Evaluation of knee periosteal and cartilage morphology in subjects with arthrosis: management with Movardol

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BACKGROUND: This open registry study evaluated progress in osteoarthritis- (OA) related symptoms managed with a new pharma-standard supplement (Movardol, Leonardo Medica, Vinci, Italy).

METHODS: A comparable group of subjects using standard management was considered as an evaluation reference. A previous registry had indicated good tolerability of the supplement and a significant efficacy in improving walking and controlling pain. This study was focused on the evaluation of ultrasound parameters relative to the knee joint in 6 months.

RESULTS: The two groups studied with ultrasound were comparable: the supplement group included 22 males (mean age: 52.3±2.2 years) and the control group 23 (53±2.2 years). The Karnofsky Scale in the supplemented subjects improved from 85.5±4% to 96.3±2.2% compared with a lower variation from 85.2±2% to 91±3.2% in the standard management group (P<0.05). Oxidative stress decreased from 388±9 Carr units to 322±24 in the supplement group in comparison with no significant changes (378±12 at inclusion and 385±13 in the control group) (P<0.05). No side effects or tolerability problems due to the supplementation were observed; there were no dropouts. Out of 22 different ultrasound morphological parameters 8 items were changed at 6 months after supplementation. The observation indicated an improvement (increase P<0.05) in periosteal cartilage (PC) thickness. The irregularity of the PC (0-3 on a scale) was improved (decreased P<0.05). The presence of periosteal “steps” was decreased with the supplement (P<0.05). The higher ultrasound range (white) components of the image at the cartilage level were increased to 16.34% in the scanned images (P<0.05). Elastosonography (considering tissue density and its elasticity) were increased in the supplement group [P<0.05]). The visible “channel” space possibly indicating the presence of fluid and swelling was smaller at 6 months with the supplement (P<0.05). The presence of a diffuse vascularization and inflammation (visible as “redness” and measurable by thermography) was significantly decreased with the supplement (P<0.05) considering the maximum temperature of the area and the global average temperature of the skin over the affected knee (P<0.05).

CONCLUSIONS: This registry indicates that remodeling of the knee cartilage in relatively younger subjects using Movardol may occur in months in association to symptoms control.


KEY WORDS: Osteoarthritis; Knee joint; Cartilage; Dietary supplements; Pain; Ultrasonography.