Wound odour: principles of management and the use of CliniSorb

Clare Morris

Wound management in the context of palliative care presents a number of challenges that differ from wound management in other situations (Chaplin, 2003). Bale et al (2004) identify the challenges as:

- Identifying and treating the cause of malodour
- Maintaining relationships with patients who may feel isolated
- Coping with the physical effects of malodour in the presence of patients
- Coping with the distress of patients and their caregivers.

Malodour

Malodour is not exclusive to palliative care and malignant fungating wounds. Lindahl et al (2007) describe in their study the meaning of living with malodorous and exuding leg ulcers. They conclude that although they cannot always make the leg ulcer or smell disappear they can contribute significantly to improving the patient’s quality of life by seeing the human being beyond the ulcer.

Neal (1991) defines malodour as wounds identified by patients or practitioners as having an offensive smell. To detect odours or bad smells, molecules of a certain size are breathed into the nose, reaching and matching the olfactory receptors there and registering smells across a continuum from pleasant to unpleasant (Bale et al, 2004). Fungating malignant wounds

Wound malodour is often associated with fungating wounds (Figures 1 and 2). The term ‘fungating wound’ is often used interchangeably with ‘malignant lesion’. Both refer to the infiltration and proliferation of malignant cells through the epidermis of the skin (Collier, 2000). Naylor (2002) states that there is some confusion about the correct term to describe these lesions and that several descriptions can be found in the literature, but that the most commonly used term is malignant wound.

Tumours can grow very quickly, sometimes within 24 hours, and often have a cauliflower appearance. A fungating wound rarely heals due to its cancerous nature, but there are adjuvant therapies, such as hormone therapy, chemotherapy and radiotherapy, that can be used to slow down the growth temporarily (Draper, 2005).

Grocott (2000) explains that the loss of vascularity in fungating lesions is a major source of problems in this wound type due to the loss of tissue viability and resulting necrosis. She explains how anaerobic and aerobic bacteria proliferate in these conditions and may account for the malodour and profuse exudate. The mechanisms responsible for the malodour have not been established (Hampson, 1996).

Draper (2005) states that there is little clinical research based on the management of fungating wounds on which to base or guide nursing practice. She goes on to explain that most of the literature comprises experiential accounts and case studies written by experts, yet there is a lack of formal evidence-based protocols on which to base treatment of fungating wounds.

All practitioners involved with wound management, especially of fungating wounds, should adopt a holistic approach to patient care (Collier, 2000). The management of malodour following a holistic assessment falls into two main areas: psychological and physical management.

Psychological aspects of malodorous wounds

Naylor (2002) describes the psychological problems encountered by the patient with a malignant wound as:

- Body image alteration
- Denial
- Depression
- Embarrassment
- Fear
- Guilt
- Lack of self-respect and self-esteem
- Problems with sexual expression
- Revulsion or disgust
- Shame.

Abstract

The management of malodour in fungating wounds and chronic ulcers presents a number of challenges. This article examines the sense of smell and the development of fungating malignant wounds. It describes the psychological and physical aspects of managing malodorous wounds and how they impact on quality of life for the patient. It concludes with a focus on CliniSorb® – an activated charcoal dressing from CliniMed – and how the dressing impacts on the psychological and physical needs of a patient with a malodorous wound.

Key words: Charcoal dressing ■ Malodorous wounds ■ Psychosocial needs ■ Wound care

Clare Morris is Tissue Viability Advisor, North East Wales NHS Trust, Wrexham

Accepted for publication: February 2008
Young (2005) explores the effects of malodour caused by a fungating wound on patients’ body image and quality of life. She explains that patients with malodorous wounds often experienced anxiety about whether others can smell them, and also that malodour prevents intimacy with partners and patients often isolate themselves from others.

Malodour often affects the nurses caring for patients with malodorous wounds. Nurses have described malodour as causing them to feel nauseous on coming into contact with patients (Wilkes et al, 2003). Young (2005) states that nurses who understand the transition or journey from a normal to an altered body image may be better equipped to support and care for the patient with a fungating malodorous wound, for example, Selder’s (1989) transitional theory (Table 1).

