

# A CASE SERIES OF CHRONIC WOUNDS MANAGED IN A SPECIALIST CYPRIOT WOUND CLINIC.

Prof. Charalambos Agathangelou, PhD in Medical Gerontology, PhD in dermatology and venerology. Sofoulis Achilleos (RN), Bsc (Hons)  
Dhali Community Geriatric, Rehabilitation and wound Centre, 111 Adonidos Avenue, 2540 Dhali, Cyprus. c.agathangelou@cytanet.com.cy

## Introduction

It is widely evident from research studies that effective wound debridement is a prerequisite component of wound bed preparation and for optimal wound healing. Necrotic tissue or yellow slough present in the wound needs to be removed because it may act as a media for bacterial growth and the formation of biofilms, it contains high levels of inflammatory mediators, which promote chronic inflammation at the wound site and can impair cellular migration which is needed for wound repair to take place.



21/01/16



10/02/16



06/07/17



14/07/17

Although it is widely accepted that debridement is a must, there is not always enough evidence to guide clinicians in their daily practice how to select a safe and effective debridement method for patients with chronic wounds.

The management of chronic wounds in our clinic is based on the following universal principles: cleansing, debridement, control of exudates, prevention of more traumas to the wound bed, treating infection, and control of wound pain. Based on these principles, we decided to test an enzyme alginogel in our clinical practice to evaluate its properties and effectiveness.

## Aim

The purpose of our study was to remove yellow adherent slough from chronic wounds by using the topical treatment; an Enzyme Alginogel® (Flen Health) which facilitates rapid autolytic debridement, reduces bioburden, prevents biofilm formation, absorbs exudates, alleviates pain, and preserves the integrity of the surrounding skin thus helping to instigate the process of wound healing in the chronic stagnated wounds.

## Method

7 patients (4 men and 3 women) with chronic wounds were referred to the clinic. Two patients had leg ulcers in the chronic state for a year and despite compression therapy, there were no signs of improvement. Three patients had pressure ulcers covered with yellow slough for 18 months despite the regular sharp debridement carried out after initial surgical debridement. Two patients had diabetic foot wounds. The average age of the patients was 81 years old.

Previous debridement methods used were surgical debridement, sharp debridement, autolytic debridement using dressings, mechanical debridement or a

combination of the above methods. On their first visit to the clinic it was found that the patients were, cleaning their wound with Betadine solution, removing the Betadine solution by using normal saline and applying Betadine ointment on the wound. The wounds were then covered with paraffin gauze and dry gauze. This was done by all patients over the last three weeks before being referred to us.

In our clinic, a thorough assessment of the patients' ulcers was done before deciding to use an Enzyme Alginogel®. Patients were not referred for surgical or sharp debridement as they all refused to go through this procedure believing that their wounds would soon return to the same stage as before. On initial assessment, the patients complained of pain which was. On average, 8 out of 10 on a visual scale analogue. Dressing changes were done daily during the first week of treatment and the moved to every 72-hour dressing changes. A week later, the pain scores had dropped from 8 to 4 and 12 days later all patients were pain free.

## Results

All wounds were successfully debrided and moved to the healing phase. During the first week the average reduction in slough was 30% for all wounds, this reduction is measured by using the clock technique. As the slough reduced, patients reported an 80 % reduction in pain during this period.

## Conclusion

Although this is small case series, it suggests that the Enzyme Alginogel® can be effective not only as an autolytic debriding agent but also helps to promote healing of the wounds due to its unique properties. An added benefit was also that the enzyme alginogel seems to help manage and reduce wound pain.

Enzyme Alginogels® contain an antimicrobial enzyme system capable of absorbing excess exudate (whilst remaining in a gelled state), promoting continuous debridement and controlling bioburden.<sup>1</sup> They have also demonstrated ability to reduce pain in acute and chronic wounds.<sup>2</sup>

### References

- 1) De Smet K, Van den Plas D, Lens D, Sollie P (2009) Pre-clinical evaluation of a new antimicrobial enzyme for the control of wound bioburden. Wounds 21 (3): 65-73
- 2) Durante CM (2012) An open label non-comparative case series on the efficacy of an enzyme alginogel. J Wound Care 21 (1): 22-28