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Study and Science Behind the Cut Wound

Ghorpade Gaurav B.[1], Gholap Vishal B.[2], Takle Mansi A.[3], Chordiya Khushi R.[4], Prof. Gholap Shubham V.
Students, Department of Pharmacy[1,2,3,4]
Guide, Department of Pharmacy[5]
Mrs. Saraswati Wani College of Pharmacy, Ganegaon, Maharashtra
Affiliated to Dr Babasaheb Aambedkar Technological University, Lonore, Raigad

Abstract: *In order to facilitate effective wound repair and tissue regeneration, this study explores the creation and assessment of a novel wound healing ointment made with anti-inflammatory, antibacterial, and regenerative ingredients. Significant antibacterial action, improved cell migration and proliferation, decreased inflammation, and quicker wound closure are all shown in the preliminary results. Better collagen deposition and angiogenesis were also seen in treated wounds by histological investigation, indicating better tissue repair. The study also emphasizes the distinct pathophysiology and care needs of cut wounds, which are distinct from other traumatic injuries because of shock brought on by plasma loss, eschar formation, and protracted periods of scar remodeling. Despite their initial sterility, cut wounds require particular treatment methods beyond standard bandages since they are susceptible to infection and sepsis due to patient immunocompromise. Simultaneously, both internal and extrinsic aging processes, which are primarily caused by reactive oxygen species and free radical damage, impact the structural and functional integrity of the skin, which includes the epidermis, dermis, and subcutaneous layers. These procedures impact the results of wound healing by decreasing the suppleness, moisture, and barrier function of the skin. Overall, the results highlight the unique difficulties in treating cut injuries as well as the larger involvement of skin physiology and aging in wound healing, while also highlighting the therapeutic potential of the developed ointment for clinical wound care.*

Keywords: repair and tissue regeneration

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