

WOUND CARE, DERMATOLOGY AND ORTHOPEDICS

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Bovine colostrum and wound healing

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Exploitation of bovine colostrum and its derivatives is nowadays a research trend due to its natural presence of nutritious and physiologically active components such as hormones, immunoglobulins and growth factors. Bovine colostrum is bioactive due to proteins and peptides secreted into milk by the mammary glands. Using cutting-edge technology, it can be obtained a functional ingredient that results in an isolated, purified, or transformed constituents from colostrum with many medicinal uses. One of the most important targets human health as wound healing. Used as a dressing on wounds it stimulates the growth of the granulation tissue, reduces scars and exudates, provides pain relief, protects from infection. Among its components, for example Transforming Growth Factor β (TGF β) is stimulating the initial stages of repair, where surviving cells at the wound edge migrate over the damaged region to re-establish a continuous epithelial layer.

Chronic wounds have a negative impact worldwide, with huge medical costs for patients and an increased risk of mortality. These can be diverse, from burns to venous, arterial, or diabetic ulcers. Worldwide, diabetic foot ulcers represent a major health-care problem, especially an impaired wound healing. If these have a high bacterial load, that will delay the healing process. Clinical trials have reported that topical application of most growth factor on chronic wounds is for the most part unsuccessful because of their rapid degradation and extremely short half-life. The healing process is very complex and includes many stages. The normal skin wound healing is a complex process orchestrated by cytokines, GFs, clotting factors, prostaglandins, free radicals and nitric oxide. In diabetic patients these stages are altered, so different approach is needed. Aside of multidisciplinary team, the right topic treatment is the most important in treatment.

Recent Publications

- Jafferany M, Mkhoyan R, Stamu-O'Brien C, Carniciu S. Nonpharmacological treatment approach in trichotillomania (hair-pulling disorder). Dermatol Ther. 2020 Jul;33(4):e13622.
- Stamu-O'Brien C, Jafferany M, Carniciu S, Abdelmaksoud A. Psychodermatology of acne: Psychological aspects and effects of acne vulgaris. J Cosmet Dermatol. 2021 Apr;20(4):1080-1083.
- Stamu-O'Brien C, Carniciu S, Halvorsen E, Jafferany M. Psychological aspects of COVID-19. J Cosmet Dermatol. 2020 Sep;19(9):2169-2173.

Biography

Simona Carniciu is a medical doctor and a PhD in diabetes, nutrition and metabolic diseases and graduate assistant in Carol Davila University of Medicine and Pharmacy, Bucharest, Romania. After many years of gaining experience in National Institute of Diabetes, Nutrition and Metabolic Diseases "N. Paulescu", Bucharest, Romania now she owns private clinic. She is also a treasurer at Romanian Medical Association, the most important medical association in Romania, founded in 1857 and a scientific secretary of a science journal in the Romanian Academy, Proceedings of the Romanian Academy Series. Is involved in education on lifestyle medicine, and a constant presence on scientific events and TV shows about medical subjects.

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