

Management of draining wounds: an Indonesian perspective

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Abstract

Management of draining wounds can be especially challenging and in Indonesia must be considerate of the patient's psychological and spiritual needs. In addition, the patient's financial status and their ability to pay will determine treatment choices. In this article, we will outline the need for some creative and low-cost innovations for management of complex draining wounds in Indonesia. Like other countries, our goals of care focus on identifying wound aetiology, factors which will impact on wound healing as well as optimising containment of the wound drainage and wound bed preparation and interventions for improving the patient's quality of life.

Introduction

Indonesia has a population of 245.6 million and growing. The average life expectancy is 71.2 years; 56.6% of the population lives on less than \$2 a day. Access to health care is generally on a user-pays system, with some local government insurance for the extremely poor and employers also providing some level of health insurance. Health management is in the main decentralised and comes under local government control. It is estimated by the World Health Organization¹ that the average per capita expenditure on health by the government is \$33 per year. Nursing education is varied, with most nurses only having high school education with a diploma and nurses with higher education are in the minority. The number of university-educated nurses is estimated at being less than 2%². There is no central national registration of nurses. Nurse specialisation is relatively new to Indonesia. Enterostomal Therapy Nursing Education Programmes (ETNEPs) have been available since 2005 and have since then graduated over 80 Indonesian nurses.

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Major national catastrophes such as earthquakes, tsunamis, volcano eruptions and terrorist attacks, plus the trauma related to motor vehicle accidents and the 'tsunami' of diabetes-related health problems have impacted on wound management resources and demands. The cost of modern wound dressings and devices is prohibitive for the average Indonesian. The daily challenge for practitioners is to attempt to incorporate best practice principles whilst using resources at hand. This article aims to highlight some of the innovative and affordable practices that have been adopted by enterostomal therapy (ET) nurses in Indonesia. Many of these nurses run private nursing clinics which are licensed by the local health authority.

Wound management in Indonesia

The management of draining wounds in Indonesia has much in common with that in other countries. However, for Muslim patients, heavy exudate is "not *halal*"³ and uncontrolled leakage from the wound dressing or appliance is perceived as "dirty" and adds to the patient's physical and spiritual burden, especially when they are preparing for prayer (*shalat*). So it is imperative that excessive exudate and odour are well contained.

The literature states that exudates contain a variety of substances including water, electrolytes, nutrients, inflammatory mediators, white cells, protein-digesting enzymes, growth factors and waste products⁴. However, it is important to ascertain the aetiology of excessive exudate or why there has been an increase in exudate production. Common causes relate to infection, fistula or

changes in oncotic pressures associated with endocrine disease, congestive cardiac failure, renal or hepatic disease and malnutrition. In addition, the type, amount, colour, consistency and odour of exudate need to be assessed and documented. A significant problem associated with heavily draining wounds is maceration of the peri-wound skin and loss of skin integrity. The optimal goal is comprehensive assessment and treatment planning, which should focus on the individual patient.

In order to simplify and enhance wound management of draining wounds, a three-pronged management strategy known as the "3M" approach was introduced to Indonesian nurses. The principles of 3M approach include: wound cleansing, debridement of necrotic tissue and selection of appropriate topical therapy. Wound cleansing is important and the aim is to reduce infection risk and/or control infection. Removal of excessive exudate and protection of the peri-wound skin will also prevent maceration and skin damage. Irrigation is the most common method employed for wound cleansing and gentle antiseptic soap may be used to remove heavy exudate, odour and dressing materials from the wound and adjacent tissues. The goal of cleansing is not only to make a wound clean, but also to make a patient feel fresh and clean.

The goal that underpins the management of necrotic tissue is debridement and autolytic debridement or conservative sharp wound debridement are most commonly employed. The selection of appropriate topical dressing or device is important for optimising containment of exudate or odour. The dressing or device must be considerate of the wound characteristics and the needs and financial resources of the patients. Routine use of topical negative pressure therapy is relatively uncommon in Indonesia because it is too expensive for most patients. Drainage containment devices such as ostomy bags or modifications of these appliances are most commonly used to manage draining wounds of all types and for all anatomical locations. A frequently used, inexpensive topical treatment, which promotes moisture balance within the wound and allows easy removal of old dressings is a zinc-based paste composition called Metcovazin™. This topical ointment is locally produced and contains metronidazole, vaseline, zinc and nystatin. Gauze is impregnated with Metcovazin™ and this is used as a primary wound contact dressing.



Figure 1. Open nephrectomy wound with faecal drainage.



Figure 2. Skin barrier around wound.



Figure 3. 'Home-made' appliance using hydrocolloid barriers, double-sided tape and plastic irrigation sleeve.



Figure 4. The appliance in situ.

Clinical cases

The following case studies demonstrate the challenges associated with complex wounds and exudate management and some of the creative innovations used in Indonesia to manage these problems.

Case 1

The patient had a surgical wound breakdown with bowel perforation and faecal fistula formation following a left nephrectomy. The patient was referred to the ET nurse for management of the wound and faecal output. The hospital had limited stoma supplies and the ET nurses retrieved hydrocolloid skin barriers from available ostomy products. Using these hydrocolloids barriers, double-sided adhesive tape and a colostomy irrigation sleeve, an appliance was created to contain the output and protect the peri-fistula skin. This allowed accurate measurement of the faecal drainage and the odour was controlled. Obviously medical management of the patient continued, but the nursing care greatly enhanced the patient's immediate sense of wellbeing and reduced the pain and fear related to frequent dry dressings.

Case 2

This baby was born with gastroschisis, an abdominal wall defect, and an exposed section of gut which was not covered with peritoneum was the presentation. The parents had difficulties finding the financial recourses to pay for the operation. The costs of dressings and appliances was an additional burden. The ET nurse modified a sterile, two-litre urinary drainage bag to use as an 'appliance' in order to keep the exposed abdominal contents protected, moist and



Figure 5. Urine drainage bag over abdominal wall defect.

facilitate exudate drainage. The urinary drainage bag was cut open at the distal end and the bag positioned over the tumour to provide a snug-fitting, sterile 'dressing'. The exudate drained via the attached tubing into another receptacle. As most urinary drainage bags contain a non-return valve at the junction of the tubing and bag, it is important to cut or disable the non-return valve prior to application of the bag dressing to the wound.

Conclusion

In Indonesia, the financial resources of the patient impacts hugely on their ability to afford necessary medical or surgical procedures that would potentially save their lives and improve their quality of their life. Even basic health monitoring devices such as blood glucose measuring machines are unaffordable for the average person with diabetes. Having access to affordable nursing management can mean the difference between life and death and a huge difference in their quality of life whilst living with a wound. The ability of wound clinicians to be creative and innovative in their approach to the management of complex draining wounds is paramount.

References

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