Treatment of Non-healing Abrasion with Topical Antimicrobial: A Case Report

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ABSTRACT

We here report a case of a 54-year-old female with acute radiodermatitis to the 2/3's of the lateral, distal right leg. The patient initially experienced fibrosis secondary to successful radiation therapy of a soft tissue sarcoma 6 months prior to presentation. The wound measured 15.4 cm by 8.8 cm and rated an E3 on The Radiation-Induced Skin Reaction Assessment Scale (RISRAS). Previously it had been treated with hyaluronidase-based cream, sucralfate cream, biafine cream, and mepitel with poor results. After one week of daily applications of CurX anti-microbial gel, the wound had reduced to E0 at 90% of its coverage area with the remaining 10% ranking E1. We found that topical CurX anti-microbial treatment was successful in reducing the appearance of radiodermatitis in part due to its non-cytotoxic, hemostatic, and enhanced hydrophilic properties.

1. Introduction

Evidenced based protocols for the treatment of radiodermatitis is scarce and research indications that hospital management of these cases lacks consistency (Glean et al 2001). Salvo et al (2010) conducted a literature review in 2010 and concluded that there was insufficient evidence to advocate for any one therapeutic option. In addition, a previous study reported an 80–90% incidence of erythematous reactions and a 10–15% incidence of moist desquamation in patients undergoing radiation therapy (Wells and MacBride) indicating this condition is a prevalent side effect to radiation therapy. Here, we report a case of radiodermatitis in which treatment with CurX anti-microbial gel was performed.

2. Case report

A 54-year-old female had a history of a soft tissue sarcoma which had been successfully treated with

e 8.1 RTOG/EORTC acute radiation scoring criteria – skin

0	1	2	3	4
No change over baseline	Follicular, faint or dull erythema; epilation;dry desquamation; decreased sweating	Tender or bright erythema, patchy moist desquamation; moderate oedema	Confluent, moist desquamation other than skinfolds, pitting oedema	Ulceration, haemorrhage, necrosis

RTOG, Radiation Therapy Oncology Group; EORTC, European Organisation for Research and Treatment of Cancer.
Reproduced with permission from Cox et al (1995).

At 52 years, she experienced increased right distal leg pain and was referred to an oncologist where she was found to have a soft tissue sarcoma. After successful treatment of the sarcoma, which included adjuvant radiotherapy, she presented to our office with a 15.4 cm by 8.8 cm painful, solitary, erythematous plaque to the distal right lateral lower extremity consistent with radiodermatitis.

The occurrence rate of radiodermatitis in patients that underwent radiotherapy has been reported to be as high as 46% in one study (Schnur et al, 20011). Side effects of this treatment results in increased occurrence of local skin lesions with possible ulceration, pain, and risk of infection.

Patient reported having been previously treated with hyaluronidase-based cream, sucralfate cream, biafine cream, and mepitel but was still experiencing pain and was displeased with the physical aesthetic of the wound.

Method:

A thin layer of CurX was applied to and around the affected area. The area was covered with sterile telfa, wrapped with kerlix, and paper tape, taking care to avoid placing adhesive directly in contact with the skin. This dressing was changed twice daily. At each dressing change, the wound was cleaned with sterile saline.

Results:

A noticeable reduction in the erythema could be seen after one application and by the end of one week the plaque was almost totally resolved with only mild patchy spotting remaining. Patient reported that her pain had resolved completely and she was pleased with her outcome.

Day 1 – Before CurX

Day 7

In conclusion, CurX antimicrobial gel was found to be efficacious in treating radiodermatitis rapidly with no toxicity or side effects. The treatment was also economically efficacious. In future, randomized control trials will be established for further observation of CurX in treating radiation burns.