

Fiori G, Galluccio F, Amanzi A, Braschi F, Miniati I, Conforti ML, Del Rosso A, Candelieri A, Magonio A, Goretti R, Rasero L, Matucci Cerinic M. Vitamin E gel reduce time to healing of digital ulcers (DU) in systemic sclerosis. SP.02.237. 1st Systemic Sclerosis World Congress, Florence, Italy, 11-13 February 2010. Clin Exp Rheum,28 (2 Suppl 58)

Vitamin E gel reduce time to healing of digital ulcers (DU) in systemic sclerosis

Fiori G^{1,2}, Galluccio F^{1,2}, Braschi F^{1,2}, Amanzi L^{1,2}, Miniati I¹, Conforti ML¹, Del Rosso A¹, Generini S¹, Candelieri A³, Magonio A^{1,2}, Goretti R^{1,2}, Rasero L⁴, Matucci-Cerinic M^{1,2}

¹Department of Biomedicine – Division of Rheumatology AOUC, Denothe centre, University of Florence, Italy

²Department of Biomedicine - Scleroderma Ulcer Care Unit, Division of Rheumatology, AOUC, University of Florence, Italy ³Laboratory of Decision Engineering for Health Care Delivery Dpt. of Electronics, Informatics, Systems – University of Calabria, Italy ⁴ Department of Public Health, AOUC, University of Florence, Italy.

BACKGROUND: In systemic sclerosis(SSc), DU are painful, difficult to heal and frequently infected, heavily affecting quality of life and increasing SSc-related disability. Vitamin E has been previously used in cutaneous lesions for its antioxidant and anti-inflammatory effects.

OBJECTIVES: To study the healing effect of D-alpha-tocopheryl acetate (acetic ester of alpha-tocopherol) (VE) gel on DU of SSc patients.

METHODS: 27 SSc patients with a total of 86 DU, were enrolled in an open pilot study. Patients were randomly assigned to two groups: 15 patients were treated until DU healing with the local standard ulcer care protocol with the application of vitamin E gel (experimental group), while 12 patients were treated with standard ulcer care protocol only (control group). In both groups, DU were treated twice a week, pain was scored by a NRS (numeric rating scale). In both groups and the cost of medications was analysed.

RESULTS: VE induced a faster healing of DU in respect to controls (13.22 ± 2.72 weeks, versus 20.94 ± 3.65 ; $p < 0.0001$) with a lower number of medications (26.18 ± 5.63 versus 41.88 ± 7.31 ; $p < 0.0001$). Resolution of pain was faster in experimental (17.82 ± 4.59 medications) than in controls (26.26 ± 19.16 medications) ($p = 0.0022$). In experimental group the cost of medications was significantly lower (6.919,15 euros/patient) than in control group (11.056,32 euros/patient).

CONCLUSION: The application of VE reduces time to healing and has a faster resolution of pain, with a significant reduction of costs. Topical VE may improve the management of DU in SSc.