Evaluation of two non-adherent povidone-iodine dressings in clinical practice: results of qualitative data regarding performance and ease of use

KEY WORDS
- Dressings
- Infection control
- Iodine
- Survey results

Povidone-iodine (PI) dressings have a long history of use in wound care as a topical antimicrobial option. They are generally safe and efficacious for use in low-exudate wounds that have signs of, or are at risk for, critical colonisation. INADINE™ (PVP-I) Non Adherent Dressing (KCI) has been used in clinical practice for the treatment of wounds for over 30 years. Studies have found the dressing to be both efficacious and cost-effective. Recently a comparator non-adherent PI dressing, Povitulle® (CD Medical), was introduced to the market. To better understand the delineation between the use of the dressings in practice, a survey was conducted to compare INADINE Dressing to Povitulle from a clinical perspective, focusing on ease of use and overall performance. Clinicians reported INADINE Dressing is easier to use and more clinically effective than Povitulle, suggesting that INADINE Dressing could provide better value as a PI wound dressing choice.

Iodine is a highly effective topical antimicrobial that has been used clinically in the treatment of wounds for more than 170 years (Han and Maitra, 1989). It has a broad spectrum of antimicrobial activity with efficacy against bacteria, microbacteria, fungi, protozoa and viruses (Han and Maitra, 1989). Povidone-iodine (PI) dressings have a long history of use in wound care as a topical antimicrobial option. They are generally safe and efficacious for use in low-exudate wounds that have signs of, or are at risk for, critical colonisation.

PI has many characteristics that make it an effective agent for wound-healing, including broad antimicrobial spectrum, lack of resistance, efficacy against biofilms, good tolerability and an effect on excessive inflammation (Bigliardi et al, 2017).

However, PI does have limitations, especially in people with thyroid conditions (Bigliardi et al, 2017). In addition, other antimicrobials, such as silver, require the presence of exudate to release the active antimicrobial (Woo, 2012). PI, on the other hand, is effective in dry conditions; therefore, it is typically considered for use on low-/no-exudate wounds (Woo, 2012). In these wound conditions, the wound bed can become fragile, requiring gentle protection. Dressings should therefore be nonadherent and not absorbent, to prevent sticking to and damaging the wound bed during dressing wear and change.

INADINE™ (PVP-I) Non Adherent Dressing has been used in clinical practice for the treatment of wounds for over 30 years. Recently a comparator non-adherent povidone Iodine dressing (Povitulle®) was introduced to the market. To better understand the delineation between the use of the dressings in practice, a survey was conducted to compare INADINE Dressing to Povitulle from a clinical perspective, focusing on ease of use and overall performance. Qualitative data analysis reveals that healthcare providers consider INADINE Dressing easier to use and more clinically effective than Povitulle.

A randomised, controlled trial of three dressings — N-A (a non-adherent, knitted, viscose filament gauze), INADINE Dressing and Aquacel (an advanced hydrofibre dressing) — found that a

