, -59% with GS vs -51% with placebo (NS), the placebo patients underwent a definite joint space narrowing (JSN) of -0.23 (0.11) mm that was not observed with GS, +0.14 (0.06) mm: p=0.005.

Conclusion: Major relief in mild to moderate pain is not a confounder in the evaluation of JSN on weight-bearing knee radiographs taken in full extension. The structure modifying effect of GS is not an artifact of the drug symptomatic activity.¹

Reginster JY et al, Lancet 2001; 357: 251-562. Pavelka K et al, Ann Rheum Dis 2001; 60 (Suppl. 1): 57

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