7.2 WOUND CARE

INTRODUCTION

Malignant skin ulcer and pressure injuries are common problems in the palliative care setting.

Malignant skin ulcers are the result of cancerous cells either from the primary cancer or metastasis invading the skin and its supporting circulatory and lymphatic systems, leading to tissue necrosis. Though malignant ulcers respond to anti-cancer treatments, they are often resistant to healing and do not the follow the predictable trajectory of healing. In this situation, it is important to address the psychosocial and spiritual concerns and maintain the patient's dignity, quality of life, autonomy, physical and functional capabilities and activities of daily living. The primary aim in such situations should be comfort rather than healing.

Pressure injuries are the result of persistent pressure on the skin primarily over the bony prominences leading to impaired blood flow and can lead to tissue necrosis. Pressure injuries often occur in patients with serious and life-threatening illness, neurological disorders, those with impaired physical functions, nutrition, poor posture or deformity. To prevent development of pressure injuries, it is important to identify individuals at risk and implement preventive measures. Adults with multiple risk factors identified during risk assessment with or without a validated scale are likely to develop pressure injuries

Pressure injuries are described in four stages:

- **Stage 1 Pressure injury:** Skin is intact with a localized area of non-blanchable erythema; may be associated changes in sensation, temperature, or firmness. In a dark-skinned person, this may appear just as change in colour or may not be visible.
- **Stage 2 Pressure injury:** Partial-thickness skin loss with exposed dermis is seen with no evidence of granulation tissue, slough or eschar. Fascia and deeper tissues are not visible. The injury may present as abrasion, blister or a shallow ulcer.
- **Stage 3 Pressure injury:** Full-thickness skin loss is seen with visible fascia with presence of granulation tissue. Slough and eschar may be present. Bone, muscles and tendons are not visible. The injury usually presents as a deep ulcer.
- **Stage 4 Pressure injury:** Full-thickness skin and tissue loss is seen with undermining or tunnelling of the skin. Fascia, muscle, tendon, ligament, cartilage or bone is visible. Slough and eschar may be present.

Unstageable pressure injury: If the extent of tissue loss or injury is not visible due to the presence of slough or eschar, then the pressure injury is unstageable.

In stages 3 and 4, due to significant tissue damage, there may be little or no pain.

The secondary complications are osteomyelitis, sepsis.

ASSESSMENT

- **Assessment** must determine the underlying cause of the wound, effectiveness of treatment and impact on quality of life for the patient and their family (***refer to the Guideline - Symptom Assessment***)
- Complete history should also include:
  - Physical and functional capabilities and limitations
  - Medications
  - Comorbidities - Diabetes mellitus, peripheral vascular disease, coagulopathy peripheral neuropathy
- Assess the nutritional status - ***refer to the Guideline - Nutrition and Hydration***
- Assess pain - ***refer to the Guideline - Pain Assessment***
- Assess potential for complications in malignant wounds
  - Catastrophic bleeding
  - Airway obstruction
- Assessment of symptoms associated with malignant wounds - malodour, discharge, pain, infection, bleeding, pruritus
- Assess psychosocial issues
- Assessment of risk factors - Use Braden Scale https://www.in.gov/isdh/files/Braden_Scale.pdf
- Wound Assessment
  - Location
  - Appearance - ulcerative/proliferative
  - Stage
  - Surface area/size of the wound
  - Depth - superficial or deep
  - Colour - black - necrotic, green/yellow - sloughy
  - Eschar formation
  - Exudate
  - Wound edges and skin/ area around the wound
  - Undermining or tunnelling
  - Evidence of fistula or sinus formation

