Debridement of chronic leg ulcers with Algivon®

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Introduction
This case study shows the debridement properties of Advancis Manuka Honey dressing Algivon® on a patient with chronic legs ulcers. For the purposes of confidentiality, the patient will be known as Jack.

Patient & wound
The patient is a 78 year old gentleman who has a past medical history of varicose veins, cardiac failure, atrial fibrillation, is on warfarin and has recovered from a Cerebral Vascular Accident (CVA). Jack was originally seen on 17th January 2012 with his practice nurse. The nurse had performed a Doppler assessment prior to my visit. Doppler assessments are used to measure the arterial flow in the lower limbs. The values given from this assessment are known as the Ankle Brachial Pressure Index (ABPI). RCN (2006) and SIGN (2010) guidance recommends this be carried out at the initial assessment and this guidance is used as the basis for local policy. There remains debate on the appropriate cut off point of the ABPI for the safe use of compression therapy, although many studies have made suggestions such as Whiston (1996), Scriven et al (1998) and Jones and Nelson (2001). Local policy recommends the following:

i. If ABPI is between 0.8 and 1.25 sounds are bi or tri-phasic and venous disease is diagnosed as the underlying pathology then compression is indicated.
ii. If ABPI is less than 0.8 and venous disease is the underlying pathology then compression with caution.
iii. If ABPI is less than 0.7 refer patient for vascular assessment.
iv. If ABPI > 1.25 patient for vascular assessment.

Table 1 (adapted from Newton H, 2011)

<table>
<thead>
<tr>
<th>Position of ulceration</th>
<th>Ulcer characteristics</th>
<th>Clinical Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throbbing, aching, heavy feeling in legs</td>
<td>Slight with flat margins</td>
<td>Pain control</td>
</tr>
<tr>
<td>Limb oedema is common</td>
<td>Often presents with slough at the base with granulation tissue</td>
<td>Oedema reduction</td>
</tr>
<tr>
<td>Moderate to heavy exudate</td>
<td>Ulcer is thin and uninfected</td>
<td>Exudate management</td>
</tr>
<tr>
<td>Infection can be worsen at night and rest</td>
<td>Unhealthy appearance of wound bed</td>
<td>Wound healing</td>
</tr>
<tr>
<td>Improves with dependency</td>
<td>Presence of necrotic tissue or slough</td>
<td>Odour control</td>
</tr>
</tbody>
</table>

Position of ulceration

<table>
<thead>
<tr>
<th>Cantor of ulceration</th>
<th>Condition of the lower leg</th>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaiter area of the leg</td>
<td>Haemosiderin staining</td>
<td>Presenting history, physical and social risk factors</td>
</tr>
<tr>
<td>Common site is medial aspect</td>
<td>Thickening and fibrosis</td>
<td>Previous history of DVT</td>
</tr>
<tr>
<td>Lower leg</td>
<td>Dilated veins at the ankle</td>
<td>Varicose veins</td>
</tr>
<tr>
<td>Obesity</td>
<td>Creepy, hyperkinetic skin</td>
<td>Reduced mobility</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>Eczematous, itchy skin</td>
<td>Traumatic injury to the lower limb</td>
</tr>
<tr>
<td>Non-healing ulceration</td>
<td>Pedal pulses present</td>
<td>Reduced capillary refill (less than three seconds)</td>
</tr>
<tr>
<td>Recurrent plaque</td>
<td>Normal capillary refill</td>
<td>Limb oedema is common</td>
</tr>
<tr>
<td>Previous vein surgery</td>
<td>Algivon® is applied to the ankle/necrotic areas as a primary dressing with an exudate manager as a secondary dressing, held in place with soft wool and a retention bandage, secured with an elasticated tubular bandage.</td>
<td>Non-healing ulcer to his right leg only, with a dark wound bed, moderate exudate levels, oedema, haemosiderin staining thickened toe nails and hairless legs with pain on elevation, which suggested to me there was an arterial element to the leg ulcers</td>
</tr>
</tbody>
</table>

As part of the holistic management, Algivon® debrided the ulcers, whilst controlling the bacterial burden and odour. The alginate dressing did not appear to cause any increase in pain.

References

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The ulcer continues to heal under the care of the community nursing team, using exudate managers under retention bandages, changed on alternate days. They have had to introduce honey for short periods of two weeks at a time to combat any bacterial burden. The oedema has almost resolved (as you can see from the reduction in size of the limb). He was seen by the vascular team for follow up on 24th May 2012, whom were very pleased with his progress and discharged him. Jack was discharged from Tissue Viability on 8th June 2012 the ulcers had completely debrided, were granulating and reducing in size. He continues to be seen by the community nursing team.

Clinical Objectives

Debridement
Exudate management
Antimicrobial activity
Skincare
Oedema reduction
Pain control
Odour control

Challenges in wound management

Gross oedema
Exudate levels
Bacterial burden
Vasculitis
Medical condition/history

Benefits

Algivon® debrided the ulcers, whilst controlling the bacterial burden and odour. The alginate dressing helped with the exudate management along with the exudate managers. The dressing did not appear to cause any increase in pain.

Conclusion

As part of the holistic management, Algivon® exceeded my expectations. Due to the medical history and circulatory issues I was sceptical about achieving any massive improvements in the wounds. I had hoped to debride them at least, but thought Jack may have required more intervention from the vascular team in order to gain any healing. I feel the continuity of the ward staff and the trust Jack had in them and myself has had a positive impact on the situation. This case has restored my faith in Manuka honey products.

The management plan for Jack was as follows:

1. Washing the legs at least on a weekly basis with an emollient/antimicrobial soap substitute on the intact skin or cleaning the ulcers with warm normal saline at required at each dressing change. The skin was then dried and creamed with an emollient cream.
2. Algivon® is applied to the ulcers with a non-adherent secondary dressing placed within the alginate dressing, the wound was covered with a sterile dressing and held in place with a compression bandage.
3. Algivon® was re-applied on alternate days as the exudate levels improved.

The dressing did not cause any increase in pain. The management plan for Jack was as follows:

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- Algivon® was re-applied on alternate days as the exudate levels improved.

The dressing did not cause any increase in pain.

Jack was seen by the vascular team on 12th April 2012, who recommended he return at a later date for sharp debridement. The use of larvicide therapy was discussed with Jack both by myself and the consultant, but Jack was not keen to go ahead.

Photos 3 and 3a were taken on 26th April, prior to Jack’s discharge home from the community hospital.