Successful management of a non-healing pressure ulcer using a bacteria binding gel dressing for an immunocompromised child

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Introduction

A 2-year-old girl with Acute Lymphoblastic Leukemia (ALL) developed a grade 4 pressure ulcer in the right gluteal sulcus after six months of chemotherapy treatment (Fig 1). The wound was managed with wound gel and adhesive secondary dressings according to local clinical practice. Surgical debridement of necrotic tissue was performed on two occasions with minimal improvement noted. After 20 days of management the wound was still about 2.5 cm in diameter (Fig. 2). Meanwhile, the patient suffered from two episodes of febrile neutropenia requiring IV antibiotics. Also advanced antimicrobial dressings including silver based preparations were used with little improvement (Fig 3).

Methods

The management with a bacteria binding gel dressing began just over a month after the first visit to the wound clinic (Fig 4). The gel dressing was covered with moisture preserving polyurethane dressing. The dressing was changed twice weekly by the patient’s mother, who photo-documented the healing process.

Results

At the dressing change after 7 days a notable improvement had occurred (Fig 5). After 13 days of treatment, the wound was further improved and healing of the wound occurred over time while chemotherapy treatment was ongoing (Fig 6).

Discussion

The patient in this case report was an immunocompromised toddler thus making the choice of dressing paramount. The purpose of the dressing was to protect the wound from infection without interfering with healing while maintaining a good moisture balance. Location of the wound within the diaper boundary and in combination with a compromised immune system increased the likelihood of wound contamination. This was a reason alone to protect the wound from infection.

In this case a bacterial binding gel dressing was used to protect the wound against microorganisms. The mode of action of the dressing is based on hydrophobic interaction and is not dependent on the release of chemicals into the wound bed [1].

An important factor for good wound healing is that the moisture balance is maintained [2]. After debridement of the necrotic tissue a wound cavity was formed which was filled with the gel dressing. As the gel is combined with a dressing the gel is kept in place.

The patient was managed at home with regular visits to the hospital to verify the state of the wound status. The dressing was easy to apply and remove both at the hospital and in the home environment. The gel did not cause pain and the dressing did not stick to the wound bed, which may cause pain at dressing change.

Clinical relevance

This case report indicates that a bacteria binding gel dressing can add value in the treatment of a non-healing pressure ulcer in an immunocompromised child.

References