[2007] [OP0025] POSITIVE EFFECTS OF STRONTIUM RANELATE ON SPINE OSTEOARTHRITIS PROGRESSION

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Objectives: Strontium ranelate is a new drug proposed for the treatment of osteoporosis. The objective of this post-hoc study is to assess if a 3-year treatment with strontium ranelate can delay the progression of spinal osteoarthritis.
Methods: 1105 patients with spinal OA, with (n=682) or without (n=423) prevalent vertebral fracture, and with lumbar X-rays available at baseline and after 3 years were included in this post-hoc analysis of the SOTI and TROPOS trials. SOTI and TROPOS were two double-blind placebo prospective 3-year studies having assessed the efficacy and safety of strontium ranelate in the treatment of postmenopausal osteoporosis. On the lateral spine radiograph, four inter-vertebral spaces (i.e. L1-L2, L2-L3, L3-L4 and L4-L5) were evaluated for the presence and severity of osteophytes, joint space narrowing and sclerosis following the method of Lane et al. leading to the calculation of a global OA score for each intervertebral space (0 to 2). Back pain (Likert scale) and health-related quality of life (SF-36) were assessed at baseline and after 3 years. Patients with an incident vertebral fracture during the study were excluded.
Results: After 3 years of treatment, in the population of patients with prevalent radiographic lumbar spine OA degeneration at each vertebra (n=1105), 17.1% of the patients in the placebo group experienced a spine osteoarthritis progression compared to 9.9% of the patients in the strontium ranelate group [RR 0.58 (95%CI 0.42-0.79) p=0.0005]. Strontium ranelate was also able to significantly reduce the number of patients with an increased joint space narrowing score, compared to placebo [0.67 (0.47-0.97) p=0.03]. An absolute reduction in the proportion of patients with an increased severity of anterior osteophytes score was also shown with strontium ranelate, compared to placebo, but these results did not reach statistical significance (p=0,22). When analyses included only patients with at least one prevalent vertebral fracture (n=682), strontium ranelate reduced significantly spine OA progression [RR 0.41 (0.26-0.65) p<0.0001]. A significant protective effect of strontium ranelate on joint space narrowing (p=0.0002) and anterior osteophytes (p=0.04) progression was also observed in this population. No significant effects of strontium ranelate were observed on health-related quality of life (SF-36 questionnaire) in these patients. However, more patients from the strontium ranelate group experienced an improvement in back pain after 3 years compared to placebo (p=0.03).
Conclusion: Strontium ranelate is able to reduce radiographic spinal OA progression and back pain in osteoporotic women with prevalent spine OA.

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