

The impact of cancer and its treatment on wound healing

Symptoms of cancer and its treatments are both variable and vast. The symptoms that cause most distress to the individual and have detrimental effects on wound care include fungating wounds, lymphoedema, nausea and vomiting, fatigue, malnutrition and psychological issues. Many of these symptoms as well as implications of treatments have a deleterious effect on wound care management and on the individual. Chronic wounds can have a severe negative impact on patients' body image, their sense of self-worth and their lives. Caring for a patient with cancer with a chronic wound should encompass an individual, holistic approach.

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KEY WORDS

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A diagnosis of cancer and its subsequent treatments gives rise to a set of symptoms and problems that are specific to each individual experiencing the disease trajectory. The nature and severity of these symptoms depends on several factors, including the effect of the disease on the individual, the effect of treatments and the physiological and psychological response.

The intensity of cancer treatments can have major implications in relation to formation of wounds and wound care management. These wounds can lead to problematic long-term care. Cancer itself can give rise to wounds in the form of multiple skin lesions or fungating wounds that frequently have associated symptoms (Naylor et al, 2001).

Malignant wounds may occur in up to 5% of patients with cancer and in 10% of patients with metastatic disease (Seaman, 2006).

Cancer treatments and their impact on wound healing

Radiotherapy

Background. Radiotherapy is a localised cancer treatment that is used alone or in conjunction with other treatments such as surgery or chemotherapy. High-energy ionising rays act on cellular DNA, halting cellular replication. The subsequent formation of free radicals then damages healthy tissue, including the skin (Hassey and Dow, et al, 1997). Damage to DNA is repaired by enzymes, with either correction of the damage or fixation of the damage resulting in mutations that can lead to cell dysfunction, inability to proliferate or later carcinogenesis (McMillan and Steel, 2005). The level of damage equates directly with the level of radiation exposure.

Radiotherapy may be administered before surgery to treat undisturbed tissues and to shrink the tumour size, or after surgery to attack cancer cells that may have disseminated beyond the surgical margins. Thus radiotherapy may be used to cure by eradicating the tumour; to control the growth and spread of disease or to reduce and potentially relieve symptoms of advanced disease. About 60% of all patients with cancer will be treated with

radiotherapy at one stage during their disease (Otto, 2001).

As radiotherapy cannot differentiate between normal cells and cancer cells, normal cells within the path of the radiation beam will be affected, causing the patient to experience side-effects (Green and Kinghorn, 1995). Certain tissues are sensitive to radiotherapy, such as the lungs, testes, eyes and ovaries, thus only limited doses of radiotherapy can be given.

Wound healing can be seriously affected by radiotherapy. The long-term effects include skin atrophy, soft tissue fibrosis and microvascular damage, leading to a higher risk of developing problematic, non-healing wounds that are unamenable to surgical repair (Dormand et al, 2005).

Clinical manifestations

The response of healthy tissue in the treatment site produces the common side-effects of skin reactions, hair loss and gastrointestinal disturbances (Gates and Fink, 2001). Most of these problems are reversible, except for skin reactions and wound healing where radiotherapy can have long-term detrimental effects. Usually skin reactions occur about two weeks into the course of treatment. They depend on a number of treatment and patient factors, including the patient's age, skin integrity, type of radiation and amount of energy used, chemical and skin irritants used by the

patient, nutritional status, presence of skin folds and concurrent chemotherapy (Sitton, 1992). Skin reactions to radiotherapy may be mild, such as dry skin, but may vary from slight erythema to, at its worse, moist desquamation.

Nursing management

Treatment of dry desquamation is similar to erythema. Care of the skin should focus on preventing skin breakdown and relieving the symptoms of burning and itching. The skin should be moisturised daily with an emollient cream. If pruritis and/or pain are present, topical steroid creams and cooled hydrogel sheets should be applied (Naylor et al, 2001). Skin folds, moist areas and opposing skin surfaces subject to friction are likely to develop more intense reactions (Gates and Fink, 2001).

