Occasional contributions

A special thank you goes to our Queensland wound experts who provided two excellent posters!

Case Study: Why undertaking gold standard practice achieves greater results for healing leg ulcers

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Case study: Why undertaking gold standard practice achieves greater results for healing leg ulcers

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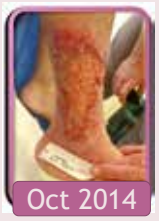
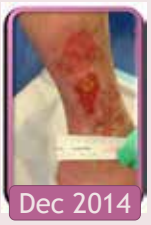
73 year old, female
SLE, HTN, Osteoarthritis, chronic shoulder pain (L capsulitis, R torn rotor cuff), overweight

3rd Recurrence Right Medial Gaiter Venous

May 2014





Wound Care

May - October 2014
Care administered by patient's GP, wound continued to deteriorate

October - December 2014
Care at QUTWHS. Best practice. Compression 20 - 30mmHg for first two weeks - full compression for remainder of care (40 mm/hg).
Use of silver and antimicrobial dressings.

December 2014 - January 2015
Care by community nurses
Use of dressing patient has allergy to

January - April 2015
Full compression and silver and antimicrobial dressings
Once healed - fitted into Class II flat knit hosiery

Patient Experience

May 2014 - Patient requests referral from GP to QUTWHS, due to positive outcomes in the past. GP declined.

October 2014 - Patient referred to QUT WHS. Ulcer malodourous, infected and producing excessive exudate. Patient experiencing significant distress, pain, disturbed sleep, impaired self-confidence and reduced QoL. Patient demonstrates limited self-care efficacy.

December 2014 - Pain, exudate, infection and malodour resolved. No sleep disturbance and improved QOL.

January 2015 - Patient distressed due to wound deterioration (pain, erythema and pruritus), believes it to be due to break in continuity of care.

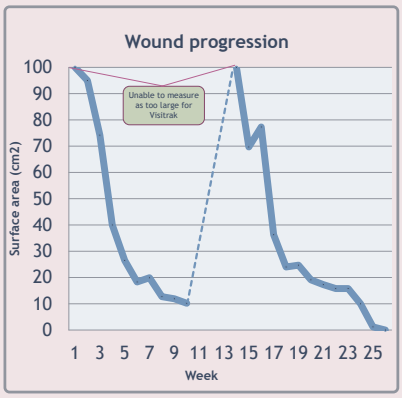
April 2015 - Wound completely healed. Patient reports improved self-care efficacy including daily leg elevation, maintenance of compression. Patient has improved QoL.

Results

Upon presentation in October 2014 and at readmission in January of 2015 the patient's wound was unable to be measured using Visitrak due to it's size.

During the first period of treatment the patient experienced >90% reduction in wound size in 10 weeks and commensurate improvement in QoL. The patient's PUSH score was 16 at admission and fell to 11 prior to the break in treatment.

During the second period of treatment, the patient achieved complete healing. Patient was re-admitted with a PUSH score of 15. The wound size reduced by 53% between weeks 15 and 16. In addition to improved QoL the patient demonstrated a commitment to self-care



Conclusion

In this case best practice wound care by experienced and well trained practitioners resulted in:

- Improved wound healing
- Reduction in patient physical pain and emotional distress
- Improvement in QOL and patient engagement

Rapid resolution of a lower leg ulcer with evidenced-based practice, and the discovery of a rare underlying condition causing recurrence

Alison Vallejo

The study aims to highlight how a holistic assessment aided in the development of a successful management plan and identified the underlying aetiology of ulcer recurrence and associated complications.

The collection of relevant information, patient history, main concerns, preferences, capabilities and expectations, enabled the clinician to develop a patient-centred plan. This unique plan promoted patient concordance with the regime, developed trust, and resulted in rapid resolution of the wound.

The patient's history of Antithrombin 3 was questioned by the clinician and linked to a history of DVTs and ulcerations. In consultation with the local referring doctor, the clinician requested further investigations by a haematologist. It was then discovered that the patient had developed liver and kidney complications associated with the clotting disorder. The specialist advised the patient to lose weight or she would be a candidate for a liver transplant.

Clinicians need to be aware of rare underlying disorders for non-healing wounds especially when attending a younger population. They should be empowered to discuss and request further investigations when seeking clarification and trying to reach a correct diagnosis. In this case, although rapid healing was achieved and quality of life restored, it revealed how vital information and a holistic assessment not only aided in appropriate care for wound healing and prevention of recurrence, but also identified detrimental complications that were otherwise unknown.

Rapid resolution of a lower leg ulcer with evidenced-based practice, and the discovery of a rare underlying condition causing recurrence

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Permission was granted for the information and photos used in this case study. The name used is fictitious.

Introduction:

- Gina - 46 year old lady
- Presented to the Wound Solutions Clinic (WSC) with 6 month Hx of a non-healing left medial gaiter leg ulcer following a scratch in the garden. Same area as a previous ulcer.
- The WSC team performed a comprehensive and holistic assessment in order to obtain an accurate diagnosis and identify patient concerns. This allowed application of evidence-based Mx tailored to Gina's needs. Appropriate management led to a rapid healing response, patient satisfaction, healthy lifestyle changes and the discovery of a rare health condition; thought to be the underlying cause of ulceration and recurrence.

