

Use of Hydrogel Dressings in the Management of Blisters in Children with Epidermolysis Bullosa Simplex

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Introduction

Epidermolysis bullosa (EB) is a rare genetic skin disorder. The condition is characterised by an extreme fragility of the skin and mucous membranes and a susceptibility of these to blister or break down in response to minimal everyday friction and trauma. There are several types of EB, determined by the affected protein and the specific gene mutation; many of these lead to progressive disability and may be life limiting.

Epidermolysis bullosa simplex localised is considered to be one of the milder forms of EB as there is little involvement of the mucosa, the blisters heal without scarring and it is not life limiting. However, significant pain and subsequent limitation on mobility and activity results from continual blistering.

Children with EB simplex (EBS) experience painful blistering of their hands and feet especially during hot and humid conditions. Many children with EBS find dressings can make the blistering worse as heat can be generated under the dressing, particularly when foams are used. The edges of dressings can rub and create blisters. Many choose not to use dressings, leading to further problems with debris accumulating in the wound and adherence to socks. Hydrogel-based dressings have been shown to be effective in the management of pain in this group of children although earlier products have been difficult to keep in place and prone to drying out.

The Study Aims and Objectives

The aim of the study was to assess the effectiveness of KerraLite Cool (Crawford Healthcare), a next generation hydrogel dressing, in the management of children with EB Simplex. The objectives included evaluation of the benefits of the dressing and the ease of application and removal.

Method

Questionnaires and case studies were carried out during a 6 month evaluation process. All patients were introduced to KerraLite Cool by EB Nurse Specialists. 11 children aged between 3 and 15 years with EBS participated in the study. Inclusion criteria were children who were mobile and who suffered from painful blisters on their feet. A Silicone Medical Adhesive Remover (SMAR) was provided to prevent skin stripping on removal of bordered dressings.

During the study, 5 properties of the dressing were evaluated including;

- Aid healing
- Be atraumatic
- Remain in place
- Not dry out
- Provide comfort and pain relief

Results Summary – Patient response

KerraLite Cool provided comfort and pain relief	80%
KerraLite Cool was easy to apply	100%
KerraLite Cool caused no damage to peri-wound skin	95%
KerraLite Cool was easy to remove (using SMAR)	100%
KerraLite Cool enabled greater mobility	60%
KerraLite Cool did not break up	100%
KerraLite Cool did not dry out	100%

Discussion

KerraLite Cool is a patented Pro-ionic® copolymer matrix with a high MVTR PU film barrier. It has been formulated and designed specifically to encourage wound bed preparation, granulation and subsequent epithelialisation of chronic wounds, while minimising pain levels and the risk of infection.

Reduction in pain and resulting in improved mobility are the request for those with EB simplex. Blistering in EBS is exacerbated by heat and humidity and so this dressing will be more in demand during the summer. The study can be extended to include other forms of EB to assess the ability of KerraLite Cool to facilitate wound healing rather than blister management in these patients.

Conclusion

KerraLite Cool dressings are a useful addition to our EB formulary. We are pleased to offer effective pain relief in the form of a new dressing for those with EB simplex who sometimes feel less worthy of attention than those with more severe forms of EB.

Case Study

Abbie is a 13 year old girl with EB simplex localised. She suffers from painful blisters on her feet which limit her mobility.

She takes regular analgesia in the form of paracetamol and ibuprofen and in addition requires tramadol when her feet are particularly painful.

Abbie was using bordered soft silicone dressings which prevented the wounds and blisters from adhering to her socks but found these tended to slip when her feet were moist. Previously she has used sheet hydrogel dressings but these were unsuitable for use on pressure points such as the balls of her feet and beneath her heels as they macerated when she walked on them.

Abbie finds KerraLite Cool bordered dressings help to reduce pain from her blisters. They provide a cooling effect and the padding helps cushion the blisters on the balls of her feet and under her heels. The KerraLite Cool dressings remain in place until she removes them using SMARs and they do not macerate when used over pressure points.

She has found that she is able to walk for longer distances and was able to go on a school residential trip for the first time.



Figure 2. Healing noted following use of KerraLite Cool border



Figure 1. Blisters on heels

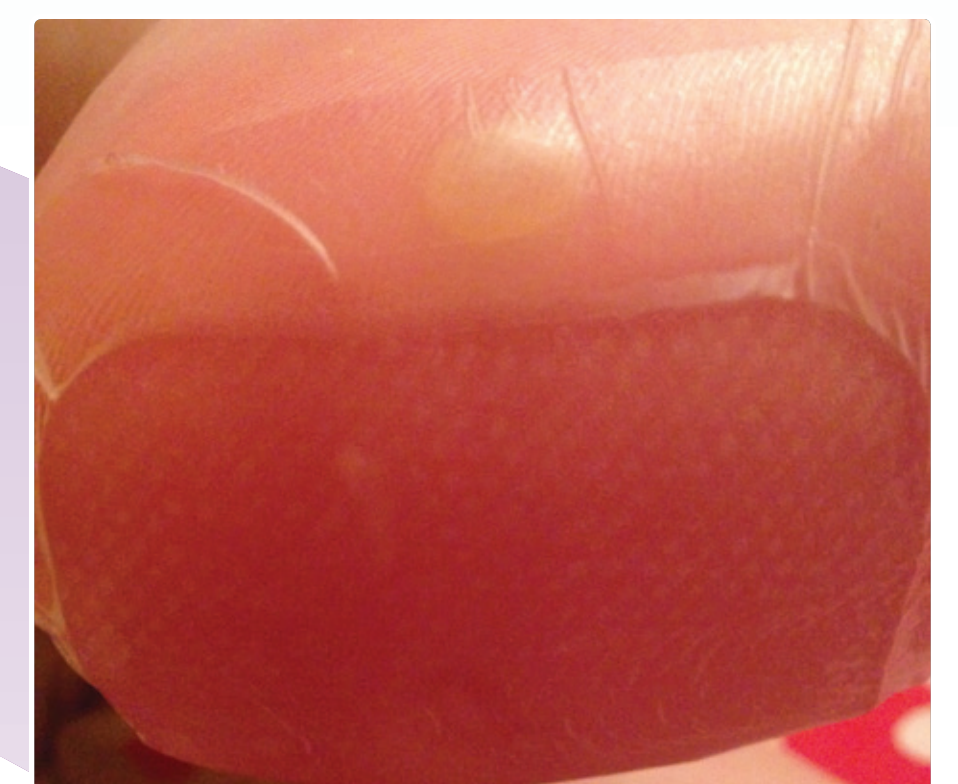


Figure 3. KerraLite Cool bordered dressings covering blisters