RECOMMENDATION

- Wound care should be managed by a multi-disciplinary team (patient and family including caregiver, oncologist, palliative care team, family physician, home care nurse, dietitian, psycho-social counsellors, lymphedema therapist etc.)
- Develop and document an individualised care plan for adults with malignant wounds and at elevated risk of developing a pressure ulcer
- Avoid antiseptics such as hydrogen peroxide, povidone iodine, and sodium hydro chlorite, as they may cause tissue damage and pain
- Use topical antimicrobial agents for superficial wound infection and systemic antimicrobial therapies for deep and surrounding-wound infection
- Use hydrocolloids, hydrogels and occlusive/semi-occlusive dressings to enable autolytic process. Such dressings can help to achieve debridement of necrotic tissue in the management of malignant wounds and pressure injuries with small quantity of necrotic tissue
- Anticipate and manage temporary increase of odour and drainage induced by autolysis
- Consider the use of surgical debridement in the management of pressure injuries with large amount of necrotic tissue
- Surgical debridement should be avoided in the management of malignant wounds

MANAGEMENT

- **Correct the correctable**
  - Treat the cause - Surgery, chemotherapy, radiotherapy and hormonal therapy in case of malignant wounds
  - Correction of nutrition and hydration - refer to the Guideline - Nutrition and Hydration

- **Non-pharmacological management**
  - Address the psychological concerns, impact on body image and self-esteem of patient and provide psycho-social support to patient and family

- **Explanation and education to patient and family**
  - A trained and experienced health care professional should provide timely and individualised care plan to patients who are at elevated risk of developing pressure injuries and have malignant wounds

- Explain and educate the patient/family on management of cleaning and dressing of the wound
- Explain and educate the patient/family on the management of catastrophic bleeding (refer to the ***Guideline - Haemorrhage***)

- **Malignant wound management**
  - **Wound management**
    - Cleaning the wound - Use clean tap water, normal saline or home-made saline to gently irrigate/shower over the wound
    - Do not scrub the wound
    - Topical and oral metronidazole is useful for treatment of malodour
    - Consider use of analgesics ½ hour prior to dressing (if dressing is painful)
    - Apply topical metronidazole 2% applied OD - bd daily, directly to wound
    - Apply non-adherent dressing, e.g. tulle gras or cotton gauze soaked in vaseline or liquid paraffin, over topical metronidazole application to prevent dressing from sticking to the wound
    - In wounds with deep cavities, apply gauze soaked in intravenous metronidazole preparation and apply directly into the wounds
    - Use systemic metronidazole if there are extensive lesions, when better penetration is needed
    - In case of wounds with pseudomonas infection, consider silver sulfadiazine
    - Keep the wound always covered with dressing to prevent maggots
    - If maggots are present - bring turpentine-soaked gauze near the wound and remove the maggot as they wriggle out of the wound with forceps
    - Avoid systemic antibiotics as they can induce side effects such as nausea and diarrhoea
  - **Pain management** - ***refer to the Guideline - Pain Management Guideline***
  - **Nutrition management** - ***refer to the Guideline - Nutrition and Hydration***
  - **Haemorrhage management - *refer to the Guideline - Haemorrhage***
  - **Management of exudate**
    - Use normal saline or home-made saline to gently irrigate/shower over the wound
    - Do not scrub the wound
    - Use autolytic dressing/process to debride infected necrotic tissue
    - In low exudate wounds, ensure the following:
      - Keep the wound moist
      - Prevent adherence of the dressings to the wound
      - Prevent bleeding
      - Dressing - Amorphous hydrogels, sheet hydrogels, hydrocolloids
    - In high exudate wounds, ensure the following:
      - Absorb and contain exudates
      - Prevent dressing adherence in areas of lesion with decreased exudates

- Dressing - Adsorbent products such as alginates, foam dressings, starch copolymers, soft cotton pads