Medical Hx & Health status:

- Medical Hx includes: morbid obesity, recurrent bilateral lower leg thrombophlebitis, varicose veins, cellulitis L) lower leg, bilateral DVTs and Antithrombin 3 deficiency.
- Current medications include: Clindamycin for a confirmed localised wound infection (on and off for 6 months) and Ferrograd to assist with haemoglobin formation.
- Lives in a supportive social environment with no obvious emotional, mental or physical problems, other than pain in the wound, associated anxiety, and morbid obesity. Gina maintains a job at a school canteen and local news agency, where she is on her feet most of the time and admits to not wearing her compression stockings prescribed a few years ago.
- Gina had minimal insight about her Antithrombin condition, was not on any therapy, had ceased Xarelto a couple of years ago and was not aware of the risks involved or the damage her previous DVTs had caused.

Assessment

Wound assessment: Initial presentation = 25.9.14

Local wound assessment ="MEASURE" method = a thorough and simple systematic wound assessment that captures vital information for baseline data and assists with developing short and long-term goals and appropriate interventions (Keast et al., 2004).

M – L = 1.5cm x W = 0.8cm, A = 1.4cm2 via Visitrak
E – Moderate, thick, non-malodorous haemopurulent exudate
A – Soft dried exudate covers a suspected shallow wound bed, approximate 80% granulation, 20% brown slough
S – Severe pain, 10/10 to touch - Numerical Rating Scale (NRS) 0-10
U - No undermining suspected
R – Review weekly for wound bed preparation, monitor pain, establish wound regime, follow up on Ix in conjunction with GP
E - Hyperpigmented, almost purple peri-wound, with a dry circular edge of debris extending 2cm. Surrounding skin healthy & intact

Limb assessment:

Oedematous L) lower leg with visible varicosities. L) ankle = 33cm, L) calf = 47 cm, 2 cm larger than the R) leg. Localised erythema, no heat detected, normal hair growth and healthy toe nails, indicating no signs of spreading infection and adequate arterial supply (Carville, 2012). A hyperpigmented scar on the medial gaiter of the contralateral limb is prominent and consistent with the presenting ulcer's discolored appearance.

Pain assessment:

Intense procedural pain was observed and at non-specific times reported by Gina; measured using the NRS 0-10. Pain caused anxiety and stress at dressing change. Pain was described as shooting, stabbing, burning pain that could waken Gina and impact on her daily activities. Pain limited thorough inspection of the wound at initial visit and had reduced Gina's tolerance to compression. Panadeine was her analgesia of choice, used with moderate effect.

Further Investigations:

- Arterial and venous duplex ultrasounds (a hand-held Doppler was not appropriate due to significant oedema and wound associated pain at cuff location).
- Intense pain and a suspicious purple peri-wound prompted haematological investigations, to exclude an inflammatory ulcer type: ESR, CRP, Lupus anticoagulant, ANA, ANCA.

Findings:

- Duplex US = deep venous incompetence in the L) common femoral vein and long saphenous vein, with an incompetent perforator 18cm above the heel at medial gaiter (ulcer site). PPG toe pressures = 0.7, indicating normal arterial perfusion (Carville, 2012).
- Blood tests = normal, with slightly elevated ESR of 21, normal value = <20 (Medline Plus, 2014).
- Research on Antithrombin 3 deficiency revealed that this anticoagulant deficiency was the cause of recurrent DVTs and thrombophlebitis, increasing Gina's risk of developing future DVTs and pulmonary embolisms due to obesity (Lipe & Ornstein, 2011).
- Pain, insufficient/nil compression and lack of wound bed preparation were immediate factors affecting healing. Obesity, poor lifestyle habits and Gina's haematological condition increased the risk of recurrence and complications.

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Action Plan:

- Pain Rx = topical anaesthetic - LMX4 & Lyrica for neuropathic pain.
- Devitalised tissue removed via low-frequency ultrasonic debridement (LFUSD) by the WSC podiatrist and antimicrobial hydrofibre applied to ↓ the confirmed heavy growth of *S. aureus.*
- Compression commenced with a 3 layer Tubigrip approach for ease of patient application and bathing. Lower limb measurements were taken and prompt liaison with the Venosan representative for appropriate hosiery was made.
- The WSC dietitian provided nutritional advice for weight loss and healthy eating habits to prevent complications and promote wound healing.

Progress:

3rd visit/2nd week – Gina reported 3/10 pain, minimal wound exudate, product changed to a hydrocolloid, 3 layer Tubigrip continued.
4th visit/3rd week – reduced anxiety and trust established, hosiery commenced -Venosan Medi Plus Class 2, hydrocolloid dressing continued.
5th visit/5th week – 100% epithelialisation, pain 0/10, Gina self caring and concordant with hosiery and regime.
7th week – complete closure, patient satisfaction and improved QOL. Best practice skin care and compression therapy education given.
6 weeks post healing – intact skin/healed wound, patient remains concordant with care, second pair of hosiery ordered.

Conclusion:

A holistic team approach with relevant Ix assisted with the rapid healing of Gina's ulcer and identified the underlying cause of recurrence. Evidence-based management of compression therapy, wound bed preparation, appropriate product choice, education, trust and patient concordance, enabled a consistent and targeted regime. Acute needs of pain and anxiety were quickly relieved and long-term healthy lifestyle habits adopted. Ongoing haematological investigations continue for Gina with firm advice to lose weight and continue compression to prevent ulcer recurrence and complications.

Acknowledgements:

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Please email any comments or suggestions regarding this report to: newsletter@awma.com.au