



Platelet-rich plasma injection and becaplermin gel as effective dressing adjuvants for treating chronic nonhealing ulcers in patients with junctional epidermolysis bullosa

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THERAPEUTIC CHALLENGE

Chronic wounds in junctional epidermolysis bullosa (JEB) are associated with significant morbidity and pose a considerable economic burden, especially in resource-limited settings. Because of lack of definitive treatment, advanced silicone foam-based dressings are recommended for wound care, but their scarcity in developing

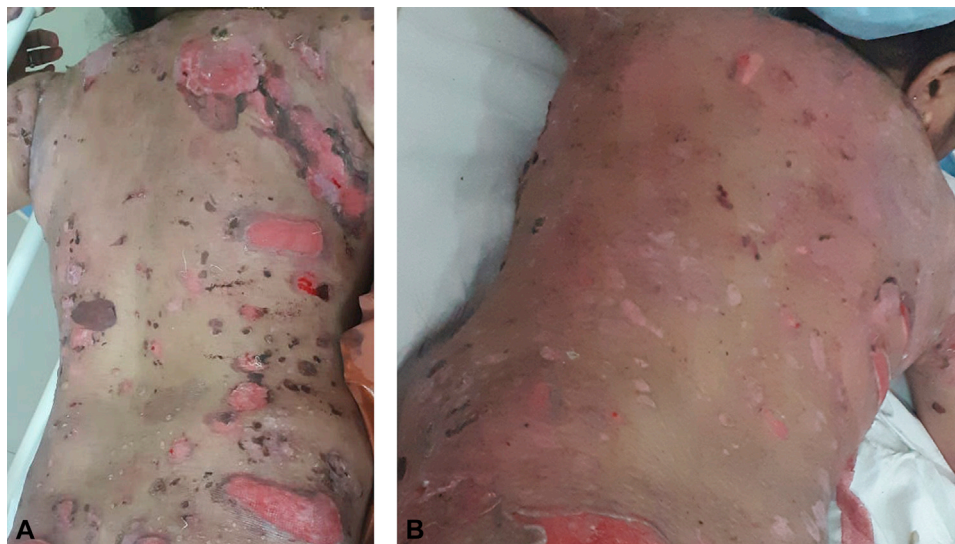


Fig 1. Clinical results for back lesions. **A**, Multiple ulcers of sizes ranging from 2 to 30 cm over the back at the time of admission. **B**, Lesions healing (80% to 90% re-epithelization) after 3 weeks of dressings and becaplermin 0.01% gel.

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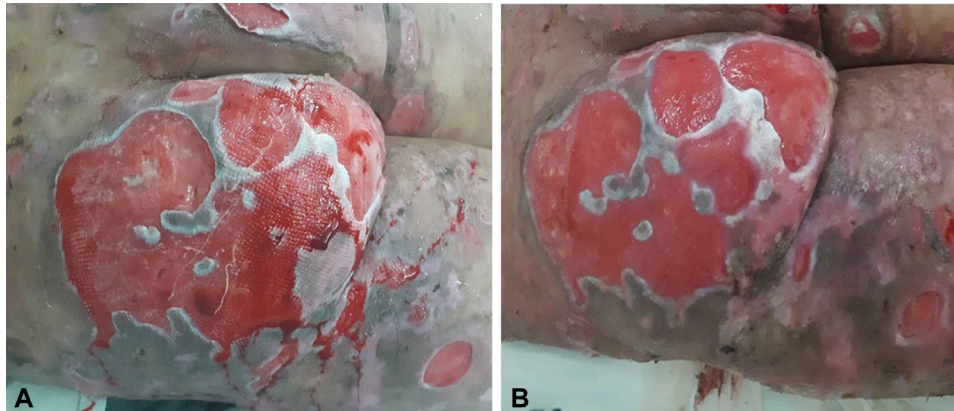


Fig 2. Clinical results for left gluteal lesions. **A**, Confluent ulcers covering nearly entire surface of the left buttock with infected granulation tissue at 1 week after admission ($14 \times 12 \times 0.5 \text{ cm}^3$). **B**, Re-epithelization has occurred to a significant extent, and granulation tissue is healthy after 3 weeks of dressings and 1 intralesional injection of platelet-rich plasma ($9 \times 8.5 \times 0.4 \text{ cm}^3$, 65.7% reduction in size compared to baseline).

countries leads, instead, to overzealous use of paraffin gauze.¹ Platelet-rich plasma is known to benefit chronic ulcers by virtue of various growth and angiogenic factors, and becaplermin is also beneficial in nonhealing ulcers of various etiologies. However, to our knowledge, none of them have been tried in JEB ulcers.

SOLUTION

A 36-year-old woman presented with recurrent trauma-induced blistering since infancy and ulcers involving almost 10% to 15% of the body surface area that were particularly nonhealing over the buttocks and back. She was diagnosed with JEB, generalized intermediate type, based on the EB diagnostic matrix² and supported by histopathology and antigen mapping. Wound dressing in the form of paraffin gauze for back ulcers and silver-impregnated silicon foam (Mepilex Ag, Molnlycke, Sweden) for larger gluteal ulcers, changed every 5 days, yielded unsatisfactory results. Therefore, additional platelet-derived growth factor (becaplermin gel 0.01%) was applied daily over the back erosions (under paraffin gauze dressing) and intralesional platelet-rich plasma (double-spin method, $327\text{g} \times 15 \text{ minutes}$ and $908\text{g} \times 10 \text{ minutes}$ at room temperature) injection at 0.1 mL/cm of the margins was given in the left gluteal ulcers (under dressings, alternating between Mepilax Ag and paraffin gauze). Three weeks later, the back lesions showed nearly 90% to 95% re-epithelization (Fig 1, A and B), and the left gluteal ulcer showed improvement of nearly 40% to 50% from baseline based on Physician Global Assessment (Fig 2, A and B).

In view of lack of English-language scientific literature on this subject, we propose that platelet-rich plasma may be used in combination with paraffin gauze dressings in resource-poor settings in all non-/poorly healing, noninfected ulcers in patients with epidermolysis bullosa. Becaplermin also seems to be effective, but the cost of therapy limits its utility.

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