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Advazorb® foam range: providing clinical performance and cost-effectiveness

The use of advanced wound dressings currently presents a costly burden to the NHS. Subsequently, clinicians need to ensure that such dressings are used appropriately and are clinically effective. This article discusses the merits of foam dressings within wound care and describes three clinical case reports using Advazorb® foam dressings (Advancis Medical) in the treatment of acute/chronic wounds. These foam dressings include a range of wound care solutions, which have been found to be clinically effective while potentially providing financial benefits without compromising quality of care.

Leanne Cook

KEY WORDS

Foam dressing
Exudate
Wound management
Advazorb® foam dressings

Effective management of wound exudate is key to promoting successful wound healing (White and Cutting, 2006). Wound exudate is produced in response to a complicated interaction between: wound aetiology, wound healing physiology, wound environment and compounding pathological processes (World Union of Wound Healing Societies [WUWHS], 2007). However, wound fluid is also known to assist healing by preventing the drying out of the wound bed, aiding migration of tissue-repairing cells, providing nutrients for cell metabolism and assisting in

autolysis (WUWHS, 2007). Therefore, the accurate management of exudate levels is vital and often at the forefront of practitioners' minds when prescribing wound management regimens.

Dressings have both a prophylactic and therapeutic role, by protecting the surrounding skin (White and Cutting, 2003). Excessive fluid needs to be

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removed to ensure that the peri-ulcer skin does not become macerated or eroded. However, simultaneously, dressings need to maintain a moist wound environment at the wound surface to allow healing to occur. Clinicians need to have knowledge, experience and tests to determine wound aetiology, comorbidities and current wound status in order to guide management (WUWHS, 2008).

Following accurate assessment and treatment of underlying causes, where possible, foam dressings are often utilised to manage moderate to high levels of exudate. Foam dressings provide many of the characteristics of an ideal dressing,

as they are designed to (Thomas, 2008):

- » Maintain a moist environment
- » Provide thermal insulation
- » Manage exudate
- » Allow gaseous exchange
- » Provide a barrier for bacteria
- » Allow atraumatic dressing changes.

Like many modern wound dressings, foam dressings have advantages over simple dry gauze (Vermeulen et al, 2005), as they provide the moist wound environment known to be required to promote wound healing (Jones, 2005). However, one major disadvantage with modern wound dressings is the cost implications. While cost is an important factor to consider in health care today, it should not override quality of care (Department of Health [DH], 2010). Studies have shown that pain, odour and exudate impact directly on patient quality of life (Vowden and Vowden, 2003). It is therefore vital that exudate is appropriately managed.

Wound dressings account for about £116 million of prescribing costs in primary care in England each year, with foam dressings being one of the most commonly prescribed wound management products, accounting for 19% of the total £116 million annual spend (National Prescribing Centre, 2010). Currently, the NHS is facing the most significant and complex change it has ever seen, while also trying to reduce costs and maintain the highest

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standards of care. The NHS White Paper *Equality and Excellence: liberating the NHS* (Department of Health (DH), 2010) and the accompanying paper, *From Good to the Great* (DH, 2009), both set clear objectives in terms of quality, cost-effectiveness and improvement in health care and health outcomes.

Advazorb® (Advancis Medical) is a comprehensive range of patient-friendly, absorbent foam dressings presented in non-adhesive and atraumatic silicone adhesives. In the author's opinion, this hydrophilic foam dressing range provides an opportunity to reduce cost without compromising clinical/quality outcomes, and has been specifically designed to overcome the complex challenges of managing exudate while protecting 'at risk' fragile skin. Advazorb Silfix® and Advazorb Silflo® have a soft silicone contact layer, which has been proven to protect the surrounding skin, provide atraumatic dressing changes and comfort during dressing wear (Barrett, 2009; Hampton, 2010).

New Advazorb® range

- ▶ Advazorb non-adhesive foam dressings
- ▶ Advazorb Silfix, soft silicone faced adhesive foam dressing
- ▶ Advazorb Silflo, bordered foam dressing with soft silicone wound contact layer.

The Advazorb range is available in both regular thickness for moderate to high exudate, and 'Lite' versions for light to moderately exuding wounds.

There are many foam dressings on the market, all of which absorb fluid in a variety of ways according to the brand. Many have hydropolyers with the foam which absorb the fluid into the structure of the foam. Additionally, some have the capacity to wick horizontally, potentially increasing absorbency as the fluid is spread through the whole of the dressing. Furthermore, some foam dressings are able to 'breathe off' the moisture that they absorb through a permeable backing. This, again has the capacity to increase the absorbency of the dressing, referred to as the moisture vapour transfer rate (MVTR). Some

foam products have adhesive boarders or silicone-lined wound contact layers.

Thomas (2010) independently evaluated the absorbency of market leading foams and found that most of the foam products examined (Allevyn® [Smith and Nephew], Biatain® [Coloplast], Mepilex [Mölnlycke Health Care], Tielle® [Systagenix], Cutimed® Siltec [BSN medical], Medifoam [Biopol] and Versiva® [ConvaTec]) were similar in terms of absorbency, but had marked differences in terms of MVTR and retention. He concluded that although absorbency is important in foam dressing performance, the moisture vapour permeability of a dressing plays a key role in determining its total fluid-handling capacity. Advazorb dressings has a MVTR rate of 2600–2700g/m²/24hours and has been proven in independent testing to have absorbency and fluid retention rates comparable to market leading foams (Figure 1).