The chances of developing a moist skin reaction increases as higher doses of radiotherapy are given. The management of moist desquamation can pose somewhat of a challenge as reactions often develop in awkward places, such as the axilla, neck and perineum, where dressings cannot be easily applied (Faithfull and Wells, 2003). The care of moist desquamation skin reactions is based on the principles of moist wound healing. Management should include:

- ▶▶ Wound assessment, including the wound colour, its appearance and the presence of exudate and any signs of infection
- ▶▶ Wound management, including irrigation of the wound as well as dressing application.

The type of dressing used is dependent on the amount of exudate present. Common dressings include a hydrogel and a secondary dressing; foam sheets or alginates should be used if bleeding occurs (Naylor et al, 2001). Patients may need additional antibiotics if infection and excess exudate are present. Dressings should be changed daily.

The development of moist desquamation may cause many patients to have treatment postponed or completed prematurely. This is not desirable as it may impact on the patient's chances of survival.

Chemotherapy

Background. Chemotherapy is the use of cytotoxic drugs in the treatment of cancer. It is a systemic treatment, rather than localised therapy such as surgery or radiotherapy. Chemotherapy may be used in five ways:

- ▶▶ Adjuvant therapy is a course of chemotherapy used in conjunction with other treatments, such as surgery or radiotherapy
- ▶▶ Neoadjuvant therapy is chemotherapy given before surgery to shrink the tumour
- ▶▶ Primary therapy is the treatment of a localised tumour with only chemotherapy where another form of treatment could also be given
- ▶▶ Induction therapy is treatment with chemotherapy where no alternate treatment exists
- ▶▶ Combination chemotherapy is the administration of two or more chemotherapy agents.

Chemotherapy can cause significant wound-related problems. Skin reactions associated with chemotherapy include transient erythema, hyperpigmentation, photosensitivity, nail changes and palmar/ plantar syndrome.

Chemotherapy drugs affect both normal and malignant cells by altering activity during one or more phases of the cell cycle. Although both types of cells are destroyed by chemotherapy, normal cells have a greater ability to repair and recover than malignant cells. The susceptibility of malignant cells to irreparable damage is used to achieve the therapeutic effect of cytotoxic chemotherapy (Corner and Bailey, 2001).

Chemotherapy is delivered in planned schedules to enable normal cells to recover while killing a number of malignant cells with each administration. It is most effective in frequently dividing cells. Normal

body cells with rapid growth changes that are most commonly affected by chemotherapy agents include bone marrow, hair follicles, the mucosal lining of the gastrointestinal tract, the skin and germinal cells (Otto, 2001).

Clinical manifestations

The most common side-effects of chemotherapy drugs include mucositis, nausea and vomiting, skin changes, stomatitis, cardiac toxicity, haematopoietic toxicity (resulting in neutropenia, thrombocytopenia and anaemia), hypersensitive reactions, metabolic alterations, neurotoxicity, ototoxicity, pulmonary toxicity, renal system toxicity, reproductive system dysfunction and fatigue (Otto, 2001).

Chemotherapy can cause significant wound-related problems. Skin reactions associated with chemotherapy include transient erythema, hyperpigmentation, photosensitivity, nail changes and palmar/ plantar syndrome.

The administration of specific chemotherapy agents may result in an inflammatory reaction in tissue that has been previously irradiated. This can result in erythema, blisters, hyperpigmentation, oedema, vesicle formation, exfoliation and ulcer formation (Brighton and Wood, 2005). Neutropenia is recognised as being a potential problem for many patients who receive chemotherapy (Kirschbaum, 1998), and is defined as having < 1000 circulating neutrophil cells/mm² of blood. Neutropenia results from the destruction of neutrophils by chemotherapeutic agents that cannot distinguish between normal and malignant cells (Fisher et al, 1997) and can have grave implications for wound care. Because of a reduction in the number of neutrophils, patients who are neutropenic are at a greater risk of infection and having infected wounds (Kirschbaum, 1998).

