Intrabullous injection: A novel, painless technique of drug delivery in localized bullous dermatoses

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THERAPEUTIC CHALLENGE

Many skin diseases present with bullae; for example, bullous impetigo and epidermolysis bullosa, among others. Poor patient compliance to medications and refractoriness to available therapies (eg, in epidermolysis bullosa) are problems faced by the clinician and patient. Variable penetration of topical medications through the epidermal barrier is another issue.

THE SOLUTION

We used the occluded environment created by a bulla as a reservoir for the drug. The usefulness of topical and intralesional gentamicin in dystrophic epidermolysis bullosa has been described.[1] Because our patient with dystrophic epidermolysis bullosa (Fig 1, *A*) was apprehensive of pain during intralesional injections, we drained 1 bulla (Fig 1, *B*) and administered the gentamicin solution (80 mg/2 mL) inside it from a nondependent part to prevent leakage of drug due to gravity. The injection is painless because the roof of bullae do not have a nerve supply. After we applied sterile paraffin (Fig 1, *C*), sterile gauze, and adhesive, the patient was asked to follow-up fortnightly. In our patient, there was no recurrence or refilling of the lesion during the next 2 months (to date) (Fig 1, *D*). However, refilling of bullae was noted on other sites where only bulla drainage was done. We also used this technique in bullous impetigo with satisfactory results (Fig 2).

This simple, painless technique not only drains the bulla (a part of the treatment modality of vesiculobullous diseases) but also creates a drug reservoir beneath the superficial epidermis (barrier to topical drug penetration) with the sole caveat that the patient must not traumatize or rupture the bulla. Thus, it delivers a high concentration and amount of drug locally, making it a convenient, painless supplement to routine therapy.

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Fig 1. Epidermolysis bullosa dystrophicans. **A**, Bulla before treatment with intrabullous gentamicin. **B**, Aspiration of bulla from the superior aspect (nondependent position). **C**, Gentamicin delivered into the bulla (giving it a full appearance) with sterile paraffin seal (*). **D**, After treatment. Note complete absence of any bulla on the treated site. This was the picture at the fortnightly follow-up to date.

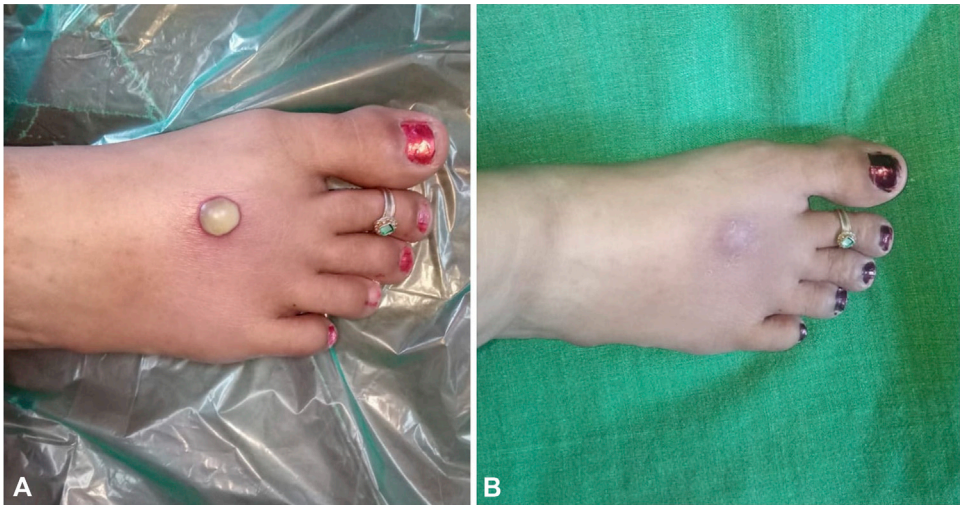

Fig 2. Bullous impetigo (**A**) before treatment and (**B**) 1 week after the intrabullous gentamicin injection. Note subsidence of lesion and absence of bulla.

REFERENCE

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