

TREATING OVERGRANULATION WITH A SILVER HYDROFIBRE DRESSING

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Wounds left to heal by secondary intention fill with granulation tissue, which is a complex combination of newly formed capillaries with collagen laid down over them. This can be observed as a deep pink wound bed with a red lumpy 'granular' appearance. Granulation tissue usually fills the wound from the bottom and grows upwards. Once it reaches the surface of the wound, epithelial cells migrate from the wound edges across the surface of the wound (Collins et al, 2002).

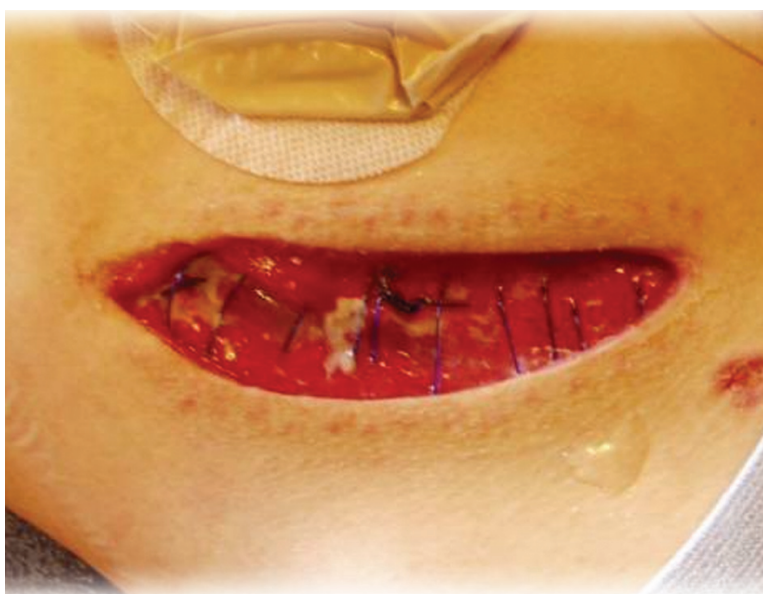


Figure 1. Initial assessment showed the wound bed covered with healthy granulation tissue with visible raised dissolvable sutures.

In cases of overgranulation, the granulation tissue continues to grow, and fills the area until it is proud of the wound, preventing the migration of epithelial tissue across the wound bed (Collins et al, 2002). This means that the wound does not heal.

It is possible that overgranulation occurs due to the over-efficiency of modern day dressings or a possible infection that has prevented the 'switching-on'

of epithelialisation (Collins et al, 2002).

PATIENT DETAILS AND HISTORY

A 20-year-old male student had recently had abdominal surgery for Crohn's disease, which resulted in him having two stomas. Following surgery and before discharge there was dehiscence of the abdominal wound. Dehiscence is the term used to describe the separation of the opposing edges of a surgical wound. It usually occurs between the sixth and eighth

day following surgery (Collins et al, 2002). Due to the surgery and his poor general condition, the patient had lost more than two stone in weight. On discharge home he was referred for tissue viability advice due to the dehiscence and problems with dressing retention.

On first assessment, he had a gaping abdominal wound, close to the site of two stomas. As previously stated, he had recently

unintentionally lost more than two stone in weight. However, since being discharged from hospital, his appetite had improved. He was eating well and was also supplementing his diet with Ensure supplements (Abbot, Maidenhead).

Ensure consists of 10g of protein and 330kcal and is a complete supplement which can be used as a meal replacement or in addition to meals. In this patient's case they were used as an additional supplement to help him regain weight.

ASSESSMENT

The wound on the right side of the abdomen had a total surface area of 31cm, was 12cm long and 3.5cm wide. About 80% of the wound bed was covered with healthy granulation tissue with visible raised dissolvable sutures (*Figure 1*).

The aim of treatment was to keep the wound clean and free from infection and contamination from the stomas, and to promote granulation. However, due to the close proximity of one of the stomas the community nurses were having difficulty in retaining the wound dressing. They selected a hydrofibre dressing (Aquacel; ConvaTec, Ickenham) which was held in place by a Mepore dressing (Molnlycke, Dunstable).

When the patient was assessed again eight days later it was evident that the dressing selection was suitable as there had been a noticeable improvement. The wound had clean granulating tissue and had reduced in size since his discharge home (*Figure 2*).