Nursing management

Chemotherapy can adversely affect wound healing by inhibiting cell division and protein synthesis. Many chemotherapy drugs can also cause immunosuppression. This can inhibit

the inflammatory response in the early stages of wound healing (Lotti et al, 1998). Immunosuppressants have a profound negative effect on wound healing by inhibiting the immune response. This reduces the activity of neutrophils and macrophages, thereby increasing the risk of wound infection and delaying the removal of dead tissue and foreign bodies through phagocytosis (Cutting, 1994).

Chemotherapy may decrease the size of a fungating wound by destroying malignant cells, and in turn reducing pressure on nerves and blood or lymph vessels. This can also lessen exudate production and the tendency of the wound to bleed, potentially allowing the wound to heal (Brighton and Wood, 2005).

Chemotherapy causing extravasation and wound-related problems

A number of chemotherapy drugs are known to cause venous irritation. These drugs are known as vesicants. The extravasation of a vesicant drug may cause severe tissue damage that results in the formation of a non-healing necrotic ulcer. Tissue damage may be severe and long term. The tissue damage to the specific area where chemotherapy drug leakage occurs may cause significant pain, cosmetic disfigurement, nerve damage, loss of limb function or even amputation (Stoios, 1999).

Following extravasation of a vesicant drug, tissue ulceration normally forms over a few days, with maximum severity over 2–3 weeks. The degree of tissue damage can be related to several factors, such as amount of drug extravasated, drug concentration, site, needle insertion device and technique. The affected skin tissue appears swollen, tender and red; this can gradually progress to the development of a necrotic ulcer. Ulcers may become wider and deeper over a period of weeks to months and may involve tendons and nerves. Severe necrosis with pain involvement usually indicates the need for surgical intervention (Montrose, 1987).

Surgery

Despite certain limitations, surgery continues to be an important treatment

modality for cancer. Surgery has several applications in cancer management and treatment and is often the initial and preferred treatment of choice for many cancers (Moffat and Ketcham, 1994).

Surgical treatment of cancer focuses on five key areas:

- ▶▶ Primary treatment involves the removal of a malignant tumour and a margin of adjacent normal tissue
- ▶▶ Adjuvant treatment or debulking is the removal of a large tumour burden
- ▶▶ Salvage treatment is extensive surgery to treat local recurrence
- ▶▶ Palliative treatment involves surgical treatment of related symptoms
- ▶▶ Combination treatment combines surgery with other treatment modalities, such as chemotherapy, radiotherapy or immunotherapy (Otto, 2001).

Radical surgery often causes major deformities to the individual as well as loss of function. This can have major psychological implications for the patient as well as a severe impact on body image. This may result in depression and withdrawal from social interactions and normal daily activity.

The extent of cancer surgery has changed considerably over the past number of years. Previously, surgery tended to be quite radical involving large surgical excisions, such as mastectomy. Today surgery tends to be more conservative, such as a lumpectomy followed by further treatment such as radiotherapy. However, major surgery is still necessary in some cases such as those requiring a radical mastectomy. For these patients a wide excision or *en bloc* dissection removes the primary tumour, regional lymph nodes, intervening lymphatic channels and involved neighbouring structure is necessary (Otto, 2001).

Radical surgery often causes major deformities to the individual as well as loss of function. This can have major psychological implications for the patient as well as a severe impact on body image. This may result in depression and withdrawal from social interactions and normal daily activity. After surgery, patients with cancer often grieve over real or imagined changes in body image or self-worth. Cancer surgeries requiring the largest number of subsequent reconstructive surgeries include the head and neck (facial reconstruction), breast (reconstruction after mastectomy) and superficial tissues (skin graft after resection for melanoma) (Otto, 2001). Reconstructive surgery is carried out with the initial surgery for tumour removal, or following a period of time.

