OVERCOMING BARRIERS TO HEALING - AG OXYSALT DRESSING IN THE TREATMENT OF OVERGRANULATION IN DIABETIC FOOT ULCERS

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Introduction

Understanding the barriers to wound healing is vitally important to ensure that chronic wounds can be treated effectively, especially when other co-morbidities are in play. Over-granulation of the tissue in diabetic foot wounds can be significantly problematic due to the vascular compromise and an increase risk of infection (Stephen-Haynes, 2003).

There are a variety of treatments for over-granulating tissue however a newly developed Ag Oxysalts dressing has demonstrated good clinical results in early use.

Granulating tissue is a term to name the newly growing capillaries looping together on the wound surface. Issues arise when the granulating tissue grows above the wound edges. It may be a difficult condition to manage as it increases the patient's risk of infection, as it prevents or slows epithelial migration across the wound and thus delays wound healing (Nelsen, 1999).

Method

This evaluation identified two patients with type 2 diabetes where over-granulation was a significant factor in the delay of wound healing. The dressing choice was commenced when previous dressings failed to reduce over granulating tissue. The product evaluation took place over a 4 week period. Wound progress was monitored at each dressing change to record wound bed condition, size and appearance.

Photographs were taken at regular intervals to help visualise the improvements in the wound tissue and size.

Patient A

A 75 years old female with type 2 diabetes and neuropathy. The patient was first admitted to hospital in October 2015 due to severe infection, necrosis, abscess osteomyelitis and ulceration to the left foot following standing on a drawing pin.

The patient underwent extensive surgical debridement and was commenced on intravenous (IV) antibiotics for 4 weeks, this was then changed to oral co-amoxiclav. The ulceration failed to progress due to the ongoing osteomyelitis and she was readmitted to hospital for further surgical debridement and IV antibiotics.

Following surgical debridement the ulcer began to over granulate therefore a silver alginate dressing was commenced, the over granulation was still present the following week. The decision was made to change to the Ag Oxysalts dressing to treat the infection and over-granulating tissue. The ulcer was reported to be 10cm x 4.5 cm.

The Ag Oxysalts dressing was used as a primary dressing and a superabsorbent dressing was used to manage the high levels of exudate. The patient was continued on IV antibiotics via the home IV team due to osteomyelitis.

Patient B

A 79 year old female diagnosed with Rheumatoid Arthritis and Chronic Obstructive Pulmonary Disease (COPD). The patient had undergone surgery on the left foot surgery where the 3rd toe was amputated . The patient was referred to the high risk foot service due to non-healing foot ulcer measuring 1.4 cm x 0.8cm.

Over-granulation was reported shortly after referral to the service. Initial treatment with a silver hydrofibre dressing proved to be unsuccessful after one week and therefore the decision was made to change to the Ag Oxysalts dressing.

Results

The results at the end of the 4 weeks showed a significant improvement in all wound factors including a reduction in wound size, slough and over-granulating tissue for both patients. Patient B showed improvement to the ulcer just one week into treatment.

At the end of the evaluation Patient A's wound was measured at 10cm x 4.5cm, a 50.5% reduction in size whilst Patient B's wound was 0.9cm x 0.6cm, a 48.2% reduction. These results are particularly encouraging due to both patients having wounds that did not progress for more 3-4 months before the treatment with the Ag Oxysalts dressing and Patient A's went onto heal.

Patient A

Time 0

Week 2

Week 4

6 months
Wound Fully Healed

Patient B

Time 0

Week 1

Week 4

Discussion

There are many factors that can lead to delayed wound healing, the presence of over-granulation tissue is one of these factors. (Hampton et al. 2003). Current treatment guidelines are varied and cover a wide range of products and treatment types, this can be confusing for clinicians.

The need to have a treatment that is fast and effective reducing the risk of further complications and also reducing the need for long term antibiotics is extremely important.

Conclusions

Treatment options for over-granulation are varied and when current treatment fails to progress alternative options are limited. In the presented case studies both a silver alginate and a silver hydrofibre dressings failed to improve the wound, once the Ag Oxysalts dressing was introduced improvements were visible within 1-2 weeks. Therefore the Ag Oxysalts dressing is shown to be a successful treatment for over-granulating wounds particularly for diabetic patients with foot ulceration.

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Reference

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