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Novel uses for Debrisoft in burns and scars

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Introduction

This poster demonstrates the novel use of Debrisoft, a monofilament fibre debridement pad consisting of 18 million polyester fibres. These are a specific angle, length and density that allow them to reach uneven areas and loosen, lift and bind into the pad necrotic tissue, hyperkeratotic skin, and adherent exudate from the wound and surrounding skin. The pad is soft, flexible and comfortable which allows for non-traumatic debridement and cleansing.

Method

A case study approach was used to collect data on each patient presented.

Results

Case Study 1 - Hypertrophic burn scar hyperkeratosis

Mr R is a 56 year old man who sustained 25% TBSA burns to his face, arms and hands at work. He was skin grafted to arms and hands and then went into pressure garment therapy.

Unfortunately his elbows consistently broke down, due to him developing hypertrophic burn scar hyperkeratosis. Many patients with hypertrophic burn scars have significant problems with dry skin, particularly on elbows, behind knees and on the Achilles.

A range of creams and emollients were used to try and prevent this happening. This meant that Mr R had to stop his scar treatments, pressure garments and that his scar pathway was prolonged, which is costly to both the NHS and the patient. It was decided to use Debrisoft alongside a silicone gel to break the cycle of breakdown, healing and breakdown.

The pad was shown to be effective at removing the hyperkeratosis around the scars and preventing breakdown of the wound. The patient found it easy to use and, in conjunction with silicone has not had breakdown for over 4 months.



Case Study 2 – Psoriatic Arthritis

Mrs D was a 50 year old lady with Psoriatic Arthritis. She had been an inpatient for over 6 weeks in a Dermatology unit. She was referred to the Burns Service by the Rheumatology Specialist Nurse with agreement from Dermatology.

At her first review she had plaques of offensive smelling dead tissue and the hand was swollen, immobile and painful. Mrs D's quality of life was significantly affected, as she had been an inpatient throughout this time and it was at her request that she was referred to the Burns Service.

Her treatment to date had been daily potassium permanganate baths with emollient ointment applied. Debrisoft completely removed the plaques which had built up, instantly allowing freer movement, and within 2 weeks the hand was healed and fully functional. There was resistance from the dermatology nurses where she was an inpatient to undertake debridement with Debrisoft at every dressing change, but once they could see an improvement in the wound, increased range of movement and decrease in pain, they became much more involved with the treatment.

The patient found the use of Debrisoft tolerable and could not believe the difference even after the first treatment.

She is currently campaigning to change the way these types of wounds are managed.



Figure 1. On admission



On admission



Figure 2. On discharge



After patient use of Debrisoft

Case Study 3 – Background Information

- 54 year old gentleman threw old paint thinner on bonfire
- Admitted to the regional Burns Unit with a 25% TBSA burn injury (12% full thickness and 13% mixed depth burn) to lower limbs (Figure 1)
- Patient had a 46 day admission for split skin grafting and rehabilitation on Burns unit and Intensive care unit
- On discharge the patient continued under the care of the burns team, for analgesia, nutrition and wound management review. (Figure 2)
- Received wound care management review by the burns dressing clinic, burns outreach team and district nurse team
- Wound management objectives after skin grafting included management of the following areas;
 - > a wound colonisation with a culture of Staphylococcus Aureus - topical antimicrobial silver dressings
 - > hydrogel wound dressings to debride sloughy areas on his shin areas
 - > over-granulating areas to thighs and buttocks managed according to local standard protocol

It was decided by the Burns outreach team on day 3 visit of the patient's post discharge review when wounds still had sloughy areas present, that there was the possibility of using Debrisoft to assist the debridement process. The patient used Debrisoft on wound areas during showering prior to dressing change visits, wound slough was removed on the first treatment.

The patient and his wife commented it allowed them to "gently circle the wounds and amazingly the yellow sloughy areas lifted", **"We could not believe how well it worked when used in the shower the wounds reacted so well"**.

Discussion and Conclusion

Management of hypertrophic burn scar hyperkeratosis is extremely difficult. Many Burns Services try numerous emollients to try and keep these areas hydrated, but unfortunately this is not effective and hyperkeratosis develops which ultimately leads to skin breakdown. This can be psychologically very distressing for patients as they do not feel they are making any progress and therapeutic treatments often have to be stopped to allow wounds to re heal. Given the psychological impact of a burn, even minor setbacks can often be viewed as catastrophic so any adjunct that can help prevent this can have a significant impact.

Scars which break down lead to suspension of scar therapy leading to ongoing costs to the patient of more hospital visits and less opportunities to return to work.

Moore et al (2014) outline the importance of patient focus within wound management and empowering patients to become involved in their care. As demonstrated in case study number 3, Debrisoft enabled control to be given to the patient and carer in a safe and effective way.

The authors are aware that these are only 3 examples of using Debrisoft in a different way but continue to use in burn care and a number of hypertrophic burn scar patients are currently using Debrisoft to see if they have the same results.

References

Moore, Z., et al (2014) Managing Wounds as a Team. J Wound Care. 23 (5 Suppl.): S1-S38.