Clinical presentation

As a consequence of the intensity of the surgical treatment, such as a radical mastectomy, many patients develop significant side-effects. These side-effects often result in wounds that are complex and require a well-planned management strategy. Wound-related complications of surgery include:

- ▶▶ Haemorrhage and haematoma
- ▶▶ Sepsis
- ▶▶ Pulmonary complications
- ▶▶ Thrombophlebitis
- ▶▶ Shock (Corner and Bailey, 2001).

Nursing management

In order to reduce the risk of cancer wound complications, careful continuous assessment should be carried out on each individual wound.

There are a number of areas that should be focused on, such as:

- ▶▶ Wound aetiology — is the wound caused by radiotherapy or is it a fungating wound?
- ▶▶ Location, which can affect the rate of healing — is the wound at the site of the radiotherapy field?
- ▶▶ Size, depth and shape of wound
- ▶▶ Amount and nature of exudate
- ▶▶ Is there odour present?
- ▶▶ Type of tissue present — is the wound necrotic or sloughy and what specific colour is the wound?

- ▶▶ Signs of infection — local and systemic signs such as swelling, heat and redness
- ▶▶ Nature and type of pain
- ▶▶ Pain related to dressing changes and wound cleansing
- ▶▶ Conditions of surrounding skin and episodes of bleeding (Naylor et al, 2001).

Advanced cancer and wounds

Fungating wounds

Background

Fungating cancer wounds could be considered the most distressing type of lesion for patients with cancer, and indeed is the most distressing side-effect of the disease that is most apparent in patients with advanced cancer. These wounds are frequently strongly odorous with exudates that may be serous or blood, which can seep onto clothing and cause extreme distress (Neal, 1991).

Fungating wounds can have a huge negative psychological impact on the individual causing potential withdrawal from social activities and indeed daily life. A fungating wound in a patient with cancer develops from the extension of a malignant tumour into the structure of the skin, producing a raised or ulcerating necrotic lesion (Bennett and Moody, 1995).

Fungating cancer wounds are generally described when malignant tumours infiltrate and erode through the skin. Breast cancer, melanoma, bladder, colon, kidney, ovary, uterus, stomach, head and neck, and lung cancers can all potentially cause fungating wounds (Grocott, 1995) with fungating breast wounds being the most common. Fungating cancer wounds generally occur in older people and in the last six months of life. Patients with cancer can generally present with a number of symptoms, as fungating cancer lesions generally do not heal. Many of these symptoms can be long term and often persist until the patient dies.

Clinical presentation

Fungating wounds frequently have many associated symptoms: exudate; infection; slough/necrosis; bleeding; pain at wound site; itching and irritation; and malodour (Collinson, 1992). Exudate is considered

the most common problem of fungating wounds. Exudate is frequently distressing and embarrassing for the patient, resulting from the common occurrence of leakage onto clothing. The psychological distress caused by a heavy bleed can be devastating to the patient, family and the healthcare professional involved (Naylor et al, 2001). It can have devastating effects on the patient's social and personal life, and may result in hospitalisation if the wound tends to bleed heavily.

Nursing management

There has been little research into the incidence and management of fungating cancer wounds. By combining surgery with other treatments, such as chemotherapy, radiotherapy and hormone therapy, mortality rates and disease-free interval rates have increased significantly (Otto, 2001). These treatments may be administered separately or given as a combination. Local treatments include haemostatic agents and topical metronidazole, as well as systemic analgesics, antibiotics or clotting factors, as necessary (Regnard and Tempest, 1992).

The priority in the management of fungating cancer wounds, especially in advanced cancer, should be optimum patient comfort. It may be unnecessary to use dressings that promote optimum conditions for wound healing, as the priority of a dressing should be:

- ▶▶ Patient comfort and acceptability
- ▶▶ Minimising slough and necrotic tissue
- ▶▶ Minimising infection
- ▶▶ Containing odour
- ▶▶ Containing exudate (Naylor et al, 2001).