- **Management of malodour**
  - In wounds with malodour, ensure the following:
    - Wound cleaning
    - Reduce or eliminate odour
  - Appropriate treatment
    - Select dressings capable of absorbing drainage and odour
    - Use normal saline or home-made saline to clean the wound
    - Topical metronidazole to be applied with each dressing change
    - An absorbent hydrocolloid dressing and activated charcoal dressing should be applied
    - Consider antimicrobial dressings for infected wounds with odour
    - Seal the dressings to contain malodour
    - Change dressings at least twice a day and if necessary, increase frequency of dressing changes
    - Consider potential benefits of biologically natural remedies such as honey, sugar, live yogurt, turmeric, raw pulped papaya, tulsi when suggested treatments ineffective
  - Modify the environment
    - Ensure adequate ventilation
    - Use extra fans
    - Place charcoal briquettes and baking soda around the room
    - Consider using incense sticks (agarbathis), ginger grass, perfumes or sprays to mask odour; but check for nauseating effect on the patient
    - Remove soiled dressing, clothes and linen at the earliest from the patient's room
    - Use bleach or vinegar solution to wash soiled clothes and linen to remove the odour
- **Management of pruritus** - ***refer to the Guideline - Pruritus***
  - Promote skin hydration:
    - Increase fluid intake
    - Moisturise skin with lotions and creams
  - Humidify the environment
  - Avoid damage from nails or scratching
  - Encourage safe alternatives to scratching when urge is irresistible or persists:
    - Use gentle massage or gentle patting with flat of hand
    - Wear cotton gloves/mittens at night to prevent accidental scratching during sleep
    - Use loose clothing

- **Care of the skin/area around the wound**
  - Silicone polymers, zinc oxide/petrolatum inorganic compounds, acrylates, hydrocolloid or adhesive film dressing can be used to protect the normal peri-wound skin
  - Apply hydrocolloid strips around wound to secure tapes to; for preventing irritation from adhesives and exudates
  - Choose absorbent dressings when managing wounds with exudate to avoid contact with the peri-sound skin
  - For extremely fragile skin select non-adhesive products
  - Regularly inspect the area for new lesions
  - Minimize use of tapes

- **Pressure injury management**
  - **Prevention and management**
    - Do a risk assessment to identify individuals likely to develop pressure injuries
      - Significant limitation of mobility
      - History of previous pressure injury
      - Risk of nutritional deficiency
      - Inability to reposition
      - Presence of neurological condition
      - Considerable cognitive impairment
    - Skin assessment
      - Skin integrity in areas of pressure especially over the bony prominences
      - Any change in the colour, warmth, consistency, oedema and moisture of the skin
      - Presence of erythema - blanching or non-blanching
      - Consider skin assessment beneath and around medical devices e.g. intravenous cannula, subcutaneous cannula etc. for pressure injuries
      - Consider skin assessment in patients with localised or generalise oedema
      - Assess urinary incontinence
      - Consider repeated risk assessment in patients with non-blanching erythema
    - Skin care
    - Repositioning - ***refer to Repositioning in the Guideline - Care of the Bedbound Patient***
      - Patients assessed for risk of development of pressure injuries - change the position every six hours
      - Patient with elevated risk of development of pressure injuries - change the position every two hours if on regular mattress

  - If on pressure redistributing mattress - change the position every four hours
  - Patients unable to do the repositioning should be given help to do so
  - Document the time of repositioning
- Massage
  - Avoid offering massage or rubbing as a measure to prevent pressure injuries
- Barrier creams
  - Use a barrier cream to prevent pressure injuries in adults who are at elevated risk of developing a moisture lesion or incontinence associated dermatitis, as identified by skin assessment (such as those with incontinence, oedema, dry or inflamed skin)
- Moisturising creams
  - Use a moisturising skin lotion or cream to hydrate dry skin in order to prevent or reduce the risk of developing pressure injuries
- Redistribution of pressure
  - Advice the use of a high specification foam or pressure redistributing air mattress to patients who are at elevated risk of developing pressure injuries
  - Advise the use of high specification foam or pressure redistributing cushion to patients who use wheel-chairs
  - Use measures to reduce the pressure on heels who are at elevated risk of developing pressure injuries of the heel
- Mobilisation
  - Increase mobility as rapidly as possible and as tolerated
- Linen/clothes
  - Consider the use of silk-like clothes and linen to decrease shear and friction
  - Avoid wrinkling of clothes and linen to decrease the incidence of pressure injuries

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