Choosing a Support Surface for a Progressive Ischemic Ulcer

Introduction

With 60,000 people per year dying as a result of pressure ulcers, treating and preventing these ulcers from getting worse is a primary goal of the wound care clinician. Treatment options include support surfaces for the bed and chair, topical wound dressings, nutritional support and other adjunctive treatments. When choosing these treatment alternatives, outcomes and costs are two of the most important criteria.

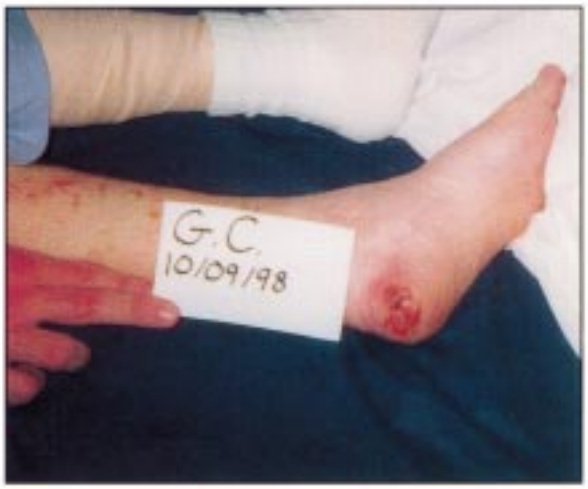

Figure 1. Left calcaneous stage III ischemic ulcer measured 2.3cm x 5cm (Oct. 9, 1998).

Background

Ms. G.C. is an 81-year-old female residing in a long term care facility following a right cerebral vascular accident in July of 1998. This resulted in left hemiparesis and altered cognitive status. Ms. G.C. was admitted to Kingston Care Center in September of 1998 after a prolonged stay at a community hospital. Her medical history included: a previous right hip fracture, seizure disorder, hypertension, anemia, and bilateral cataracts. Also documented was an unconfirmed diagnosis of multiple sclerosis mentioned by Ms. G.C.'s daughter. Ms. G.C. has multiple risk factors for skin breakdown including poor nutrition, altered cognitive status, a decline in functional mobility, incontinence of bowel and bladder, altered sensory status, and cardiovascular disease.

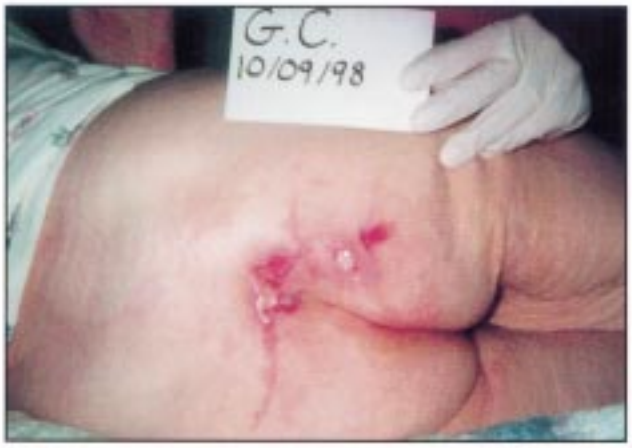

Figure 2. Stage III sacral ischemic ulcer measured 1.6cm x 2.4cm and stage II right buttock ischemic ulcer measured 1.8cm x 1.1cm (Oct. 9, 1998).

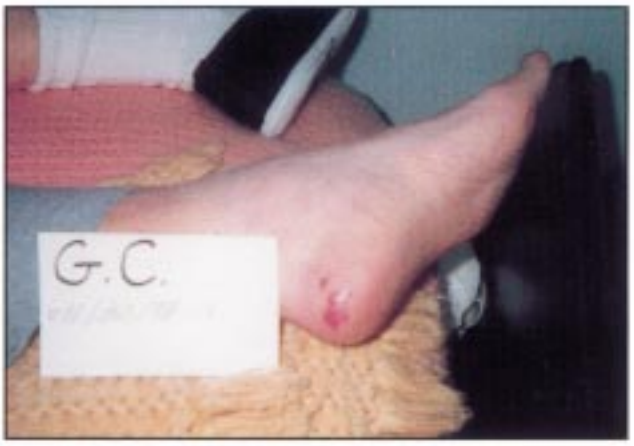

Figure 3. Right calcaneous ischemic ulcer 100% granulated and healed to closure (Nov. 30, 1998).

Her initial Braden Risk Assessment score was only 12. She required maximum assistance with activities of daily living, was dependent with wheelchair propulsion, and required moderate assistance to stand. Ms. G.C. was able to perform a seated push-up for pressure relief, but required moderate verbal cueing to do so.