It is important to select the correct dressing as each type has different absorbent properties. The dressing should have minimal bulk, while preventing leakage and creating an acceptable cosmetic appearance (Thomas, 1997).

Lymphoedema

Background

Lymphoedema is an incurable, progressive condition characterised by chronic swelling, most commonly of a limb and sometimes the adjacent quadrant of the trunk (Corner and

Bailey, 2001). Lymphoedema is a frequent complication of cancer and its treatments, and it can have long-term physical implications for the individual.

Lymphoedema is categorised as either primary or secondary, although most patients with cancer develop secondary lymphoedema. Primary lymphoedema is caused by an intrinsic abnormality or insufficiency in the lymphatic system. Secondary lymphoedema occurs because of damage or changes in the lymphatic system resulting from an external cause (Morison et al, 2007).

Cancer surgery, radiotherapy and cancer metastasis can produce lymphatic injury that progresses to lymphoedema. Both infection and thrombosis are two common factors that can precipitate lymphoedema in patients who have had surgery and radiotherapy. Other factors that can cause lymphoedema include: postoperative wound complications including infection/seroma or radiodermatitis; infection of soft tissue of the arm; a tumour on the side of the dormant hand; and obesity (Corner and Bailey, 2001).

Lymphoedema can cause traumatic disfigurement to the patient with cancer, as well as pain and disability. The cancer survivor can be faced with psychological and psychosocial adjustment. Lymphoedema can develop at any time following a diagnosis and/or treatment for cancer and has been reported to occur many years later, especially in the case of breast cancer. Lymphoedema is defined as an oedema of more than three months duration that does not reduce on elevation (Moffatt et al, 2003).

Clinical presentation

With the exception of the early stages of lymphoedema (when pitting occurs with the application of pressure and the oedema may be reduced by elevation of the swollen limb), lymphoedema does not reduce significantly with elevation or with diuretic administration (Corner and Bailey, 2001). According to Veitch (1993), skin problems also occur at an early stage as well as in more complicated lymphoedema, including:

- ▶▶ Dry skin
- ▶▶ Callosities and corns
- ▶▶ Fungal infections
- ▶▶ Hyperkeratosis
- ▶▶ Acute inflammatory episodes (infective and non-infective)
- ▶▶ Contact dermatitis.

Nursing management

Treatments are focused on reducing the swelling, minimising complications and teaching the individual to self-care and maintain the improvements in the long term. Treatment is based on compression, exercise, skin care and massage (British Lymphology Society [BLS], 2001 a,b).

The components of treatment are combined according to the severity of the condition; whether the individual has no swelling but is known to be at risk of developing lymphoedema, has mild and uncomplicated lymphoedema, has moderate to severe and/or complicated swelling, or has oedema and advanced malignancy (BLS, 2001 a,b). Lymphatic massage is a simple form of skin massage used to encourage the movement of lymph along the skin from the swollen congested areas to normally draining areas (Corner and Bailey, 2001).

Manual lymphatic drainage (MLD) is designed to move fluid from swollen areas to those areas of the body where it can naturally drain; a self-massage technique has been developed to enable individuals to maintain and potentially gain further improvement (BLS, 2001 a,b). Surgical interventions for lymphoedema are not recommended in patients with cancer as they have not been proved to be successful in reducing and eradicating the condition.

Skin care is an extremely important component of lymphoedema management and the overall goal of care should be to promote skin integrity and prevent complications from the decreased oxygenation of tissues. The aim of skin care should be to improve the condition of the epidermis and dermis so that they are well hydrated and intact, and to reduce the risk of infection. Skin care should include factors such as: good daily hygiene; regular inspection of the skin; avoiding sources of skin

damage such as sun; razors and needles; reducing the risks of cuts and grazes by prompt cleaning; wearing comfortable loose clothing; daily application of bland emollients (non-perfumed); and the use of specific dermatological products (Corner and Bailey, 2001).

