

Pressure Ulcer Management

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With a growing number of frail older patients, pressure ulcers have unfortunately become commoner. It is therefore of paramount importance that these are managed in the most appropriate manner. A description of the current evidence or lack of it is given in this review.

Pressure ulcers are usually the result of sustained pressure on parts of the body such as the heels, trochanteric and sacral areas. The main risk factors contributing to pressure ulcer formation are acute illness, injury or sedation. The two main groups of patients most susceptible of sustaining pressure ulcers are frail older patients and patients with spinal cord injuries.

Frail older patients have thinner skin, are more likely to have a lower body mass index, and may be malnourished and immobile due to various neurological and musculoskeletal pathologies. Because of the phenomenon of an ageing population, pressure ulcers are becoming increasingly prevalent.

It must be emphasized that pressure ulcers can in the majority of cases be prevented. Most doctors tend to underestimate the importance of a pressure-ulcer risk assessment, and this task is commonly delegated to nursing staff who use validated tools such as the Waterlow scale.¹

In those patients who have developed pressure ulcers, the latter must be categorised according to four internationally recognised stages, stage I being the least severe and stage IV being the most serious.

Management

Stages I and II are managed conservatively. This involves basic nursing care such as changing the patient's position regularly and avoiding friction when the patient is moved. Special support surfaces such as cushions and mattresses may be used according to the perceived risk and availability of such resources. Regular aseptic cleaning of such wounds with physiological saline and mild soap will prevent them turning septic. Incontinence should be managed concurrently.

For pressure ulcers in the more advanced stages, removal of damaged tissue or debridement will keep the

wounds free of damaged, infected or dead tissue that will delay the wound healing process. Debridement may be surgical, mechanical, autolytic, enzymatic, chemical or using larval therapy (sterile maggots).

Dressings²

There are a variety of dressings on the market that are used according to the stage and severity of the ulcer in question. The objective is to keep the wound itself moist and the surrounding skin dry. Stage I ulcers may not require a dressing. Stage II ulcers are usually managed with hydrocolloid or transparent semipermeable dressings that retain moisture, thus encouraging skin cell growth. For ulcers in a more advanced stage, more specialised dressings are used.

An ideal dressing would:

- Allow excess exudate to be removed from the wound surface
- Provide a moist micro-environment
- Be sterile/contaminant free
- Not shed dressing material in the wound
- Reduce wound pain
- Be easy to remove and apply
- Not cause allergic reactions
- Not cause trauma when removed
- Be impermeable to micro-organisms
- Provide thermal insulation

There is no dressing that satisfies all the above criteria, and available dressings can be categorised into five basic categories:

1. Contact layers (e.g. Tulle gras, knitted viscose, silicone-coated fabric): prevent adherence to the wound bed and allow free drainage of exudate. Indicated for superficial or lightly exuding wounds.
2. Passive dressings (e.g. films, foams, and hydrogels): create a local wound environment conducive to healing. Indicated for wounds with exudate or to prevent contamination or control odour.
3. Interactive dressings (e.g. hydrocolloids, alginates and products

containing carboxymethylcellulose fibre): form a gel-like covering on wound surface that may promote healing.

4. Active dressings (e.g. Physiologically active components, skin grafts, tissue-engineered products): directly influence the physiology or biochemistry of the wound healing process
5. Antimicrobial dressings (e.g. Iodine, chlorhexidine, silver and honey).

There is insufficient research evidence to guide clinicians' decision making about which dressings are most effective in pressure ulcer management. Despite this statement, expert consensus recommends using modern dressings e.g. Hydrocolloids, hydrogels, hydrofibres, foams, films, alginates and soft silicones rather than basic dressing types e.g. Gauze, paraffin gauze and simple dressing pads.

Antimicrobial agents

The role of antimicrobial agents in the treatment of pressure ulcers remains unclear. This is due in part to the uncertainty around the issues of whether bacterial presence is an important factor in wound healing. It has been suggested that systemic antibiotics should only be used as a last resort when topical interventions have failed to produce healing.³

The most commonly isolated bacteria are aerobic organisms e.g. Staph.aureus, Streptococcus species, Proteus species, Eschericia coli, Pseudomonas, Klebsiella and Citrobacter species.⁴ Complications of infected ulcers include osteomyelitis and septicemia.

Topical agents

Topical agents e.g. Antibiotics, antiseptics and disinfectants are sometimes used on pressure ulcers. These agents are divided into three categories:

1. Lotions with antimicrobial

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properties e.g. hypochlorites, hexachlorophene, potassium permanganate and gentian violet. These are mainly used to irrigate or cleanse wounds.

- Preparations designed to stay in contact with the wound for a longer period of time e.g. Creams, ointment and impregnated dressings such as topical antibiotics (mupirocin, fucidic acid, and neomycin), and silver sulphadiazine.
- Products that can be used either to cleanse or stay in contact with the wound for a longer time period e.g. Povidone iodine, chlorhexidine, benzoyl peroxide and hydrogen peroxide.

Mobilising, positioning and repositioning

As immobility is a significant risk factor for both the development of pressure ulcers and a contributory factor in delayed healing, mobilising, positioning and repositioning interventions should be considered for all individuals with pressure ulcers. It has also been suggested to avoid positioning directly on pressure ulcers or bony prominences.

Nutrition

Although malnutrition is positively correlated with pressure ulcer incidence and severity⁵, there is no evidence to support routine administration of nutritional support or supplementation to patients with pressure ulcers to promote their healing. In patients who have detected nutritional

deficiencies, these should be corrected.

It must be emphasized that all the above recommendations should be considered in the context of the patient's general health status, acceptability and comfort. The needs of informal carers should also be considered in management decisions. ☐

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