Policy on Wound Management

Introduction

This document is intended for all Nurses in Myhomecare.ie who have a responsibility for wound management. A wound can be defined as "an abnormal break in the normally intact covering of the body- the skin" Wounds may be classified as Acute "wounds that are healing as anticipated" or chronic "wounds that are failing toheal as anticipated or that have been fixed in any one stage of wound healing for a period of six weeks"

This document will address wound assessment, wound cleansing, dressing procedures, wound swabbing procedure, wound infection, audit, education and training. It is recognised that wound management requires a multidisciplinary approach and that this guidance does not cover every eventuality.

Purpose

This policy aims to guide nursing staff on a standardised approach to wound care within the framework. Myhomecare.ie recognises the need to have a clinical policy based upon current best evidence and practice to inform, guide and support staff in the management of individuals who have wounds whilst recognising that individual practitioners have their own responsibility to keep updated. The overall aim is to protect patients through the provision of a framework that supports professional practice at all levels in the treatment of wounds.

Wound Management

Wound healing is a complex process involving cellular and biochemical cascades which must take place in a specific sequence to enable restoration of tissue integrity and function. Wounds can happen to any individual of any age group causing pain and discomfort. The basis of wound management is to treat the individual as a whole, to achieve healing where possible and if not possible, to provide palliative care. There are many types of wounds including leg ulcers, pressure ulcers, surgical wounds, foot ulcers, burns all of which can be acute or chronic. Most wounds heal quickly and without incident. However the healing process can be delayed, if not halted, by an interruption or imbalance in the natural healing process, or by the overall physiological status of the patient.

Assessment

• With appropriate management a wound should heal at a steady rate identifiable through regular planned assessment.

• Assessment should include information from different sources. It should bring together general and specific information on the patient, the skin, the circulation and the wound itself, only in this way can an accurate diagnosis be made, risk factors evaluated and effective treatment commenced.

• Assessment may necessitate referral to other members of the multidisciplinary team such as Dieticians, Physiotherapists, Podiatry,

Assessment can be thought of on four levels

1. General patient factors that could delay healing – Patient assessment
2. Immediate causes of the wound and any underlying pathophysiology – patient and event/environmental assessment

3. Local conditions at the wound site – wound assessment
4. Potential consequences of the wound for the individual – assessment of possible outcomes
This should allow the nurse to identify and record:
• The healing potential of the individual
• Factors that will help formulate a treatment plan such as the general appearance of the skin, wound pain or allergies
• Factors that will delay healing such as general health, nutritional status, underlying disease, medication or incontinence
• The cause of the wound so that further problems can be prevented, such as immobility resulting in pressure sores, venous hypertension resulting in a venous ulcer or diabetes giving rise to a neuropathic ulcer
• Functional and psychological factors that will result from the wound or its treatment that may delay healing
• The effect on carers and family

Patient assessment
• As part of the patient assessment, factors that may delay wound healing should be documented and if possible minimised.
• Patient factors that have an effect on wound healing.
-Poor nutrition/malnutrition
As the body has the potential to heal itself it is of utmost importance that it is provided with the raw ingredients to allow it to do so. Nutritional status has a significant effect on wound healing. Lack of protein reduces the amount of cell generation, vitamin C is essential for collagen synthesis: other nutrients such as Zinc have also been found to play vital roles.
-Pain
Consideration should be given to pain in relation to wound management and a pain assessment undertaken in patients identified during screening. An individuals experience of pain is unique, it is complex and influenced by many factors. A systematic and rational approach to the assessment and management of pain is essential and is a specific role of the clinician that should be documented with other
aspects of the assessment
-Poor circulation
Poor blood supply will affect the health of any wound: reducing the supply of oxygen and nutrients required for healing as well as preventing the removal of fluid and metabolites. If you suspect circulatory problems a vascular assessment should be sought. Dependent oedema and immobility affect the circulation to the extremities.
-Smoking
The chemicals in cigarettes particularly nicotine, carbon monoxide and hydrogen cyanide can have a direct toxic effect on the cells necessary for healing. Nicotine is a vasoconstrictor that reduces nutritional blood flow to healing tissue, it also reduces macrophages, fibroblasts and proliferation of red blood cells. Nicotine increases platelet adhesiveness, increasing the risk of thrombotic microvascular occlusion and tissue ischaemia
-Drug therapy
Many drugs have an effect on wound healing: Anti-inflammatory drugs suppress the initial inflammatory phase of healing, corticosteroids suppress both multiplication of fibroblasts and the immune system. Other drugs found to have a detrimental effect are anticoagulants, antineoplastic drugs and anti-prostaglandins as

well as chemo and radio therapies.

-Depleted Immunity

Immune response from the patient can delay healing; this includes allergic response to topical applications and dressings.

-Age

Cell replication is slower and the skin's resistance to injury decreaseswith age.

-Obesity

Adipose tissue has poor vascularity. There is a greater incidence of wound breakdown in obese patients

-Psychological

Increases in hormone levels, particularly those related to stress havebeen found to have a detrimental effect on wounds and healing.

