

# Management of a Stage IV Ischemic Ulcer

## Clinical Case Study

### Introduction

*The prevalence and incidence of pressure ulcers (ischemic ulcers) in the home care environment is becoming increasingly evident. This provides homecare agencies with the challenge of preventing and treating complicated pressure ulcers as well as educating families on the importance of eliminating risk factors. The following case study involves the case management of a Stage IV pressure ulcer in the home.*

### Background

**M**rs. H.S. is a 84-year-old female with a history of Alzheimer's disease, degenerative joint disease, peripheral vascular disease (PVD), cerebrovascular accident (CVA) and osteoporosis. The patient was being monitored and cared for by home care professionals for a necrotic full thickness pressure ulcer to the coccyx for approximately three weeks. At this time, the pressure ulcer was surgically debrided to reveal a Stage IV ulcer which was essentially granular. The patient was then referred back to home care for local treatment and follow up.

### Management

**T**he wound to the coccyx measured 5cm x 6cm with a depth of 3cm (Fig. 1 & 2). On 10/07/94, the patient was placed on a Sofflex<sup>®</sup> Mattress System and local wound care was initiated. This included cleansing the ulcer with saline, packing with a calcium alginate dressing (three times a week) and securing it with a transparent adhesive film.

Due to the patient's age and medical history, there were a multitude of risk factors that had to be addressed in order to achieve optimum wound healing. The patient was on complete bed rest due to immobility. She was incontinent of stool, and had an indwelling catheter; however she did have a good appetite and was adequately hydrated.

The home care staff addressed all of these issues with the family, specifically the importance of nutrition, hydration, turning and repositioning, and incontinence management. The patient's daughter worked with the ET nurse and the physical therapist on turning and repositioning techniques including shifting and utilization of a turn sheet. The head of the bed was kept lower than 30 degrees, placing pillows under the

mattress to reposition instead of directly under the patient allowing adequate pressure relief to be achieved at all times. On 2/22/95, an order was received to start the patient on range of motion (ROM) to improve mobilization. The wound measured 2cm x 1cm with no measurable depth (Fig. 3). The patient's activity was increased to sitting for short periods of time. She received a ROHO<sup>®</sup> DRY FLOATATION<sup>®</sup> cushion and back support for her wheelchair to provide pressure relief during this transitional phase. Not only was pressure relief provided by the ROHO DRY FLOATATION product, but the ROHO back support offered sacral support and comfort.

Because the patient had been bed-bound for such an extended period of time her midline was posterior to normal. The seat-to-back angle was set for approximately 100 degrees to accommodate a lack of hip flexion and kyphosis. Ideally, the back support should be set at a larger angle due to her relatively fixed posture, but was limited due to frame type of the wheelchair.

The patient's ROM is expected to increase. A 25 degree tilt and space is also being utilized for proprioception. This helps to decrease the patient's fear when up in a chair due to the patient's present stature. Home care services

will continue to monitor shear forces and make adjustments as necessary. H.S. is presently allowed to be up in the chair at one hour intervals.

On 3/30/95, only two small openings, measuring 1cm in diameter remained (Fig. 4). Wounds were 100% granular, draining small amounts of fluid. The alginate and transparent film dressings were discontinued and a hydrocolloid wafer was applied to the ulceration and changed two times weekly. On 6/26/95, the ulcerations were completely epithelized (Fig. 5). The patient remained on the Sofflex<sup>®</sup> Mattress System without further skin breakdown, until her death from respiratory complications in November of 1995.



*Figure 1. Sacrum/Coccyx. Stage IV measured 5 cm x 6 cm x 3 cm. (Oct. 7, 1994)*



Figure 2. Sacrum/Coccyx. Stage IV. (Oct. 28, 1994)



Figure 3. Sacrum/Coccyx. Stage IV measured 2 cm x 1 cm with no measurable depth. (Feb. 22, 1995)



Figure 4. Sacrum/Coccyx. Stage IV measured 1 cm in diameter. (March 30, 1995)

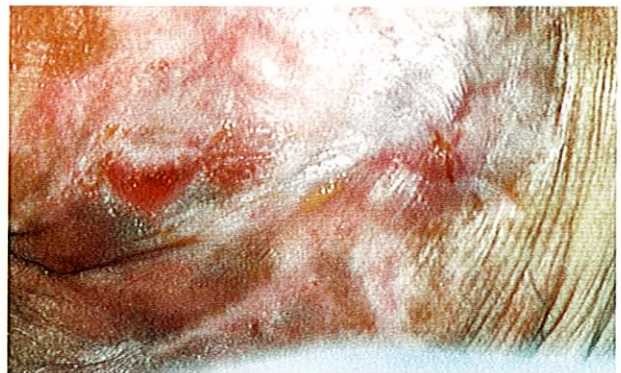


Figure 5. Sacrum/Coccyx. Ulcerations completely epithelized. (June 26, 1995)

## Conclusion

The Sofflex mattress provides adequate pressure relief to facilitate wound healing and prevents further skin breakdown. Because the system does not require electricity, pressure relief is maintained even in the event of a power failure. The Sofflex Mattress System is placed on top of a standard hospital mattress so no special linens are required. The low maintenance, cost-effectiveness and adaptability of the Sofflex Mattress System makes this an ideal system for home care use.

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