Vulnerable patients

Patients with cancer are in a vulnerable position in that they experience a number of symptoms secondary to their cancer that can have detrimental consequences to effective wound repair and management as well as to their lives in general. The most frequent and most debilitating symptoms include nausea and vomiting, malnutrition/ cancer cachexia and fatigue. All of these symptoms can invariably cause problems with nutritional intake and, potentially, malnutrition.

Patients with cancer who are experiencing nausea and vomiting can quite quickly become dehydrated and malnourished. Dehydration also adversely affects optimum wound healing by disturbing cellular metabolism and reducing circulatory blood volume. Malnourished patients are also at a reduced risk of wound infection because of a reduced immune response.

Adequate nutrition is vital for wound healing. However, achieving and maintaining a good nutritional status for patients with cancer is often difficult as 40–80% of all patients with cancer will experience some degree of malnutrition, which is a major cause of morbidity and mortality (Gates and Fink, 2001).

Malnourishment delays wound healing because it reduces collagen synthesis, while plasma proteins essential for effective wound healing may be used elsewhere to satisfy increased energy requirements (Senter and Pringle, 1985). Malnutrition is reported as the cause of

death in as many as 20% of patients with cancer (Otto, 2001). Metabolic changes affecting appetite and the use of nutrients cause many patients to lose weight before diagnosis (Ovenson et al, 1993).

Cancer treatments, such as surgery, radiotherapy and chemotherapy, can all further reduce food intake because of the development of side-effects such as taste changes, mucositis, pain, nausea and vomiting (Ottery, 1995). Protein-calorie malnutrition (when macronutrient intake cannot meet the body's metabolic needs) is the single most common syndrome resulting from cancer and its treatment. Protein-calorie malnutrition can result in a number of severe and life-threatening symptoms, including progressive weight loss, muscle wasting, skin breakdown, poor wound healing, potential intolerance to therapy, endocrine abnormalities, electrolyte and fluid imbalances and inadequate immune functions (Gates and Fink, 2001).

Despite major progressions in anti-emetics, nausea and vomiting appear to have remained a constant uncomfortable disruptive feature for patients with cancer. People with cancer are at risk of nausea and vomiting from several causes: the cancer treatments (chemotherapy, radiotherapy and surgery, including anaesthesia); progressive disease; and from other factors such as chemicals, central nervous system involvement, and vestibular and visceral effects (Brighton and Wood, 2005). Nausea and vomiting related to chemotherapy occurs in 20–40% of patients despite the constant use of anti-emetics.

Radiation-induced nausea and vomiting occurs in 10–100% of patients and is dependent on the site of irradiation (Gates and Fink, 2001). The gastrointestinal tract is particularly vulnerable to radiation damage and toxicity occurs when radiotherapy is directed at sites covering the oesophagus, abdomen and pelvis (Faithfull and Wells, 2003). Postoperative nausea and vomiting is a significant feature. Half of patients with advanced cancer experience nausea and vomiting. Sustained nausea and

Key points

- ▶▶ The intensity of cancer treatments can have major implications in relation to formation of wounds and wound care management.
- ▶▶ Wound healing is a serious complication of radiotherapy. The long-term effects include skin atrophy, soft tissue fibrosis and microvascular damage, leading to a higher risk of developing problematic, non-healing wounds that are unamenable to surgical repair.
- ▶▶ Chemotherapy can cause significant wound-related problems.
- ▶▶ Despite certain limitations, surgery continues to be an important treatment modality for cancer.
- ▶▶ Fungating cancer wounds could be considered the most distressing type of lesion for patients with cancer.
- ▶▶ Lymphoedema is a frequent complication of cancer and its treatment that can have long-term physical implications for the individual.
- ▶▶ Caring for a patient with cancer with a chronic wound should encompass an individual, holistic perspective.

an individual, holistic perspective. Assessment and management should involve the psychological, social, emotional and spiritual aspect of the individual patient.

