

Venous Ulcer & Obesity Case Study

This wound has been present for two years with little sign of improvement

Profile of patient:

- Sally (not her real name), 65 year old, house bound, arthritic and morbidly obese.
- Long standing venous ulcer for over 2 years.
- Ulcer A had been present for over two years and Ulcer B (a cluster of 3 ulcers) had recently developed.
- Sally was referred to a DN when 3 small ulcers developed on the back of the same leg.

In the two weeks after the referral was received, the ulcers became steadily worse. The three ulcers at the back of her leg grew into one large ulcer, distressing Sally further. During this time a Doppler assessment was carried out and a Profore compression bandaging was trialled. However, Sally found this extremely uncomfortable. She also found that Acticote and Iodosorb increased the pain in the back of her leg to intolerable levels. In these two weeks it became apparent that the skin on Sally's leg was very sensitive and reacted adversely if dressings or bandages were left on for more than 24 hours. The following plan of care was therefore chosen:

Initial plan of care

- Daily dressing changes initially – to minimise pain caused by dressing products and bandages
- Irrigate ulcers gently with sterile saline
- Apply Algisite to deslough and absorb exudates
- Cover with parafilm to secure Algisite and minimise adherence to the wound bed
- Apply Actisorb to absorb and minimise odour
- Cover with combined dressing to absorb exudate
- Apply Tubifast toe to knee to prevent irritation of skin on leg from Softban fibres
- Apply Softban toe to knee
- Apply Elodur compression bandage toe to knee with 50% stretch, 50% overlap
- Apply a second length of Tubifast toe to knee to secure bandages

Documented by Ruth Wickens (District Nurse), New Zealand

Ulcer A



Ulcer B



October 26th 2005

Nutritional Concerns

Further complications regarding the healing process became evident when questions were asked regarding Sally's nutrition. She described her appetite as being very poor. Lunch consisted of fruit and yoghurt and she had takeaway food twice a week. A weight was not obtained due to her size and immobility. She stated that she had tried reducing her weight, without success.

Nutritional plan of care

It was decided that Sally would benefit from nutritional support in an effort to support wound healing. A number of essential nutrients are required for wound healing. These include protein, zinc, arginine and selenium¹⁻⁵.

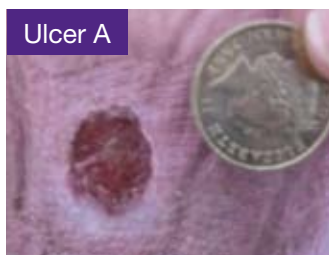
It was agreed that Sally commence on a nutritional sip feed designed to support wound healing. Cubitan was selected due to its superior protein content (30% energy from protein), dose dependent regime (to aid compliance) and cost compared to other arginine enriched products. Sally commenced Cubitan treatment on November 1st 2005 at a dose of 2 x 200ml per day. At this time the wound beds of both ulcers were sloughy, exudate was blood-stained and moderate to heavy and there was an offensive odour.

References: 1. Meyer NA et al. Nutrient support of the healing wounds. *New Horizons* 1994; 2: 202-214. 2. Breslow R. Nutritional status and dietary intake of patients with pressure ulcers: review of research literature 1943 – 1989. *Decubitus* 1991; 4: 1, 16-21. 3. Barbul A et al. Arginine enhances wound healing and lymphocyte immune response in humans. *Surgery* 1990; 108: 331-7. 4. Kirk SJ et al. Arginine stimulates wound healing and immune function in elderly human beings. *Surgery* 1993; 114: 155-160. 5. Malone AM. Supplemental Zinc in Wound Health: Is it beneficial? *Nutrition in Clinical Practice*; 2000; 15. 253-256.

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Cubitan

November 15th, 2005 (presentation + 2 weeks)

Healthy granulation tissue was evident in the wound beds and there was scant exudate. An 'island' of granulation tissue was evident in Ulcer B, indicating that this large ulcer might divide back into three small ulcers as it healed. There was a significant reduction in the size of both ulcers.



November 29th, 2005 (presentation + 4 weeks)

Ulcer B had almost completed its predicted division into three small ulcers. Ulcer A was slower to reduce in size and had areas of over-granulation. A decision was made to use Aquacel AG instead of Algisite, to try to improve the healing of Ulcer A.



December 19th, 2005 (presentation + 7 weeks)

Ulcer A had healed. Ulcer B now consisted of four small ulcers, some of which were over-granulating. In view of the excellent effects Aquacel AG had on Ulcer A, it was trialled on Ulcer/s B. By now there was no slough, no odour and scant exudate. Dressing changes were reduced to Mon, Wed and Fri. Sally was not able to tolerate any further reduction in dressing frequency because the skin on her leg would become acutely tender if bandaged for longer. Sally reduced her intake of Cubitan to one 200ml bottle per day.



January 13th, 2006 (presentation + 11 weeks)

All ulcers completely healed. Sally discontinued Cubitan and commenced Fortisip nutritional supplement to support and 'cement' the healing that had taken place. Sally's leg was monitored three times per week, while she waited for the arrival of new compression stockings.

CONCLUSION: Sally's immobility, venous insufficiency and nutritional status were all factors that contributed to the poor healing of the ulcers on her leg. After enduring the ulcers for 2 years Sally commented that she believed the ulcers were "there to stay" and were unlikely to heal.

However, the commencement of Cubitan coupled with diligent nursing care which included a dressing regime tailored for Sally's needs resulted in the rapid healing of Sally's ulcers. Sally was able to shower for the first time in 2 years in January; she is now more mobile and free from the pain inflicted by the ulcers.



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