A 30 Patient Clinical Evaluation Of A Natural Gelling Fibre Dressing Across One Primary Care Organisation.

Introduction

A 30 patient non-comparative study was undertaken to explore the clinical benefits of a natural gelling fibre dressing (Aspen Medical) derived from Chitosan for the management of chronic wounds which offers high absorption, fluid retention with a high "wet strength" and one piece removal.

What is KytoCel? The natural gelling fibre dressing used for this study (KytoCel®, Aspen Medical) is a highly absorbent dressing composed of natural, biodegradable acylated chitosan. These fibres bond with wound exudate to form a clear gel that locks-in fluid absorbates, pathogens and is conformable to the wound bed. Chitosan is a naturally-occurring starch (polymers) derived from the shells of crustaceans. It works by creating a positive charge. The absorbent properties of KytoCel® enable it to bind and lock away commonly encountered wound pathogens such as Escherichia coli, Staphylococcus aureus, Candida Albicans and meticillin-resistant organisms. The positive charge of chitosan fibres facilitates haemostasis by binding to negatively charged red blood cells, resulting in faster coagulation. This ability to reduce bio-burden, absorb exudate and encourage coagulation is useful element when dealing with chronic wounds that have an increased bioburden, that may have risk of increased bleeding or infection.

Method

Clinical governance approval was obtained for a 40 patient evaluation, with an agreed data collection tool.

Inclusion criteria:

- Patient is over 18 years of age
- Patient is willing to participate and has capacity to consent
- Patient has an indication suitable for treatment with an absorbent dressing product
- Patient will be seen regularly by their evaluator

The evaluations were conducted over a six-eight week period completing a data set per patient.

Results and Discussion

The main aetiology of underlying diseases including:- diabetes, hypertension, Multiple Sclerosis, Rheumatoid arthritis and osteoarthritis. Data sets were completed in a variety of clinical environments by 20 evaluators. All 30 recruited patients had a variety of chronic wounds, all had capacity and were able to agree to take part in the evaluation. The age range was 24-93 years. The ratio of male to female 16:14. (n2) patients were recruited from the initial presentation of the wound to wounds that are 6 months old. The decision regarding the new presentations related to patients with a previous history of chronic wounds. Exudate levels were reported to be (n20) heavy (n8) moderate and (n2) minimal. Wound type range was 24-93 years. The ratio of male to female 16:14. (n2) patients were recruited from the initial presentation of the wound to wounds that are 6 months old. The decision regarding the new presentations related to patients with a previous history of chronic wounds. Wound type range was 24-93 years. The ratio of male to female 4:1. (n2) patients were recruited from the initial presentation of the wound to wounds that are 6 months old. The decision regarding the new presentations related to patients with a previous history of chronic wounds.

Case Study

A 58-year-old farmer with a skin tear on the right lower shin, with evidence of, following a trauma injury at work. The skin tear was classified by the tissue viability nurse as category 3. He was a known insulin-dependent diabetic with neuropathy and high blood glucose, with a previous history of cellulitis and leg ulcers. The skin tear measured 8.2cm long and 2.2cm wide (Fig. 1).

The wound was actively bleeding, with associated erythema. KytoCel dressing was applied as a primary dressing with modified light compression, to stop the bleeding, reduce the risk of infection and reduce oedema.

Three days later, the wound bed appeared clean with healthy granulation (Fig. 2). The risk for patients with diabetes is well documented and, in particular, those patients with wounds may develop complications if not managed appropriately.

Importantly, prevention, appropriate assessment and management and maintenance can prevent a skin tear from deteriorating into a leg ulcer. Mr R's injury healed within 12 days (Fig. 3). KytoCel enhanced the wound healing recovery time.

Conclusion

All evaluators reported that the new natural gelling fibre dressing was easy to apply and remove, provided fluid retention and the "wet strength" supported the one piece removal.

This non comparative study explored the clinical benefits of a natural gelling fibre dressing for the management of chronic wounds and offered high absorption, odour control and management of patients with signs of critical colonisation and local infection.

References


