Antimicrobial Photodynamic Therapy: An Unexplored New Field

Terapia fotodinámica antimicrobiana: un mundo por explorar

For several years, photodynamic therapy (PDT) has been a treatment option for skin conditions such as nonmelanoma skin cancer. Recently, this technique has been studied for skin infections, particularly those in which biofilms have formed. The antibacterial, immunoregulatory, and regenerative effect of PDT may enable healing of antibiotic-resistant infections and infections at sites with limited antibiotic penetration. The technique may also be useful in patients for whom a local treatment is sought free of the side effects of systemic antibiotic therapies. The group who published this article has extensive experience in the use of PDT for the treatment of onychomycosis and other infections, such as sporotrichosis, Scytalidium, Demodex or Candida, and for biofilm-mediated processes such as suppurative hidradenitis. The authors report an open-label series in which several superinfected ulcers achieved healing with PDT using methylene blue and visible light. Methylene blue is a photoactivated phenothiazine that is suited to inducing cytotoxicity at the bacterial membrane thanks to its cationic nature. It is cheap and its incubation time is relatively short, thus facilitating its use in daily clinical practice. The success reported by these authors should encourage controlled, randomized studies to provide stronger evidence for PDT in this context.

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