The management of a static dehisced sternal cavity wound: The role of a monofilament fibre debridement lolly

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FIG 1 1st April 2016
before Monofilament fibre debridement lolly

FIG 2 1st April 2016
after Monofilament fibre debridement lolly

FIG 3 8th April 2016
before Monofilament fibre debridement lolly

FIG 4 8th April 2016
after Monofilament fibre debridement lolly

Introduction

- A 60 year old female patient underwent urgent Coronary Artery Bypass Grafts (CABG) at the beginning of February 2016
- Due to some identified risk factors including diabetes and raised Body Mass Index (BMI) some additional sternal precautions were taken, including the use of deep tension sutures
- The wound completely dehisced in a short period of time, it became infected and the wound was covered with almost 100% soft necrotic tissue and slough
- Topical Negative Pressure (TNP) was used to manage the large volume of wound exudate
- While there was some reduction in the percentage of sloughy tissue and changes in wound appearance debridement was very slow
- The wound base appeared to be covered with a visible 'sheen' (FIG 1), which was probably a biofilm **(Metcalf et al, 2014)** and the wound soon became static, showing little or no progress for a number of weeks

Method

- There was an urgent need for a method of debridement that was quick, safe, pain free and effective at removing the slough and biofilm from the wound bed and undermined areas
- The authors concluded that the monofilament fibre debridement lolly* would be an ideal way of managing this complex surgical wound
- The monofilament fibre debridement lolly was used to access the undermined areas and across the wound bed
- It was flexible, easy to hold and use, and perhaps most importantly appeared to be effective even at the first use (FIG 2)
- It was used on 3 consecutive occasions over an eight day period when the TNP dressing was due to be changed
- Treatment time was just a few minutes on the 'stubborn' areas of sloughy tissue, on the areas which were easily visible on the wound bed and also to the undermined areas at the upper aspect of the wound
- The treatment plan continued, using topical honey, to aid further de-sloughing and for its antimicrobial properties, and TNP
- Biofilm based wound management advocates disrupting the biofilm with debridement and then preventing the biofilm from reforming by using a topical antimicrobial **(Metcalf et al 2014, Morris et al, 2016)**

Results

It was quickly evident that the sloughy tissue had lifted in parts by the actions of the monofilament fibres (FIG 1-4). This disruption to the wound bed and biofilm seemed to make the wound bed more receptive to the topical treatments being used, and the wound made quick progress thereafter reinforcing the biofilm evidence within the literature.

The monofilament fibre debridement lolly achieved faster wound bed preparation and debridement for this patient, 'kick-starting' the debridement process and arguably enabling the wound to progress at a much faster rate than it would have without its use (FIG 5-7). It was painless and comfortable for the patient, who was keen to try anything which would progress her wound.

Conclusion and discussion

- The monofilament fibre debridement lolly required very little training or explanation on how to use it
- It is now an alternative product to use when considering debridement options for the cavity wound and has some obvious advantages over some other debridement methods in that it is immediately available, quick and simple to use and caused little or no discomfort for the patient
- For some wounds it could also contribute to overall cost savings compared with some current debridement practices

References

Metcalf et al (2014) A clinical algorithm for wound biofilm. JWC 23(3) 137-42

Morris et al (2016) The management of chronic wound biofilm with a monofilament fibre debridement biofilm pathway: results of an audit. WUWHS conference, Florence, Italy

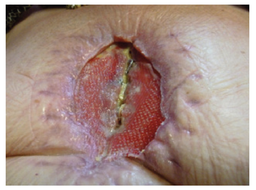

FIG 5 Approximately 4 weeks later – early May 2016

FIG 6 27th May 2016

FIG 7 Almost healed – August 2016

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* **Debrisoft® Lolly** – Activa Healthcare an L&R company

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