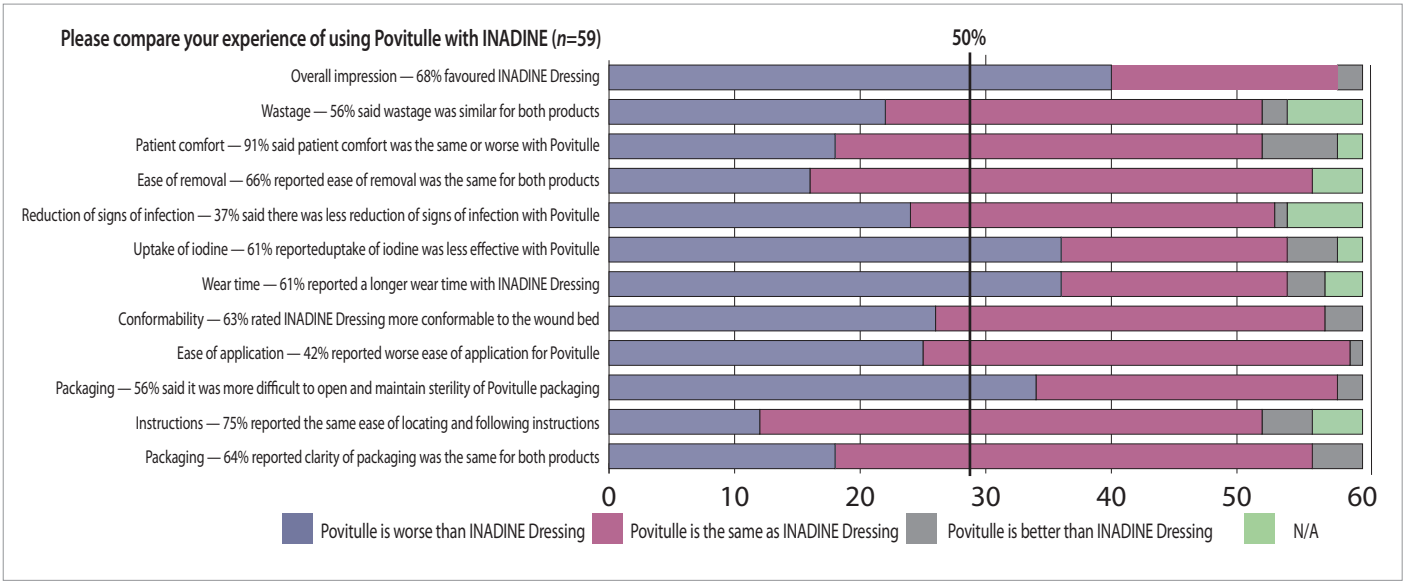

Figure 1. Detailed results from clinicians' survey

greater proportion of patients randomised to N-A dressings withdrew from the study (34.9% versus 29.1% Aquacel and 19.4% INADINE Dressing). Otherwise no significant difference was found between them for percentage healed by 24 weeks, mean time to healing, recurrence at 12 weeks, or incidence of adverse events (Jeffcoate et al, 2009). However, the cost associated with the provision of dressings was £14.85 for N-A, £17.48 for INADINE Dressing and £43.60 for Aquacel, and the higher cost of the advanced dressing was not offset by the fewer dressings required (Jeffcoate et al, 2009). Therefore, when an antimicrobial dressing is required and exudate levels are low, INADINE Dressing presents a more cost-effective option for wound healing than more 'advanced' dressings.

INADINE DRESSING AND POVITULLE

INADINE Dressing consists of a low-adherent knitted viscose fabric impregnated with a polyethylene glycol (PEG) base containing 10% PI; equivalent to 1.0% available iodine. The composition of the dressing minimises adherence to the wound bed, thereby reducing the risk of damage to the granulation tissue at dressing removal and, in clinical practice, has been shown to reduce pain for patients (Sibbald et al, 2011; Gordon, 1993; Campbell and Campbell, 2013).

In a clinical evaluation study, 90% of patients reported no adherence to the wound bed and no pain at dressing change with INADINE Dressing (Campbell and Campbell, 2013). Furthermore, 85% of patients preferred INADINE Dressing to other dressings their wounds had been managed with, and the non-adherent surface eliminated the need to apply wound bed–protection products, which add to the cost of care (Campbell and Campbell, 2013).

As PVP–I is released from INADINE Dressing, the dressing will change colour from orange to white. The colour change provides an indicator of how frequently dressings should be changed — typically 3 to 7 days in low-exudate wounds — preventing unnecessary dressing changes, when compared to other dressings (Han and Maitra, 1989). This could also improve cost-effectiveness in treatment. Povitulle is also a non-adherent dressing with a comparable composition to INADINE Dressing (10% PI).

Anecdotal reports from clinicians using the newer dressing reported that performance was different, despite the seemingly similar nature to INADINE. A survey was initiated to better understand what they were experiencing.