Conclusion

Cancer causes a large range of distressing and traumatic problems, which are caused by the disease itself and the subsequent treatments. These symptoms or problems are

vomiting are associated with anorexia, taste changes, development of food aversions and weight loss with depletion of body stores of protein and fat causing protein-calorie malnutrition (Gates and Fink, 2001). Patients with cancer who are experiencing nausea and vomiting can quite quickly become dehydrated and malnourished. Dehydration also adversely affects optimum wound healing by disturbing cellular metabolism and reducing circulatory blood volume (Naylor et al, 2001). Malnourished patients are also at a reduced risk of wound infection because of a reduced immune response (Olde Damink and Soeters, 1997).

Fatigue is the most commonly reported symptom (Winningham et al, 1994), and for some patients is the most unpleasant symptom and the most distressing side-effect in connection with cancer and its treatment (Richardson et al, 1998). Cancer-related fatigue is a severe problem that is exacerbated by the treatments needed to control and cure the disease. Fatigue has important implications for cancer care as patients may have to discontinue treatments because of it. Also, the doses of some forms of treatment are limited by fatigue.

Patients with cancer have reported fatigue as the symptom that has the most negative impact on their quality of life compared with nausea, depression and pain (the symptoms ranked most highly by oncologists) (Curt et al, 2000). Stroemgren et al (2002) identified that more than 90% of patients in palliative care suffered from fatigue. Many patients may also become malnourished and anaemic while experiencing chronic fatigue.

Psychological issues

Cancer has a profound psychological impact on patients and their significant others. A diagnosis of cancer can have an immense negative impact on patients and their families. At least 25% of patients develop depression and anxiety, which may lead to a poor quality of life and reduced life expectancy. Patients with cancer are the greatest subgroup of patients who develop depression who have not had a previous history of the illness (Dergotis et al, 1988).

Although sadness and a sense of hopelessness may be considered normal reactions to the diagnosis of cancer, other factors can contribute to a depressed mood: the disease process itself; tests, treatments, side-effects and their management; medications; chemotherapy; or a biological depression not necessarily related to the present event. Many people consider a cancer diagnosis as a sentence of impending and painful death. Society still has a collective dread of cancer and considers that cancer means death and pain.

It could be considered that uncertainty is the hallmark of cancer. Throughout their cancer journey, patients are faced with constant uncertainties, such as treatments, side-effects of the cancer and therapies, remission and relapse. Treatment and side effects as well as the illness itself often necessitate patients with cancer to alter their lifestyle and normal daily living routines. Many patients may lose the ability to work and care for their family, which will then have detrimental effects on all family members.

The psychological impact of a chronic wound varies according to the patient's coping mechanism, the impact on his or her quality of life and the patient's perception of the wound. A fungating wound can have a devastating psychological effect on an individual, especially when it is in an area where it is visible. This could cause the patient to withdraw from society and become isolated. Close relationships may also be severely affected. The sharing of common facilities may cause severe embarrassment, and symptoms such as odour and excessive exudate may lead to a reluctance to go to bed with a partner because of the likelihood of leakage and staining of the patient's clothes or bedding during the night (Naylor et al, 2001).

Chronic wounds can severely negatively impact patients' body image, their sense of self-worth and their lives. Caring for a patient with cancer with a chronic wound should encompass

not mutually isolated, but in fact often coexist with other symptoms, having a domino effect on the others, such as the case of nausea/vomiting and anorexia/cachexia. As a result of the necessary intensity of treatments, the impact and severity of symptoms may fluctuate over time throughout the cancer journey.

Many of these symptoms as well as implications of treatments have a deleterious effect on wound care management and on the individual. Cancer wounds can result in major irreversible skin damage to the extent of tissue necrosis. They can cause extreme pain and discomfort, which can affect daily activity. They can be disfiguring, foul smelling and appear repulsive to the patient. This can result in an individual's self-esteem, body image and quality of life being severely affected.

Nursing care of the cancer patient with a chronic or fungating wound should not just focus on the physical aspects of care, but encompass communication skills and general advice on how to adapt and promote optimum quality of life. **WUK**

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