

The use of Haelan tape in the management of an overgranulated, dehisced surgical wound

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The patient was a 37-year-old man who had suffered from back pain for several years and was referred for physiotherapy treatment as an outpatient. After several weeks of treatment an MRI was requested as minimal progress had been made. The scan showed a prolapsed disc at S3 and S5 which could only be repaired with surgery. He was admitted for spinal fusion and decompression surgery, which is a complex and lengthy procedure. The patient was discharged three days later. At 10 days he attended his GP's surgery to have the staples removed. Two days later he felt unwell and developed excruciating pain in his knee that resolved quickly. However, the following day he became very unwell with dizziness and shortness of breath that was later diagnosed as a pulmonary embolism (PE). To treat the PE he was admitted to hospital and had anti-thrombotic therapy administered, but due to the recent surgery he was warned that this had potential risks.

The patient suddenly became critically ill, bleeding profusely from his nose and bleeding into the previously healing surgical wound on his back, presumably due to the anticoagulants given to treat the PE. He was given significant doses of analgesia and pressure was applied to the nasal bleeding. Additionally a computed tomography (CT) scan was performed of the surgical wound. This revealed a large haematoma which was probably a result of using the anticoagulants. It was hoped that this would resolve conservatively but the haematoma caused the wound to dehisce in two places along the suture line. Once again pressure was applied to this wound to reduce the blood loss. Three days later the patient was discharged again. Within a week he was readmitted for intravenous (IV) antibiotics via a Hickman line for treatment of the wound infection.

The tissue viability team was asked to review this wound as it failed to heal following the

completion of the course of antibiotics. Over the next few weeks a number of wound care products were commenced to first cope with the resolving haematoma and then to reduce the overgranulation tissue that had developed over the dehisced areas of the wound. The primary wound care objective now was to reduce the overgranulation tissue to allow epithelialisation to occur.

In a wound healing through secondary intention the amount of granulation tissue required to fill the defect will vary according to the size of the wound (Dowsett, 2002). Healthy granulation tissue which is present in a wound healing by secondary intention is red, lumpy and almost velvet-like in appearance and indicates that the wound is healing. Overgranulation in a wound bed often presents as dark red or discoloured tissue which may bleed easily. It has a 'cauliflower-like' appearance which appears to grow over the top of the wound surface (Johnson, 2007). Overgranulation in a wound often presents a challenge as it appears to cause a delay in healing and there is no consensus on the most appropriate form of management. Products used in the management of overgranulation such as foams, hydrocolloids, antimicrobials and silver nitrate have little or no evidence base to support their use and can cause pain, further tissue damage, be expensive to use or take extended periods of time to show any real improvement in the wound bed.

In this case a foam dressing was used to try and flatten the tissue through pressure but this failed. An antimicrobial dressing (Iodoflex[®], Smith & Nephew, Hull) was then applied to try to reduce the bacterial load which is implicated as the cause of overgranulated tissue (Leak, 2002; Hampton, 2007), but this also failed (Figure 1).

At this point the surgeons were keen to hurry the process of wound healing and were considering one of two options — either to use silver nitrate or to cauterise the overgranulated tissue. The tissue viability nurse was not keen on either of these methods due to the potential for pain and damage to newly

formed tissue. Having heard the tissue viability nurse's concerns the patient was less than keen on either of these options.

About six weeks after the operation it was decided to use Haelan tape (Typharm Dermatology, Norwich), with the plan that one of the other options may need to be explored if this did not work. Haelan tape is a topical steroid adhesive tape impregnated with 4mcgs/cm² fludrocortide. It is recommended for use in recalcitrant dermatoses such as hypertrophic scars, *pyoderma gangrenosum*, and overgranulation around stoma sites (Johnson, 2007). Johnson's (2007) study was a small evaluation comparing the effects of Haelan tape with other more commonly used preparations for the treatment of overgranulation such as silver alginates, foams and silver foams. She noted the resolution of overgranulation in a variety of wound aetiologies in seven days or less, which led to Haelan tape being included in her trust's formulary as the first choice for the management of overgranulation. This study's findings led the author to review whether this product would be useful to use in this instance to try and resolve the overgranulated tissue. The Haelan tape was prescribed by the surgeons and the nursing staff caring for the patient were instructed on the application techniques.