Laverty (2003) points out that literature relating to the psychological issues arising for the patient and their family is limited. She also comments that patients with fungating wounds require sensitivity and understanding in their care. Lazelle-Ali (2007) argues that nurses may not have the ability or confidence to enable them to do this. A study of 71 palliative care nurses suggest that nurses struggle to come to terms with the effects of these wounds and feel helpless at times because of the enormity of the symptoms and the fact that there is no cure (Wilkes et al, 2003).

**Physical care in managing malodorous wounds**

The physical care of the malodorous wound is interlinked with the psychological care and can be described as managing the common malignant wound symptoms and their causes. Naylor (2002) describes the five main wound symptoms as:
- Malodour
- Exudate
- Pain
- Bleeding
- Pruritus.

Grocott and Moody (1993) describe the assessment of fungating wounds in three levels:

**Level 1** – involves the collection of baseline data about the patient and the wound. The outcome of level 1 assessment can be categorized as:
- Wound pathology, treatment and progression
- Patient/carer knowledge/acceptance of diagnosis/prognosis
- Wound’s emotional impact
- Wound’s social impact
- Patient environment, ability to self-care, informal support structures
- Level of formal support from health service.

**Level 2** – involves the application of critical thinking skills for data collection. The outcomes of this assessment may be categorized to assist in the development of a management plan and include:
- A statement of symptom control needs in relation to the wound
- Insight into patient, carer and multidisciplinary team priorities for wound care
- Reconciliation of differences in these priorities.

**Level 3** – involves the development of a management plan, taking account of the priorities of the patient, carer and multidisciplinary team.

It is essential that accurate records are kept of the assessment as they provide evidence of the plan of care for the patient and are crucial in monitoring progress and communication concerns (Griffith, 2004). As well as their clinical function, records have a very important legal purpose (Griffith, 2004).

There are difficulties quantifying and describing malodour, as an individual’s perception of smell is very subjective (Benbow, 2005). Haughton and Young (1995) devised a method for quantifying odour through the use of an odour assessment scoring tool (Table 2).

Browne et al (2004) looked at TELER (Treatment Evaluation by A Le Roux’s method) to record odour using a scale of 0–5 and a scale to measure the impact of odour to the patient. Grocott (2001) explains that wound assessment tools focus on objective wound measurement and that...
this system would be useful to evaluate wound dressing products by giving meaningful evidence in malignant fungating wounds (Grocott, 1998).

The management of malodour consists of three main elements (Grocott, 2000):
- Systemic metronidazole
- Topical metronidazole and/or antimicrobials
- Charcoal dressings.

Wound cleansing and debridement of necrotic tissue will also be required to help reduce the bacterial burden (Grocott, 2000).

**CliniSorb® Activated Charcoal Dressing**

Activated charcoal was developed by the Ministry at Porto Down in granule form. It is produced by carbonizing a suitable cellulose fabric by heating it under carefully controlled conditions. During this process, the surface of the carbon breaks down to form small pores. This results in an increase in surface area of the fibres and hence increases the ability to remove unpleasant smells (Thomas et al, 1998).

The use of charcoal cloth in wound management relates to its ability to adsorb small gas molecules and bacterial spores (Figure 3) making it a powerful deodorizer (Williams, 2000). CliniSorb® is an activated charcoal cloth sandwiched between viscose rayon (Morgan, 2004). Both sides are identical and the knitted viscose rayon is coated with polyamide (Figures 4 and 5) (Morgan, 2004). This is to stop the dressing adhering to the wound surface and to stop fibres coming away from the dressing.

