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ROLE OF FREE RADICAL IN MITOCHONDRIAL PATHWAY MEDIATED APOPTOSIS IN HUMAN DIABETIC SKIN WOUND

Ghulam Mohammad, Varun Kesharvani

Banarus Hindu University, Varanasi, Uttar Pradesh, India

Diabetes is a leading cause of death worldwide. It is caused by the deficiency of hormone insulin in the body causing improper utilization of glucose. Glucose accumulation in the blood causes hyperglycemia that in turn leads to several complications associated with diabetes. This study was designed to determine the antiproliferative, apoptotic and antioxidative activity in diabetic wound healing. Several pathways have been proposed to explain the mechanism by which hyperglycemia leads to vascular and other complications in patients. Apart from some classical explanations, many unconventional theories have been recently proposed suggesting a major involvement of oxidative stress in diabetic wound healing. We summarize the classical approach to explain diabetic wound complications and analyzes the role of oxidative stress and Apoptosis in the wound. We found that high level of free radical production was associated with apoptosis on wound healing cascade by determinations of cell signaling pathway of apoptosis, morphological changes and oligonucleosomal DNA fragments. Thus, it indicates that increase free radical production leads to increase apoptosis and this disturbed the homeostasis of different cell and Leads to improper wound healing.

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VENOUS LEG ULCERS AND NEW FOAM DRESSINGS: RESULTS OF TWO FRENCH MULTICENTER CLINICAL STUDIES

Valerie Thirion¹, Philippe Celerier², Eric Esteve³, Ségolène Fays⁴, Jean-luc Schmutz⁴, Serge Bohnbot⁵

¹*Angiologist, Paris, France, ²General Hospital, Le Mans, France,*

³*General Hospital Porte Madeleine, Orléans, France, ⁴Fournier Hospital, Nancy, France,*

⁵*Laboratoires URGO, Chenove, France*

Aim: The therapeutic strategy of venous leg ulcers is based on two complimentary elements: the compression therapy, and the topical care with dressings who promote the healing process.

In order to evaluate the efficacy, tolerance, and acceptability of the *Non Adhesive* and *Adhesive* wound foams in the management of venous leg ulcers, two prospective multicenter, non-comparative phase III clinical studies were conducted in 25 investigating centers (hospital wards and private physicians) in France.

Methods: Patients were followed-up six weeks on a weekly basis including clinical evaluation, area tracings and photographs. After validation of the selection criteria, about 100 patients, presenting a non infected venous leg ulcer were included in these two studies.

Results: In each of these studies, the mean surface area reductions after 6 weeks of follow-up was about 40% and the mean dressing change frequency was more than 3 days. Good local tolerance was observed in these two studies. Patient's acceptability (comfort during dressing removal) and nursing acceptance were recorded at each dressing change and will be reported by the authors.

Conclusion: These results demonstrated that the local treatment of the venous leg ulcers with these two wound foam in conjunction with compression therapy, allowed a good evolution of the healing process. The acceptability and local tolerance of these products support their usefulness in the management of chronic wounds, like venous leg ulcers.