The tape was applied daily as instructed by the manufacturer, cutting the tape to the size of the wound including a 1cm border of tape that adheres to the healthy intact surrounding skin to ensure it remains in place. The tape was then covered by an absorbent pad and Mefix[®] (Mölnlycke, Göteborg) to control any exudate. The manufacturer recommends that the tape can be removed after 12 hours, however the author found that 24 hours in place produced better results. The wound showed signs of improvement even after only one application of the tape. Figure 2 shows the wound after five days of treatment, showing dramatic improvement with the overgranulated tissue appearing much flatter and the lower aspect of the wound being about 1–2cm smaller. Once the patient was ready, he was discharged home and the



Figure 1. Dehiscent surgical wound showing two areas of overgranulation tissue.



Figure 2. The overgranulated tissue after five days of daily application of Haelan tape. Note the reduction in size particularly in the lower overgranulated area. Both areas appeared much flatter at this point.

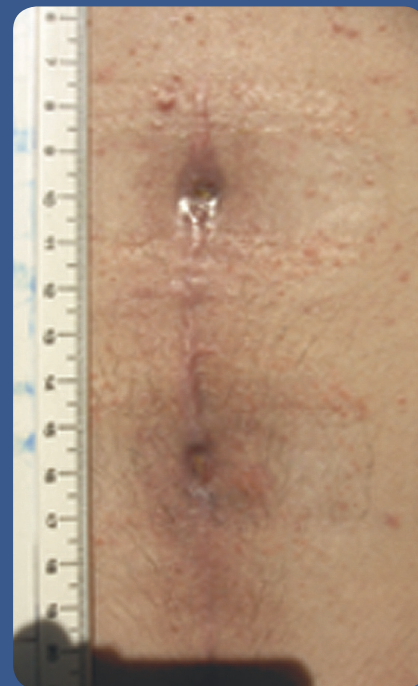


Figure 3. The wound four weeks after the first application of Haelan tape. The wound is completely healed. The Haelan tape had been stopped by the community nurses about one week before.

dressings changes were continued by the community teams.

Both the nursing staff and the patient were surprised with the significant progress being made after the commencement of Haelan tape. The patient presented in clinic about four weeks later and was thrilled that his wound had completely healed and that the Haelan tape could be discontinued (Figure 3).

This case study shows how the use of Haelan tape for the management of overgranulation in a surgical wound delivered a successful outcome and avoided the need to use products such as silver nitrate which have a caustic effect with potential to cause pain, turn tissue a discoloured black colour and damage healthy granulation tissue (Hampton, 2007).

Improvements to this patient's wound were outstanding and prompted the link nurses on his ward to call the tissue viability team to check that this speedy improvement was

expected. The overgranulated areas appeared much flatter after just five daily applications of the tape.

Haelan tape has since been used successfully in a number of other wounds by the author on areas of overgranulated tissue such as on a healing tracheostomy site, a diabetic foot ulcer, around a peg insertion site and around a stoma site. Its addition to the formulary within the trust has improved the options available for the management of these challenging wounds. Previous options used to treat overgranulation were not always ideal — foam dressings needed lengthy courses of treatment, antimicrobials such as silver and iodine were costly and have some contraindications which prevent their use on all patients, and the use of caustic products such as silver nitrate or cauterisation can cause pain and further damage to already fragile healthy tissue. A number of practitioners (Lyon and Smith, 2001; Johnson, 2007) have recognised the

potential uses of topical steroids in the management of overgranulation. However, these are not licensed specifically for use in open wounds and therefore responsibility lies with the prescriber. Haelan tape is a cost-effective product that is easy for the clinician to apply and is now the first choice for these challenging wounds within the author's acute trust. **WUK**

References

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