-Co-morbidities

Such as diabetes or vascular disease, which effect sensation and circulation and pose very specific problems requiring expert advice by the appropriate practitioner.

Wound assessment

• The aim of any assessment is to give a description of the wound appearance.
• Pressure ulcers should be graded according to the wound assessment chart
• Measurement forms an important part of documentation and can be achieved simply by the use of a tracing map or a wound care ruler.
• This information will enable the healthcare practitioner to select the correct type of dressing and allow the progress of the wound to be monitored.

Wound assessment should include:

-The general appearance and anatomical site of the wound
-The size of the wound
-The shape of the wound
-The depth of the wound
-The colour of the wound
-The amount, type and colour of exudates
-The presence/absence of infection
-Wound related pain
-The condition of the surrounding skin

• This information should be recorded on the wound care assessment tools
• A date should be set for the re-assessment.
• Photography of wounds (if available) should be done with the patient's written consent, and all photographs labelled and securely stored in a zipped folder. Photography consent forms/policy are available on the intranet.
• Wounds which appear to have a vascular cause should be treated with caution.

Wound Re-Assessment

It is essential for all health care professionals to set a deadline for reassessment of the wound; this should be a maximum period of monthly. This should be undertaken according to the individuals need, particularly if the

patients condition changes. Any alteration to the treatment regime will be discussed with the patient, the nurse should documented this

Documentation
Good record keeping is an integral part of nursing and is essential to the provision of safe and effective care. You should record all details of your assessment and reviews undertaken, and provide clear evidence of ongoing care in the form of a plan of care, which should be evaluated on a regular basis. Documentation should also include details of information given about care and treatment.

Dressing procedures
There is a requirement for a socially clean dressing procedure rather than a universal sterile procedure when treating chronic wounds healing by secondary intention e.g. pressure ulcers, leg ulcers. Sterile dressing procedure should still be utilised where the health care professionals' clinical expertise identifies a need, for example within a wound care clinic, in patients presenting with acute surgical wounds or who are particularly susceptible to infection due to their general health or in patients who have extensive chronic wounds.
Principles
1- The purpose of the dressing technique is to promote an environment conducive to wound healing and avoid cross infection.
2- Principles of Infection Control, should be applied when carrying out socially clean or sterile dressing procedures. These will include
• Guidelines for the wearing of gloves
• Guidelines for hand washing
• Wearing of P.P.E personal protective equipment
3- Nurses to have an understanding of wound types, signs of wound infection and have the knowledge and skills to identify patients who are suitable for socially clean dressing or sterile procedure.
Indications for use: Socially Clean
1- Patients with chronic wounds i.e. Wounds healing by secondary intention.
2- Where wounds are clinically infected a socially clean procedure is sufficient as long as principles of infection control are adhered to.
Indications for use: sterile procedure
1- Acute wounds healing by primary or secondary intention.
2- Patients with chronic wounds who have increased risk of infection e.g. patients who are immuno-suppressed, arterially compromised or diabetic
3- Patients who attend a wound care clinic.
4- Patients who have grade 3 / 4 pressure ulceration.
5- Patients with Arterial leg ulceration
Individual assessment of patient and wound is fundamental to identify those patients at increased risk.

Wound Cleansing
The aim of wound cleansing is to remove contamination with minimal pain to the patient and minimal trauma to the tissue/wound bed.

Wounds should be cleaned to;
• Remove excess exudates
• Remove slough and/or necrotic tissue
• Remove remnants of previous dressings
• To facilitate accurate assessment of the wound/wound bed.
For healthy wounds irrigation with a sterile solution of 0.9% sodium chloride is appropriate. For some wounds, showering or leg washing in tap water is appropriate.
The irrigation fluid should be body temperature. Wound healing is optimised when wounds are kept at body temperature. If the temperature of the wound drops, mitotic activity slows down thus reducing wound healing. Care should also be taken to avoid trauma to the wound or splash back. Repeated cleansing may do more harm than good by traumatising newly produced granulation tissue, by reducing the surface area temperature of the wound and removing exudates which may have bactericidal properties.

Debridement
Debridement is an accepted principal of good wound care. It is the removal of devitalised dead tissue or foreign materials. Removal of dead tissue is part of the natural healing process, until the wound is clean it cannot begin the process of growing new tissue. Left alone the body will remove thedead tissue but this can take time. The presence of dead tissue can stop you fully assessing a wound, delay healing and provide a focus for bacteria and infection, removal as quickly as possible is best practice. Debridement is complete when 100% of the wound bed consists of healthy granulation tissue.
To achieve this several methods of debridement may be required over a period of time. A number of debridement methods exist and these include;
• Autolysis- using the bodies own natural capacity to break down necrotic tissue. In wound care this is encouraged by the use of dressings which promote a moist wound healing environment.
• Mechanical debridement- loose tissue can often be removed from the wound by gentle irrigation.
• Biological (Larval)- Maggot therapy
• Surgical debridement- this is extensive and includes debridement to bleeding tissue, this procedure is performed in the acute environment by a surgeon.
• Sharp debridement- using a scalpel and scissors, conservative removal of dead tissue. This is a specialist procedure and the Health Care Practitioner will be required to have undertaken a Sharp debridement course.