The patient's nutritional needs were being met and he had started to regain weight, so his diet was considered to be sufficient to allow healing to continue.

The wound was healing well a month and a half after the initial consultation (*Figure 3*) and it was decided to only see the patient again if there were further problems.

However, three months after the first visit, the patient was referred

again. On consultation he was looking well and had regained two stone in weight. On examination, his abdominal wound was healing well and measured about 9.5cm x 1cm. However, there was overgranulation and healing had become static (*Figure 4*). There was also a moderate amount of exudate but no other signs of clinical infection.

TREATING OVERGRANULATION

In an overgranulated wound, the use of a dressing that promotes granulation should be stopped and changed to one that provides a warm moist environment, reduces overgranulation and promotes epithelialisation, such as a foam dressing. In this case, however, the dressing used was Allevyn (Smith & Nephew, Hull) which is a foam dressing and although it was absorbing the exudate it was not having an effect on the overgranulation.

Although there were no signs of clinical infection, a silver dressing was used to counteract any infection that might have been causing the delayed epithelialisation. Most wounds are colonised and a swab would only be taken when there are clinical signs of infection and the results of the swab would dictate the appropriate systemic antibiotics. In this case systemic antibiotics were not required and therefore swabbing the wound would be of no benefit. Because of the size of the wound, a silver-impregnated hydrofibre ribbon dressing (Aquacel Ag; ConvaTec, Ickenham) was chosen with a simple secondary dressing to



Figure 2. The wound eight days after initial treatment with Aquacel.



Figure 3. One and a half months after the initial consultation the wound is healing well.



Figure 4. The wound, photographed after three months shows evidence of overgranulation.



Figure 5. The wound shows evidence of epithelialisation after treatment with Aquacel Ag.



Figure 6. The wound six months after initial consultation.

hold it in place. The patient was then reviewed four weeks later, when a definite reduction in the amount of overgranulation was noted and evidence of epithelialisation was seen (Figure 5). The current dressing regimen was continued. As healing was progressing well, the patient was discharged into

the care of the community nurses who agreed to discontinue the silver dressing once the overgranulation had resolved. Figure 6 shows the wound as it continued to heal.

CONCLUSION

It is clear from the photographs that the overgranulation resolved. The

use of silver in the first few weeks did have an impact but it is difficult to judge if the most appropriate silver dressing had been selected, and the affects this choice had on the resolution of the overgranulation; with a different dressing, would the overgranulation have resolved

sooner or later? Wound healing is a complex process and several factors can interfere with normal progress. The use of sustained-release silver dressings is still relatively new and as clinicians we have a lot to learn about the use and benefits of silver in wound healing. Which silver dressing to use and when to start and stop treatment are commonly asked questions. The use of silver dressings has escalated and it is difficult to judge whether they are used appropriately or not. However, one way of increasing our knowledge is through documenting case histories such as this and sharing our practical experiences of new products and dressings. **WE**

Collins F, Hampton S, White R (2002) *A-Z Dictionary of Wound Care*. Quay Books, Mark Allen Publishing, Wiltshire

FREQUENTLY ASKED QUESTIONS

Q When is tap water appropriate for wound cleansing?

A Tap water can be used to clean many wounds; it is used especially for chronic wounds such as leg ulcers and pressure ulcers. But many A&E departments use tap water to clean traumatic injuries too.

Q Should prophylactic antibiotic therapy be given before surgery or in the event of a traumatic wound?

A Only if the patient is immunocompromised or the wound

is considered to be dirty, i.e. the surgery involved opening the gut or respiratory tract or it was heavily contaminated with organic material from the accident.

Q Does a closed surgical wound need a dressing applied to it?

A A closed surgical wound should be dressed for infection control purposes while it is still leaking, but once it has sealed and no longer leaking it does not require dressing to prevent infection although some patients may prefer a dressing to

reduce pain or because they do not want to see the incision line.

Q If a wound is infected how often should it be redressed?

A This depends upon exudate levels and whether frank pus is draining. If a wound is highly exuding pus then it should be irrigated and redressed daily using an antimicrobial dressing. If the exudate is lighter, then a modern antimicrobial dressing such as povidone iodine paste or an absorbent silver dressing may be used and changed on alternative days.