

The use of Activon® Tube on foot ulceration following a chemical burn injury on a patient with Diabetic Peripheral Sensory Neuropathy

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Mr. S, a 54 year old gentleman with Diabetes Mellitus Type 2, was cleaning drains in his garden using caustic soda (i.e. sodium hydroxide) while wearing trainer-style shoes. He inadvertently spilled some caustic soda onto his shoes.

The following day Mr. S noticed painless red patches across the top of his feet on areas corresponding to where caustic soda had spilt and continued to soak through his shoes and socks onto his skin. During the next three days Mr. S observed the skin on the top of his feet becoming "blistered." Other than washing & drying his feet daily he did not carry out any additional care for the blistered skin. Four days after injury he presented to his Practice Nurse who diagnosed foot ulceration, caused by direct contact of caustic soda on the skin. The nurse dressed the wounds with Inadine, Lyofoam and crepe bandage and Mr. S was advised to rest.

One week later, when no significant reduction in the size of the wounds or the amount of slough present could be seen, the Practice Nurse referred Mr. S to the Diabetes Specialist Podiatrist.

Podiatry intervention (11 days after injury)

During assessment by the Podiatrist the following was found:-

- Mr. S had Diabetic Peripheral Sensory Neuropathy (loss of sensation to a 10g monofilament) but his feet were not completely insensate. Despite feeling no pain from the ulceration at the time of



Fig. 1

injury he described feeling discomfort from the wound sites after application of the iodine dressings. In addition it was found he could not tolerate sharp debridement of the wounds.

- The dorsum of his left foot was red and hot with dense, viscous slough covering the wound beds. Erythema was marked around the ulcer sites (see figs:1 & 2).



Fig. 2

- Mr. S had a good lower-limb arterial supply.
- He had a history of sub-optimal blood glucose control.
- Due to bandaging the only footwear Mr. S could wear was slippers.

Management

Following assessment the Podiatrist provided the following care:-

Wound care

- The wounds were cleansed with sterile saline. Activon® Tube (100% Medical Grade Manuka Honey) was used as the primary treatment on all burn sites.

N.B: Activon® Tube was chosen for its antimicrobial and anti-inflammatory properties and for its ability to assist in autolytic debridement. It would also promote a moist wound environment.

- A secondary low-adherent, absorbent dressing was applied over the Activon® Tube and held in place with conforming tubular bandage.

Pressure relief

- Mr. S was issued with extra-depth, velcro-fastening shoes which accommodated the dressings and allowed him to mobilise with minimal trauma to the wound sites.

Metabolic control

- Mr. S was referred to the Diabetes Specialist Nurse who discussed and agreed ways to try and achieve improved blood glucose control.

Education

- Mr. S was issued with both verbal and written advice on Diabetic Peripheral Sensory Neuropathy and the importance of daily care and self-assessment of his feet. He was also provided with contact numbers for the Diabetes Community Team.

Shared care

- Following podiatry treatment and subsequent liaison between the Podiatrist and the General Practice Team, Mr. S attended his Practice Nurse twice weekly where the same dressing regimen was followed i.e. Activon® Tube as the primary treatment. The Podiatrist reviewed Mr. S 19 days later.

Podiatry review (30 days after injury)

Mr. S and the Podiatrist were delighted with the progress of the wounds. Mr. S detailed that he had felt a slight 'tingling' following the first application of the Activon® Tube on his foot ulcerations. He experienced no tingling or discomfort following subsequent application of Activon® Tube. This was in contrast to the feeling of discomfort he had felt on each application of Inadine dressings.

On examination the Podiatrist found Activon® Tube had effectively removed most of the slough from the ulceration on the left foot, the wounds in this foot had reduced in size and there was no dorsal erythema. All wounds on the right foot had epithelialised (see figs: 3 & 4.)

A further two weeks later, with continual use of Activon® Tube, all ulcer sites in the left foot had epithelialised fully and no further wound care was required.



Fig. 3



Fig. 4

Conclusion

Management of diabetic foot ulceration involves numerous components of care including appropriate wound management. In this case the use of Activon® Tube proved an effective treatment in debriding devitalised tissue and helping progress ulceration to complete epithelialisation, following a chemical burn in a diabetic patient with lower limb sensory loss.