

# The Use of Superabsorbent Containing Fluid Lock Dressing\* to Control Odor in Patients with Malodorous Ulcers in the Hospice Population


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# The Use of Superabsorbent Containing Fluid Lock Dressing\* to Control Odor in Patients with Malodorous Ulcers in the Hospice Population

## INTRODUCTION AND BACKGROUND

The management of odor in chronic wounds, especially in a hospice type environment is a major goal, because wound odor, and management thereof, has a very direct relationship to the patient's quality of life. Many types of dressings, and drugs have been used to manage wound odor, though there is no commonly accepted standard of care in this regard<sup>1-7</sup>. Optimum solutions to the problem are hard to find. Necrotic pressure ulcers, fungating cancer wounds, infected venous ulcers, melanoma nodular lesions are among the most malodorous wounds. In our practice we have been using a superabsorbent dressing which has been very effective in managing odor and also managing high levels of exudate with minimal maceration.

When patients have wounds that have malodor, their self-image can be eroded. Malodor may cause patients to feel unclean and not suitably presentable for social interactions. Odor perception around one's own wounds may also cause patients to suffer from depression and anxiety. A superabsorbent dressing<sup>8</sup> has been tested in the management of malodorous wounds.

Such wounds tend to have high volumes of exudate, thus the superabsorbent function of the tested dressings is very appropriate. More specifically, to the problem of odor, it is known that wound odors are at least partly caused by amines such as cadaverine and putrescine<sup>9,10</sup> and other amines which are positively charged at physiological pH. Such amines would tend to be attracted to the negative charges at physiological pH that exist on the polyacrylate polymer particles in superabsorbent dressings, and this may provide a mechanism of odor removal inherent in these dressings. The reported pilot study has been designed to probe the odor management property of this superabsorbent dressing.

## METHODS

For our study we chose patients who had wounds that had a combination of heavy exudate and odor. We asked patients who were able to rate their perception of odor on a scale of 1-10 (see reference scale) on a weekly basis. If patients were cognitively impaired, the Certified Wound Specialist (CWS) completed the scale. We also gathered data from the caregiver if appropriate.

## RESULTS

The dressings were found to significantly manage odor in three of the four patients. In one patient the wound odor was reduced, but not so as remarkably in the other three patients. All patients and caregivers reported major improvements in patient quality of life.

## DISCUSSION

In our view the ability of the superabsorbent polymer dressings to manage odor is a major improvement in wound dressing technology and more studies are indicated in a controlled manner to determine if these products provide an acceptable standard of care in the field of odor reduction.

### CAREGIVER MALODOR SCALE

- 0 = No odor
- 1 = Aware of small amount of odor able to change dressing without problem.
- 5 = Dressing not changed in a timely manner because of odor.
- 8 = Changing dressing engages the gag or nausea reflex.
- 10 = Unable to change dressing because of intensity of odor.

### PATIENT MALODOR SCALE

- 0 = No odor
- 1 = Fleeting awareness of small amount of odor with no psychological component.
- 5 = Beginning to feel self-conscious about wound odor. Attempts to mask odor with perfumes and colognes.
- 8 = Feelings of shame and being unclean, with some degree of anxiety and depression.
- 10 = Worst possible odor. Isolates self, self esteem crushed.

## CASE PRESENTATIONS

Case 1: FW is a 94 year old Japanese female with a terminal diagnosis of stomach cancer and fungating breast disease. Upon referral to our care, the patient described a strong odor and reported it as an "8" on the odor scale. Her granddaughter, the caregiver, also rated odor at an 8, and said she was regularly nauseated when changing the dressing. The use of the test dressing started on the first CWS visit day, in the second week, both the patient and the granddaughter rated the odor as a 2. At week three, the patient said she experienced only an occasional odor of "level 1" when she turned. No odor was detected, even when deliberately smelling the dressing removed from the patient. It was noted that the dressing had become loose on one edge, which could explain the occasional odor.

Case 2: KM was an 87 year old Japanese female with a diagnosis of failure to thrive. She was admitted with a Stage IV pressure ulcer on her left trochanter, where the wound had a cutaneous-cutaneous tunnel. The odor level on admission was an 8. We used the superabsorbent dressing throughout the days of her hospice care. Though the odor never completely resolved, it decreased to a five before her death.

Case 3: MA was a 64 year old Filipino female with a diagnosis of end stage CVA. She was admitted to our program with a Stage IV coccyx pressure ulcer. Culture of the wound showed infection. On admission to our program, the Case RN, CWS, and patient's daughter all agreed that the malodor was 10 on the odor scale. The superabsorbent dressing use was initiated, and the odor was decreased to a level 5 by the next visit. The pressure ulcer cavity was dressed with a silver dressing which also likely contributed to the odor control. The third visit which was the day before she died was evaluated as a zero on the odor scale.

Case 4: AN is a 68 year old Filipino male with a terminal diagnosis of prostate cancer. He presented with a large Kennedy Terminal Ulcer. His wife is the primary caregiver. At initiation of care, his wife rated the malodor at a 10. She said that she could smell the ulcer when she entered his room. She has a history of asthma and said that when the odor was a 10 she had difficulty with shortness of breath. After 7 days, there was a faintly perceptible odor when the dressing was changed. Both the CWS and patient's caregiver rated it at a 1.

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## PRODUCT NOTATION

\*Optilock Dressing, Medline Industries Inc., Mundelein, IL