

J Strength Cond Res. 2005 May;19(2):475-80.

A cetylated fatty acid topical cream with menthol reduces pain and improves functional performance in individuals with arthritis.

Kraemer WJ, Ratamess NA, Maresh CM, Anderson JA, Volek JS, Tiberio DP, Joyce ME, Messinger BN, French DN, Sharman MJ, Rubin MR, Gómez AL, Silvestre R, Hesslink RL Jr.

Source : Human Performance Laboratory, Department of Kinesiology, University of Connecticut, Storrs, Connecticut 06269, USA.
William.Kramer@uconn.edu

Abstract

This investigation was an extension of a previous study conducted in our laboratory in which we showed that 1 month of treatment with a topical cream (Celadrin) consisting of cetylated fatty acids was effective for reducing pain and improving functional performance in individuals with osteoarthritis (OA) of the knee (Kraemer et al., Journal of Rheumatology, 2004). We wanted to verify that the addition of menthol to the compound would produce a similar percentage of improvement in therapeutic effects. We used a single treatment group with a pre-post experimental design to examine % treatment changes. Individuals diagnosed with OA of the knee (N = 10; age, 66.4 +/- 11.5 years) and severe pain (e.g., OA, rheumatoid arthritis) of the elbow (N = 8; age, 59.1 +/- 18.2 years) and wrist (N = 10; age, 60.3 +/- 16.8 years) were tested for pain and functional performance before and after 1 week of treatment with a topical cream consisting of cetylated fatty acids and menthol applied twice per day. In individuals with knee OA, significant improvements in stair-climbing ability (about 12%), "up-and-go" performance (about 12%), balance and strength (about 16.5%), and range of motion (about 3.5%) were observed, as were reductions in pain. In individuals with severe pain of the elbow and wrist, significant improvements in dynamic (about 22 and 24.5%, respectively) and isometric (about 33 and 42%, respectively) local muscular endurance were observed, as was a reduction in pain. Neither group demonstrated significant changes in maximal grip strength or maximal force production. One week of treatment with a topical cream consisting of cetylated fatty acids and menthol was similarly effective for reducing pain and improving functional performance in individuals with arthritis of the knee, elbow, and wrist. The % changes were consistent with our prior work on the compound without menthol. Further work is needed to determine the impact of menthol in such a cream. Nevertheless, our data support the use of a topical cream consisting of cetylated fatty acids (with or without menthol) for enhancing the potential for exercise training in this population.

Effect of a cetylated fatty acid topical cream on functional mobility and quality of life of patients with osteoarthritis.

Kraemer WJ, Ratamess NA, Anderson JM, Maresh CM, Tiberio DP, Joyce ME, Messinger BN, French DN, Rubin MR, Gómez AL, Volek JS, Hesslink R Jr.

Source : Human Performance Laboratory, School of Medicine, University of Connecticut, Storrs, Connecticut 06269-1110, USA.
William.Kraemer@uconn.edu

Abstract

OBJECTIVE: To examine the effect of a topical cream consisting of cetylated fatty acids on functional performance in patients diagnosed with osteoarthritis (OA) of one or both knees.

METHODS: Forty patients diagnosed with knee OA were randomly assigned to one of 2 topical treatment groups: (1) cetylated fatty acid (CFA) (n = 20; age 62.7 +/- 11.7 yrs); or (2) placebo group (n = 20; age 64.6 +/- 10.5 yrs). Patients were tested on 3 occasions: (1) baseline (T1), (2) 30 min after initial treatment (T2), and (3) after 30-day treatment of cream application twice per day (T3). Assessments included knee range of motion (ROM), timed "up-and-go" from a chair and stair climbing, medial step-down test, and the unilateral anterior reach.

RESULTS: For stair climbing ability and the up-and-go test, significant decreases in time were observed at T2 and T3 compared to T1 in the CFA group only. These differences were significant between groups. Supine ROM of the knees increased at T2 and T3 in CFA group, whereas no difference was observed in the placebo group. For the medial step-down test, significant improvement was observed at T2 and T3 compared to T1 in CFA group. For the unilateral anterior reach, significant improvement was observed for both legs in CFA group and in only the left leg in the placebo group. However, the improvements observed in CFA group were significantly greater than placebo group for both legs.

CONCLUSION: Use of a CFA topical cream is an effective treatment for improving knee ROM, ability to ascend/descend stairs, ability to rise from sitting, walk and sit down, and unilateral balance.

Cetylated fatty acids improve knee function in patients with osteoarthritis.

Hesslink R Jr, Armstrong D 3rd, Nagendran MV, Sreevatsan S, Barathur R.

Source : Hesslink Ventures, San Diego, California, USA.

Abstract

OBJECTIVE: To determine the benefit of cetylated fatty acids (CFA) on knee range of motion and function in patients with osteoarthritis (OA).

METHODS: Sixty-four patients with chronic knee OA were evaluated at baseline and at 30 and 68 days after consuming either placebo (vegetable oil; n = 31) or CFA (Celadrin; n = 33). Evaluations included physician assessment, knee range of motion with goniometry, and the Lequesne Algofunctional Index (LAI).

RESULTS: After 68 days, patients treated with CFA exhibited significant ($p < 0.001$) increase in knee flexion (10.1 degrees) compared to patients given placebo (1.1 degrees). Neither group reported improvement in knee extension. Patient responses to the LAI indicated a significant ($p < 0.001$) shift towards functional improvement for the CFA group (-5.4 points) after 68 days compared to a modest improvement in the placebo group (-2.1 points).

CONCLUSION: Compared to placebo, CFA provides an improvement in knee range of motion and overall function in patients with OA of the knee. CFA may be an alternative to the use of nonsteroidal antiinflammatory drugs for the treatment of OA.