



Melatonin, vitamin C creams effective for treating open wounds

Jul 1, 2006

By: Ilya Petrou M.D.

Dermatology Times

Paris — Several methods are available to the practicing physician for the treatment of open wounds as well as cosmetically disturbing wrinkles and keloids.

The use of melatonin as well as a vitamin C cream seems to be an omnipotent, versatile and beneficial solution for the treatment of leg ulcers, wounds, wrinkles and keloids, and proves to be an effective, noninvasive and safe technique, according to an Italian plastic surgeon.

"The use of vitamin C and melatonin, particularly in combination with substances like *Olea europea*, has a very positive synergistic effect on human tissue. The biochemical interaction between vitamin C and melatonin and intracellular structures results in an improvement in the wound healing process and skin quality in healthy people, repairs DNA damage, and prevents carcinogenesis as well as mitochondrial damage during apoptosis or cellular necrosis, offering a nonsurgical alternative treatment option for numerous skin conditions," said Matteo Tutino, M.D., at the 2006 Anti-Aging Medicine World Congress here. Dr. Tutino is a plastic surgeon from the University of Palermo's Clinic of Plastic and Craniofacial Surgery, Palermo, Italy.

Dr. Tutino says that vitamin C (or L-ascorbic acid) functions to maintain, protect and preserve collagen in the skin by down-regulating collagen degrading enzymes as well as inhibiting elastin synthesis. Also, when applied prior to UV exposure, topical L-ascorbic acid can provide some photoprotection to the patient. When *Olea europea* is added to this cream, a more stable composition with a higher concentration of L-ascorbic acid can be achieved, yielding a more efficient cream, improving the

intracellular, intranuclear and intramitochondrial penetration, as well as optimizing the bioavailability by approaching intracellular saturation.

Anti-inflammatory, healing

Vitamin C plays a significant anti-inflammatory role by suppressing TNF alpha-induced activation of NF-KB, responsible for the production of a number of post-inflammatory cytokines (e.g., IL-1, IL-6 and IL-8).

Dr. Tutino cites a post-carbon dioxide laser resurfacing erythema study in which patients were treated with a topical, aqueous solution of 10 percent L-ascorbic acid, 2 percent zinc sulfate and 0.5 percent tyrosine, post laser treatment. Results showed a significant decrease in post-carbon dioxide laser resurfacing erythema in patients by the eighth postoperative week.

According to Dr. Tutino, melatonin and serotonin are other substances used for the body's healing processes, their receptors being found in keratinocytes, melanocytes and fibroblasts. They act by mediating phenotypic actions on cellular proliferation and differentiation. The cutaneous serotonergic/melatonergic system could counteract or buffer external environmental or internal stresses to preserve the biological integrity of the organ and to maintain its homeostasis.

The surgeon achieved astounding results after applying a vitamin C serum and melatonin cream daily in various types of wounds including: diabetic ulcers resistant to conventional treatments, poor-healing wounds following reconstructive surgery, keloids, and in patients with sunburn while being treated for melasma, demonstrating its strong anti-inflammatory action.

Dr. Tutino stresses the versatility and superb efficacy of his patented vitamin C cream system. He says, "Vitamin C has a rapid cell uptake and is immediately metabolized, with its intracellular uptake reaching a maximum saturation, and it has a documented effect via PCR for the mitochondrial DNA repair. It can be used as a sole product, contains no irritating fragrances, contains strong healing properties, confers strong protection against UVA/UVB rays, and results can be seen after only two to three days of application."

Vitamin C, surgery

Dr. Tutino says the vitamin C creams can be used in cosmetic surgery, general surgery, oral and maxillofacial surgery, plastic and reconstructive surgery, and in dermatology, and that, after appropriate training, they can be combined with several aesthetic procedures, such as laser, peelings and surgery.

Disclosure: The system, manufactured in Palermo, Italy, by Med Care s.r.l., is distributed in the United States by ReJuventus.

For more information: rpeterson.fcm@mac.com