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Insight into the Wound Healing Properties of Vitamin C

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Editorial Note

Water-soluble Vitamin C is inevitable and important for the synthesis of collagen and also aids as a surrounding material for body tissues, blood vessels, cartilages, bone, teeth, skin. In addition, it is also known to be improving the protective function of immune system and wounds by accelerating the healing mechanism; secondly the Vitamin C solution is required to cross link the collagen molecules to uplift the tissue strength and eventually heals the wounds. Sarpooshi HR et al. [1] evaluated the effect of topical Vitamin C on improving second degree burns.

30 patients (69% men; 40% women) with second degree burns were included in the study. According to the defined volume, two groups were adopted on a patient in this study. Two research groups, were chosen parallelly, so that the routine use of ointments (sulfadiazine) and the Vitamin C along with silver sulfadiazine will be done on the same patient but in the two symmetric or two separate parts of body. After debridement and washing with water and normal saline solution, the burned section would be dried with sterile gauze. After which silver sulfadiazine ointment 1% of 1.5 mm thickness was applied on the wound. On the other limb that was under study similar procedures were followed with washing and drying. Then, Vitamin C 10% solution was applied followed by silver sulfadiazine ointment 1% and burned wound was dressed. The wound healing was assessed on days 1, 3, 7 and 14 days after burning by applying Bates-Jensen tools for evaluating burns. SPSS-16 software and ANOVA test of repetitive measures were applied for analysing the data.

The results of ANOVA test concluded there was a significant statistical difference between the two types of treatments, in terms of the mean total scores of wounds ($P=0.047$) which clearly differentiates the two groups of treatment, indicating the topical application of Vitamin C had

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a substantial impact on wound healing. Time played a crucial effect on the mean total scores of wound and the topical application of Vitamin C had a higher impact on catalysing the wound- healing process than the control group. Vitamin C or ascorbic acid is the most effective water-soluble antioxidant [2] apart from its anti- inflammatory properties [3]; Vitamin C can alone reduce the need for fluid resuscitation in patients with burns [4]. The findings concluded that topical vitamin C solution has positive effects on the volume of necrotic tissues, epithelization and granulation tissues and aids in greater improvements in intervention areas.

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