Its ability to act as an effective odour control dressing impacts directly on a patient’s quality of life. Hampton (2003) demonstrated in her study of 20 patients that 50% of patients reported their odour had been eliminated entirely with CliniSorb®. She also demonstrated that 63% of patients said CliniSorb® had improved odour control and 37% said CliniSorb® was equivalent to their previous dressings. CliniSorb® can be used to control odour in fungating wounds, pressure ulcers, leg ulcers and diabetic foot. It can be used in moderately exuding wounds and in dry or lightly exuding wounds with the addition of a separate primary dressing to prevent adherence. It has been traditionally believed that CliniSorb® should only be used as a secondary dressing and that it would not be effective in adsorption when it became wet. This is not the case, and it has been shown to remain effective at 75% relative humidity (CliniMed, 2002). Furthermore, Hampton (2003) concluded from a pilot study carried out on 20 patients that those nurses who used CliniSorb® as a primary layer commented that malodour either improved or remained the same. Therefore, using CliniSorb® as a primary layer did not appear to affect the malodour controlling properties of the charcoal. CliniSorb® is soft and flexible and is conformable in curved body sites. It can be used either side down and can be reused for up to a week making it a very cost-effective charcoal option.

CliniSorb® is available in three sizes, but can also be cut to size without loss of performance (Morgan, 2004):
- 10 x 10 cm = £1.72
- 10 x 20 cm = £2.29
- 15 x 25 cm = £3.68

(March 2008 Drug Tariff)

Lee et al (2006) describe several disadvantages of charcoal dressings; for example, charcoal fibre particles breaking away into the wound, not being effective when saturated with exudates, and cost of treatment. However, these have been shown to be reduced with CliniSorb® (Hampton, 2003).

**Table 1. Selder’s transitional theory**

<table>
<thead>
<tr>
<th>Components</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disrupted reality</td>
<td>- Disruption of norm</td>
</tr>
<tr>
<td>- Initiates a life transition, e.g. a wound or disease</td>
<td></td>
</tr>
<tr>
<td>Uncertainty</td>
<td>- Absence of order, logic or reason</td>
</tr>
<tr>
<td>- Can include denial, body image disturbance, anxiety</td>
<td></td>
</tr>
<tr>
<td>Restructuring</td>
<td>- Giving up previous reality</td>
</tr>
<tr>
<td>- Acceptance of condition or new body image</td>
<td></td>
</tr>
</tbody>
</table>

From: Selder (1989)

**Table 2. Odour assessment scoring tool**

<table>
<thead>
<tr>
<th>Score</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong</td>
<td>Odour is evident on entering the room (6–10 feet or 2–3 meters from the patient) with the dressing intact</td>
</tr>
<tr>
<td>Moderate</td>
<td>Odour is evident on entering the room (6–10 feet or 2–3 meters from the patient) with the dressing removed</td>
</tr>
<tr>
<td>Slight</td>
<td>Odour is evident at close proximity to the patient when the dressing is removed</td>
</tr>
<tr>
<td>No odour</td>
<td>No odour is evident, even at the patient’s bedside with the dressing removed</td>
</tr>
</tbody>
</table>

From: Haughton and Young (1995)

**Figure 3. Interaction of CliniSorb® and a malodorous wound.**
Conclusion

The challenge posed in palliative care is not necessarily to heal wounds, but to improve the patient’s quality of life by managing symptoms such as malodour (Maund, 2008). These wounds can be extremely distressing for the patient and the family and the use of a charcoal dressing such as CliniSorb® can aid in the removal of the unpleasant smell.

CliniSorb® is a versatile, cost-effective and effective charcoal dressing, and is a consideration when deciding on the management for the individual patient with a malodorous wound.


ClimiMed (2002) data on file ref 905/0707


KEY POINTS

- The challenge posed in palliative care is not necessarily to heal wounds, but to improve the patient’s quality of life by managing symptoms.

- Malodour is not exclusive to palliative care and malignant fungating wounds.

- The management of malodour falls into two main areas, psychological and physical management.

- There are difficulties quantifying and describing malodour.

- The use of charcoal cloth in wound management relates to its ability to adsorb small gas molecules and bacterial spores making it a powerful deodorizer.