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Technical note: Blue and zinc protection technique for edge management in complex wounds

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Introduction: Improper management of perilesional skin in complex wounds, such as diabetic foot ulcers and dehiscences, slows healing and increases the risk of infections. The objective of this study is to describe an innovative and low-cost blue and zinc protection technique, developed from a multidisciplinary perspective to act as a physical barrier, controlling humidity and protecting the edges.

Methods: The technique is based on the preparation of an extemporaneous formulation. It is used 5g of zinc oxide powder in association with 3 drops of an engineered aqueous solution (1% methylene blue and 1% gentian violet). The mixture is homogenized until a consistent slurry is formed. The application is strictly perilesional, without direct contact with the wound bed, followed by the appropriate secondary dressing for the exudative demand of the lesion.

Results: In the clinical application in illustrative cases of neuropathic ulcers and orthopedic surgical wounds, the paste demonstrated easy applicability and excellent adherence. The formation of an effective protective barrier against maceration of the edges by the exudate was observed. The known properties of the dyes suggest adjuvant antimicrobial and antifungal action, protecting the epidermis in the cell migration phase.

Conclusions: The blue and zinc protection technique is presented as a safe, accessible, and easy-to-perform strategy for protecting edges in foot and ankle injuries. The standardization of this preparation optimizes the perilesional microenvironment, favoring the reconstructive clinical outcome.

Keywords: Diabetic foot; Wound healing; Zinc oxide.

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