Exudate Management
Exudate plays a vital role in wound healing, acute wound exudate has beneficial properties; chronic wound exudate may inhibit healing
• The volume and nature of exudate provides information about the wound and should be included in any assessment. This will include, colour, viscosity (thickness), amount and odour.
• A wound should be moist and not wet.
• Attention should be paid to preventing maceration of the peri-wound skin, and in necessary a skin protector/ barrier may be used.
• High levels of exudate does not necessarily mean infection is present: if the fluid is of low viscosity (thin) it may be secondary to underlying oedema which may respond to elevation and/or medication.

• Strike through of exudates allows passage for bacteria in/out of the wound

Wound Colonisation and Infection
Many wounds will have bacteria present, as part of each wound assessment
the practitioner should assess the wound for signs of actual infection. Nurses should be aware of the factors that indicate infection and the stages of the wound infection continuum before treatment.

Colonisation
• Many wounds, especially if chronic, are colonised by a variety of bacteria which may be potentially pathogenic.
• These colonising bacteria may exhibit no apparent harmful effect and although many wounds become colonised by a diverse range of bacteria, infection is not an inevitable consequence.
• Usually, colonised wounds do not require specific antimicrobial therapy.
• A wound covered with slough may harbour significant quantities of bacteria that can act as a potential focus for microbial spread and infection; this should be therefore removed as soon as possible. Distinguishing between colonisation and infection is important, as wounds colonised with bacteria will heal without the need for antibiotics.

Infection
• Infections occur when micro-organisms cause damage to the body tissue either by there presence, or through the production of poisonous substances (endo and exotoxins)
• A positive wound swab result does not necessarily mean that the wound is infected.
• Signs and symptoms of an infected wound include-
-Erythema
-Oedema
-Increased exudate levels
-Offensive odour
-Pain
-Pyrexia
-Delayed healing
-Discolouration
-Friable granulation tissue
-Unexpected tenderness
-Pocketing at the base of the wound
-Bridging of soft tissue and epithelium
-Wound breakdown
- Cellulitis

The use of Antibiotics
Wounds satisfying the criteria specified above usually require treatment with antibiotics. Care should be taken that there is no invasive infection or sepsis. The choice of antibiotics should be based on microbial sensitivity testing whenever possible and should be modified according to any known allergy. A topical antimicrobial

dressing will also be helpful in reducing surface bacteria. Nurses should follow the indications for use and only utilise silver dressings for a two week period.

Infection control

The key measures that help prevent wound infection/colonisation include,

- Hand hygiene, before and after handling wounds and dressings.
- Wearing gloves/Aprons
- Masks, eye protection or facial shields should be worn if appropriate to protect mucosal membranes.
- Using a wound dressing that is appropriate to the wound and that will promote healing.
- Changing the dressing when indicated and whenever the barrier effect has been impaired
- Disposing of waste correctly.

In the home situation any clinical waste should be placed in a black bag which is securely fastened then placed in the dustbin for disposal with the household waste.

Dressing choice

There are two different categories of dressings;
Primary – This is in contact with the wound bed.
Secondary – this is not in contact with the wound but covers the primary dressing.

Staff should be able to discuss their rationale for the choice of dressing and justify this in the patient documentation; patient choice and acceptability must be taken into account. There should also be consideration of any known contact sensitivities/allergies.

Dressings should be cost effective in relation to wear time and where possible products should be evidence based.

The ideal dressing should,

- Maintain high humidity at the wound/dressing interface.
- Remove excess exudate.
- Allow gaseous exchange.
- Provides thermal insulation.
- Be impermeable to bacteria.
- Be free of particles and toxic wound contaminants.
- Allow removal without causing trauma to the wound.

Choice of dressing, method of debridement and the optimum wound healing environment should be created using modern dressings.

Patient centred and self care

Patient and carers should be made aware of their wounds and the potential risk and/or complications. Patient education has been shown to improve the quality, frequency and efficacy of dressing changes, compliance as well as treatment and prevention of recurrence. Treatment and care should take into account the patient's individual needs and preferences and carers and relatives should have the opportunity to be involved in discussionswhere appropriate.

Patients should be encouraged to maintain their independence and attend either the GP surgery or a wound care clinic when possible.

Clinical Procedures

Clinical procedures have been developed in order to maintain a quality service.

- Socially clean dressing procedure
- Sterile dressing procedure
- Removal of sutures/staples
- Wound swabbing techniques

References

•An Bord Altrainais (2000) Scope of Nursing and Midwifery Practice Framework. An Bord Altranais; Dublin

•An Bord Altranais; (April, 2000) The Code of Professional Conduct for each Nurse and Midwife. An Bord Altranais; Dublin

•An Bord Altranais; (December, 2000) Guidance to Nurses and Midwives on the Development of Policies, Guidelines and Protocols. An Bord Altranais; Dublin.