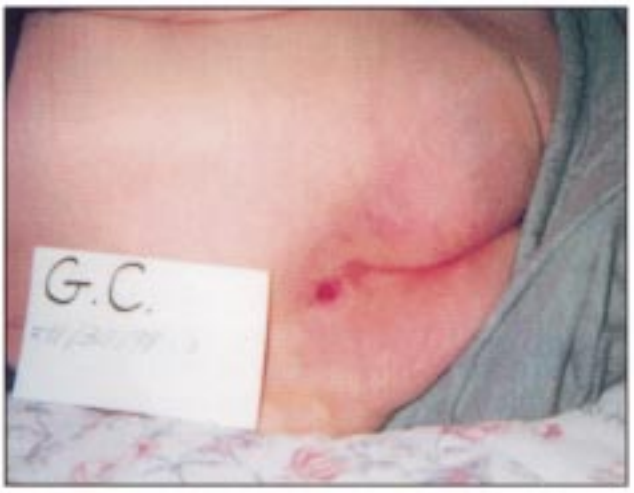

Figure 4. Sacral ischemic ulcer 40% granulated. Buttocks ischemic ulcer 100% granulated and healed to closure (Nov. 30, 1998).

Management of Care

Upon admission, Ms. G.C. was noted to have a stage I pressure ulcer on her sacrum, a stage III pressure ulcer on her left heel (Figure 1), and multiple skin tears on her bilateral lower extremities. She was placed on an EHOB® Waffle® mattress and was referred to nursing for daily dressing changes to her heel. She was non-ambulatory and

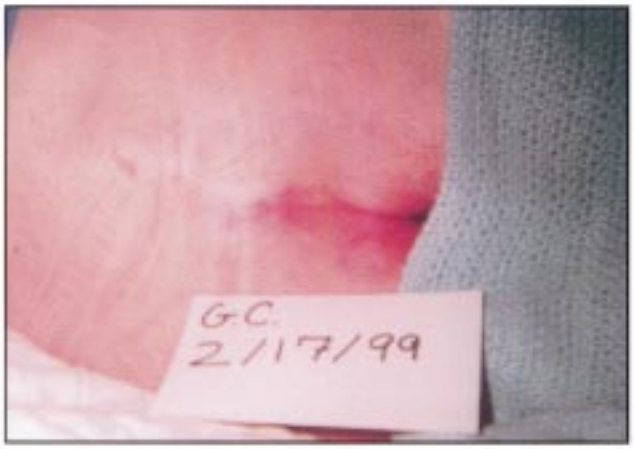

Figure 5. Sacral ischemic ulcer 100% granulated and healed to closure on January 1, 1999. No further breakdown on February 17, 1999.

using a standard 18"x16" wheelchair with sling upholstery and a foam wheelchair cushion. On October 9, 1998, Ms. G.C. was referred to the wound care team. Her sacral ischemic ulcer had progressed to a stage III, and she had multiple stage II areas on both buttocks (Figure 2). She was referred to physical therapy for wound care and was placed on the ROHO® DRY FLOATATION® Mattress on October 9, 1998. She also received daily physical and occupational therapy to improve functional status and address her seating and mobility needs.

Wound care consisted of silver sulfadiazine applied twice a day to the sacral and buttocks area. The heel was dressed once a day with petrolatum gauze and Kerlix™. On November 10, 1998, Ms. G.C. was discharged to nursing care. On November 30, 1999, her heel ulcer had closed (Figure 3) and the sacral ulcer had granulated approximately 40% (Figure 4). She was then discharged from rehabilitation services.

After her discharge Ms. G.C. required moderate assistance with activities of daily living, minimal assistance with bed mobility and was ambulating 150 feet with minimal assistance and a front wheeled walker. She continued to occasionally be incontinent of bladder and was alert and oriented to person and place. Her final Braden Risk Assessment score was 16 on December 15, 1998.

Ms. G.C. remained on the ROHO mattress until sacral wound closure on January 1, 1999. At that time, she was placed on the PRODIGY Mattress Overlay®.

She has had no recurrence of skin breakdown (Figure 5). She uses a manual 18"x16" wheelchair with a ROHO HIGH PROFILE® QUADTRO® wheelchair cushion to prevent any ischemic ulcers secondary to the seated position.

Conclusion

While initial support surface trials with the EHOB waffle mattress were unsuccessful, the use of the ROHO DRY FLOATATION Mattress allowed the long term care facility to provide a beneficial wound healing environment while facilitating continued functional gains and not incurring any additional electrical costs. With proper wound care, rehabilitation, and support surface utilization on the bed and in the wheelchair, Ms. G.C.'s wounds healed quickly and further complications were avoided.

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