Simple Changes in Wound Trauma Management Yield Significant Benefits for Everyone

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Introduction

Trauma is defined as an experience that is emotionally painful, distressful, or shocking that may result in lasting mental and physical effects. Trauma as a result of frequent dressing changes may be defined in four domains:

1. Trauma to the wound bed due to capillary disruption and debris that may remain in the wound bed following dressing changes

2. Trauma to the patient in the form of anticipatory pain and actual tissue disruption during dressing changes

3. Emotional trauma to the caregiver over time may result in job dissatisfaction

4. Economic trauma of dressing supplies, labor, cost of analgesics and antibiotics, and repeated hospitalizations

Wound Trauma

Gauze fibers left in the wound bed

Debris:

- Provides a source of infection
- Significantly impairs wound healing
- Debridement of the wound is necessary causing significant pain to the patient
Economic Trauma

- Use of pain medication can more than double the cost of dressing changes
- Reducing frequency of dressing changes and the associated nursing time significantly reduces the total cost per change

Trauma to the Nurse

Nurses may have increased feelings of powerlessness when they inflict pain on a patient during dressing changes. Non-traumatic dressing changes can increase positive feelings for the nurses.

For decades clinicians and researchers have written and debated about the benefits of a moist wound environment in enhancing epithelialization and speed of wound closure, reducing trauma to the wound bed, and reducing pain in the time period before, during, and after dressing changes. While innovation and improvements in dressing design and components have contributed greatly, wound dessication is still experienced by many patients through the use of non-occlusive dressing materials (gauze and other porous materials), and the use of Negative Pressure Wound Therapy (NPWT) or Vacuum Assisted Closure (VAC). Capillary extension into gauze or open-cell sponges can also lead to wound trauma at dressing changes which result in dressing residue remaining in the wound bed.
Case Study

Mr. P. was an 81-year-old with a history of pancreatic cancer, whose status post Whipple procedure was complicated by an abdominal wall abscess with fascial dehiscence. A fragile allograft mesh fragmented by pancreatic enzymes kept the wound wet and painful. The patient initially required Dilaudid IV for pain management during the dressing change, but after using contact layer* between the wound bed and the VAC foam, no analgesics were requested. The simple addition of the contact layer* allowed optimal moisture control and prevented granulation tissue disruption, which promoted rapid healing and eliminated pain. The dressing change experience was positive for the nurse, the patient, and his family. Progress was demonstrated with this simple and inexpensive intervention. The cost of expensive narcotics, white VAC foam, and more clinician hours were eliminated due to a simple, efficient, and effective intervention.

A key factor in the decision to choose a wound dressing is the interface between the wound and the dressing (contact layer)* in reducing the trauma and pain induced by caregivers during dressing change. This case outlines the simple interventions that can significantly reduce or eliminate all episodic wound trauma, and describes the benefits to patients and caregivers.

In conclusion, reducing trauma to the wound, patient, nurse, and facility is key in providing a holistic approach to wound care. By providing simple, effective and efficient intervention, you can significantly reduce wound trauma and increase positive outcomes for the patient, family, and facility.

* Restore Contact Layer Dressing, Hollister Wound Care, LLC.
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