Introduction

Science is emerging that clearly shows the wound microbiota, including chronic wound biofilm, is a primary cause of the chronic wound itself (Wolcott 2016).

There is confusion between slough and biofilm:
- Wound slough is a viscous, yellow and relatively opaque layer on the wound bed.
- Biofilm is more gel-like and shiny and when mature, can present as a thick gel like substance that can be lifted off.

Method

Using the Debrisoft® biofilm-based wound management pathway (Morris et al 2016), patients were selected that demonstrated signs of a biofilm.

The biofilm-based wound management pathway utilises the three important steps for effective biofilm management:
- Disrupt the biofilm e.g. with Debrisoft®
- Suppress microbial growth using a topical antimicrobial
- Prevent reformation by repeating frequently for up to 14 days, then re-evaluate

Case study 1

- 46 year old female who was morbidly obese, had a poor lifestyle and used a mobility scooter.
- She was diabetic and hypertensive.
- Wound present for 16 months prior to seeing the Tissue Viability Nurse.
- Wound was a venous leg ulcer with a suspected biofilm present (Figure 1).
- Using the Debrisoft® biofilm pathway the nurse practitioner debrided the wound bed with Debrisoft® for between 2 and 4 minutes twice weekly for 2 weeks.
- On reassessment at the end of the two weeks the patient was completely over the moon with the results.
- The malodour and slough had gone, the depth of the wound had decreased and there were very positive signs of wound progression (Figure 2).
- Compression therapy was also used to correct the underlying aetiology.

Case study 2

- Female patient aged 80 years with heart failure had been receiving treatment for a venous leg ulcer for over 2 years but despite having compression therapy the wound was not healing (Figure 3).
- Using the Debrisoft® biofilm pathway and a Debrisoft® Lolly, the wound was debrided for between 2 and 4 minutes which completely cleared the biofilm and slough from the wound (Figure 6).
- The patient was happy that the exudate reduced and how much better the wound looked.
- Compression therapy was also used to correct the underlying aetiology.

Case study 3

- Male patient aged 84 years who was a diabetic.
- Mixed aetiology venous leg ulcer for 3 months prior to being seen and the wound was covered with soft thick slough (Figure 4).
- Using the Debrisoft® biofilm pathway the wound was debrided with Debrisoft® for between 2 and 4 minutes which completely cleared the biofilm and slough from the wound (Figure 6).
- The patient was happy that the exudate reduced and how much better the wound looked.
- Compression therapy was also used to correct the underlying aetiology.

Results

These three case studies demonstrate that the biofilm-based wound management pathway and a topical antimicrobial these statics wounds can be kick started to heal.

Discussion

Our increased knowledge of the signs of biofilm in chronic wounds and the importance of proactive biofilm management has helped improved the quality of wound care delivered to patients with static or slow to heal chronic wounds in our area.

References


Debrisoft® and “Debrisoft® Lolly” - L&R

Conclusion

The presence of wound biofilm can seriously impact on patient quality of life. It can also cause inconvenience of frequent nursing and clinics visits. In these case studies the leg ulcers took precedence over the patients’ lives.

As a clinician, it can get frustrating when wounds become static and what seems like all options had been exhausted, however with the addition of mechanical debridement in the form of a Debrisoft® biofilm-based wound management pathway and a topical antimicrobial these statics wounds can be kicked started to heal.

"The patient was amazed at the results and commented that she didn’t find it painful at all."