METHOD

In June 2017, a group of 59 clinicians, with experience of using both INADINE Dressing and Povitulle in daily practice, participated in the survey. All respondents were employed as community nurses, hospital nurses or podiatrists, and were responsible for treating a wide range of wounds. Respondents were based across four NHS regions: Scotland (46%), the south of England (29%), Wales (13%) and London (12%).

The clinicians were asked to compare INADINE Dressing and Povitulle on a number of criteria: ease of removal of the dressing from the packaging, ease of application, wear time, release of iodine from the dressing, adherence to the wound bed on dressing removal and patient comfort. The study also

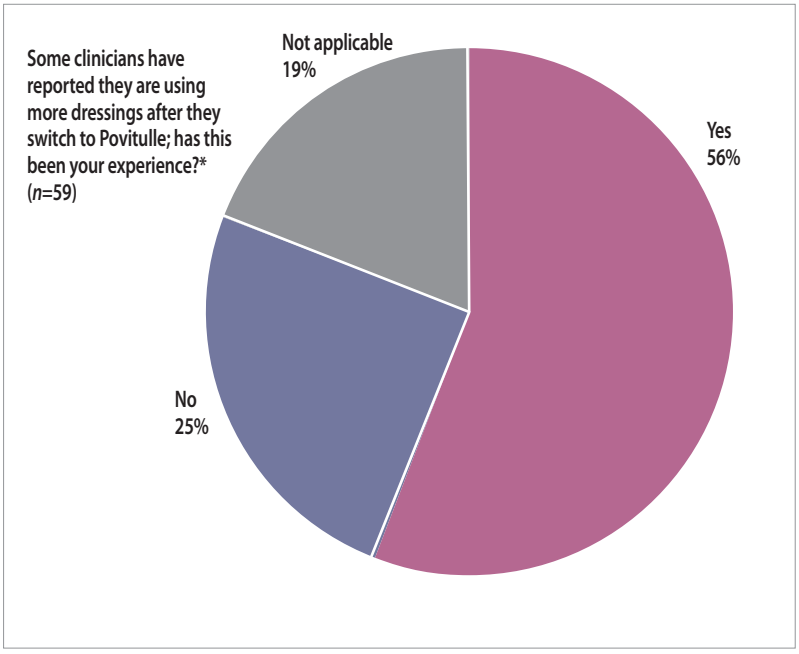

Figure 2. Increase in dressing use with Povitulle

compared the overall number of dressings used to treat the wound with each product.

RESULTS

INADINE Dressing received the highest number of positive responses, with 68% (40) of clinicians rating the INADINE Dressing better overall than Povitulle, wound contact layer and the performance of the antimicrobial PVP-I. Some of the key findings (for more detail, see *Figure 1*):

- 63% rated INADINE Dressing as more conformable to the wound
- 61% reported a longer wear time with INADINE Dressing
- 68% reported that overall they felt INADINE Dressing performed better from a clinical perspective.

Furthermore, 56% of clinicians have reported they are using more Povitulle dressings after they switch from INADINE Dressing (*Figure 2*). Respondents were also given the opportunity to provide free-form comments, which have been grouped by theme:

- Povitulle is stiffer and doesn't conform (10 comments)
- Povitulle does not maintain wear time (6 comments)
- Overall poor quality of Povitulle (8 comments)
- Cheapness of Povitulle (7 comments)
- Povitulle packaging is harder to open (11 comments)
- No difference between brands (3 comments).

CONCLUSION

Although further studies would be needed to prove clinical significance, these results suggest that INADINE Dressing is easier to use and could provide better economic value in terms of longer wear time and the number of dressings needed to treat the wounds. Ease of dressing application, removal and maintenance are key to evaluating a dressing beyond its clinical effectiveness (Baranoski and Ayello, 2008). Further, NICE recommends ease of use as an important factor for consideration when choosing a dressing (NICE, 2016). Better clinical effectiveness and ease of use with INADINE Dressing, combined with the dressing's long wear time, results in higher cost-efficiency, even when compared to dressings that are less expensive per unit. The results of clinician evaluation of ease of use in this survey further support use of INADINE Dressing. WUK

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