Use of a Novel Foam Technology Dressing to Progress Wound Healing in Chronic and Acute Wounds

Mary J Walker BSN, MSN, APN, FNP-BC

Self-employed Nurse Practitioner in geriatric care, contracted with Asbury Place CCRC, Maryville, TN

Introduction

Chronic wounds may take months to heal and can severely burden the healthcare system. It is imperative to manage new wounds aggressively (e.g. venous ulcers, diabetic foot wounds, abscesses, etc.) to prevent them from becoming chronic wounds. The introduction of a novel foam dressing to the repertoire of wound care products has supported wound healing in an environment that allows for less frequent dressing changes.

Method/Intervention

The foam dressing was evaluated on patients in a variety of settings from acute care to long-term care. One evaluation took place in a long-term care facility over 4 weeks. Participants agreed to photography of their wounds, as well as pre and post dressing views. There was no identifiable information to link participants to the photographs. The assessments included wound measurements with each dressing change. Products used included a commercial wound cleanser, a silver impregnated dressing† (if needed) and the foam dressing being evaluated.

Results

The results included reduction in tunneling and undermining, decrease in slough on wound beds and progression to granulation tissue and epithelialization. Photographs showed notable improvement in health of the wound bed and decrease in wound size. Dressing changes were reduced from daily to 2-3 times a week. This decreased wound management time per patient and of fewer dressings and products were required to manage a wound.

Conclusion

The foam dressing's advanced adherence technology secured the dressing well and increased patient comfort during dressing changes as well as during the actual weartime.

Bibliography

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Product Notations:

*AQUACEL® foam dressing
†AQUACEL® Ag ribbon dressing with strengthening fibers

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Case Study 1

71 year-old female with stage IV sacral pressure ulcer for 3 month duration and a history of Chronic Obstructive Pulmonary disease (COPD) with continuous oxygen, end-stage renal disease, low albumin, and fecal incontinence.

Day 1 of consultation: Wound measurements: 3.5 x 2.0 x 1.0cm with moderate level of exudate. Rolled wound edges with 0.6cm undermining noted at 6 o'clock position. Wound bed 25% slough and 75% granulation tissue and peri-wound skin is 25% clear. Wound protocol – pressure ulcer packed with ionic silver NaCMC ribbon dressing with strengthening fiber and covered with a new NaCMC foam dressing.

Week 1: Wound protocol continued with ionic silver NaCMC primary dressing and adhesive NaCMC foam dressings used as secondary dressings. Dressing conformed well to sacral location.

Week 3: Wound measured 2.5 x 1.4 x 0.5cm with 100% granulation tissue. Protocol continued.

Week 4: Wound measured 2.0 x 0.8 x 0.5cm. Wound showed much improvement and dressing stayed in place in this difficult-to-dress sacral location. Wound healed within few days post discharge.

Case Study 2

68 year-old female with Stage III Pressure Ulcer on Left Buttocks for a duration of 2 days. Co-morbidities include insulin-dependent diabetes mellitus, dementia, coronary artery disease and chronic kidney disease. Prior management included traditional foam dressings

Day 1 of consultation: Pressure ulcer measured 2.5 x 1.5cm with shallow depth and moderate exudate.

Week 1: New NaCMC foam dressing applied

Week 2: Pressure ulcer measured 2.5 x 1.5 x 0.1cm. Protocol continued.

Week 4: Wound measured 0.7 x 0.7cm. Patient referred to home health with protocol continued. Pressure ulcer healed within 6 weeks.

Case Study 3

69 year-old female with left ischium abscess post 24 hour incision and drainage (I&D). Patient co-morbidities include; type II diabetes mellitus, non-Hodgkin's lymphoma in remission, venous stasis and chronic lymphedema, and deep vein thrombosis with prescribed anticoagulant therapy, and fecal incontinence. Prior treatment included NPWT which was discontinued within 24 hours.

1st day of consultation: wound measured 6.7 x 7.8 x 0.2cm with undermining of 3.2cm at 3-9 o'clock. Moderate exudate and slough noted.

Week 1: 5 days post I&D. Ionic silver NaCMC ribbon dressing with strengthening fiber packed in wound and covered with NaCMC foam dressings.

Week 3: Wound measured 4.0 x 7.0 x 0.3cm. Granular tissue noted.

Week 4: Wound measured 4.0 x 7.0cm. Wound showed measurable improvement toward healing. Protocol continued post discharge to home health follow-up. Incontinence dermatitis resolved with topical cream.

Case Study 4

81 year-old female with Stage IV Pressure ulcer on right ischium. Duration of wound 4 months.
Clinical History: Alzheimers-type dementia, Parkinson's disease, adult failure to thrive, fecal incontinence. Wheelchair bound with ability to propel self.

Week 1: 1st consultation – new protocol using ionic silver NaCMC ribbon dressing with strengthening fiber and covered with a new NaCMC foam dressing. Wound measured: 0.8 x 0.9 x 0.3cm. Undermining noted. Minimal exudate.

Week 3: Wound measured 0.5 x 1.8 x 0.5cm with undermining at 12 o'clock of 1.5cm, 3 o'clock of 2.8cm and 6 o'clock of 1.4cm

Week 3: Photo of NaCMC foam dressing in place over right ischium

Week 4: Wound measured 0.5 x 1.3 x 0.4cm with undermining at 12 o'clock-6 o'clock of 0.5cm. Wound healed within 6 weeks.

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August 2012 AP-013032-US