The absorbency capacity of foam dressings directly relates to wear time, as once exceeded, the dressing becomes saturated and ineffective. There has recently been an emergence of super-absorbent dressings, designed to control large volumes of exudate. These new dressings have a different action to traditional foams, as they are designed to swell in size as the dressing absorbs exudate. Their fluid-handling capability is impressive, providing the practitioner with much needed solutions to managing wounds with high levels of exudate. However, the disadvantages of these dressings are that they absorb large quantities of fluid which will increase weight and bulk as they absorb, this can make them uncomfortable to wear. The author believes that there is a potential that if exudate levels reduce, the super absorbent dressings could cause the wound bed too become too dry resulting in delayed wound healing. Thus, for moderate to highly exuding wounds,

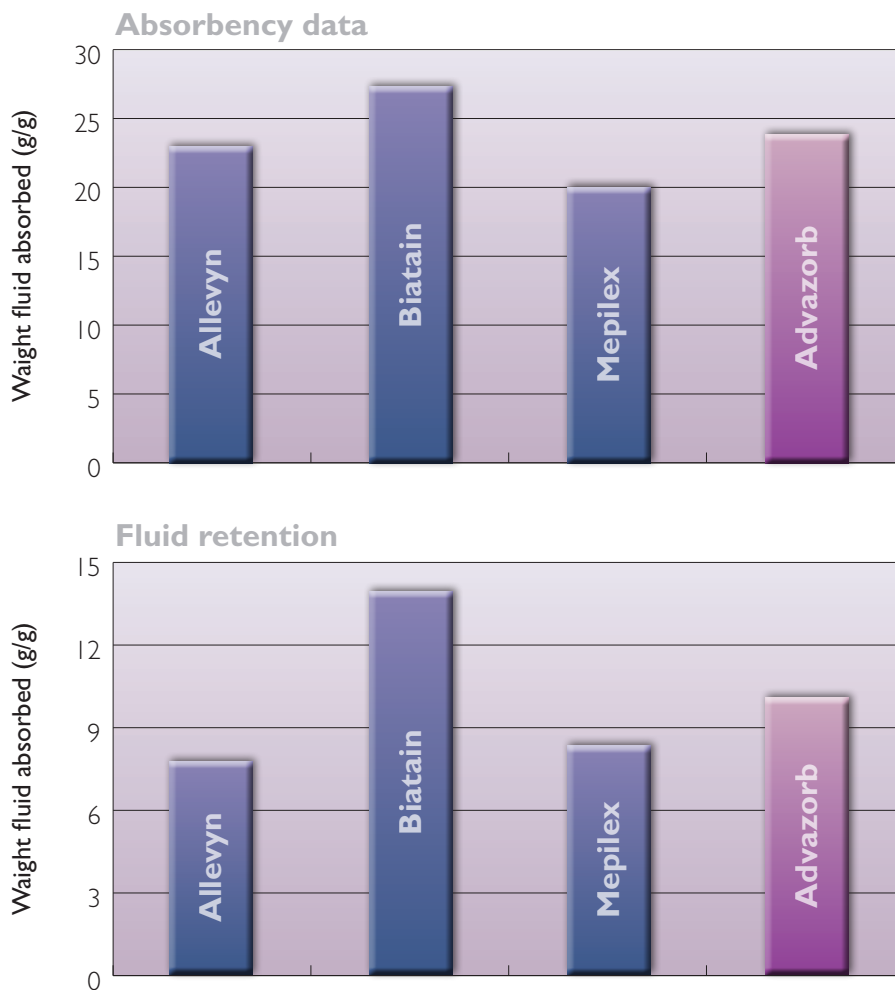


Figure 1. Independent test data.



Figure 2. Ulcer at presentation.



Figure 3. Mr W's ulcer at four weeks since referral.



Figure 4. Fully healed after eight weeks of treatment.

in the author's clinical experience, foam dressings provide the perfect balance between fluid-handling capabilities and maintaining moist wound healing.

In this clinical evaluation, the Advazorb range has been shown to control exudate effectively while maintaining a moist wound environment, while also being comfortable making dressings of difficult areas like the malleolus or digits possible. Advazorb Silfix promotes wound management by providing ideal protection of fragile tissue under compression therapy, while ensuring that moisture levels are maintained at an ideal optimum to promote wound healing and pain-free removal at dressing changes. The following cases reports demonstrate the use of the dressings in clinical practice.

Case reports

Case one

Mr W presented with a painful leg ulcer, which had been present for three months. The ulcer appeared to be superficial in depth, but the wound bed had approximately 90% dehydrated slough visible, which was turning into eschar (Figure 2). The surrounding skin appeared discoloured and fragile. On assessment, Mr W had a full complement of pulses with an ankle brachial pressure index (ABPI) of 0.95 and a normal triphasic Doppler tone, indicating no problems with peripheral arterial disease. However, there were signs of venous insufficiency with mild oedema and visible varicosities.

Mr W sometimes complained of pain, especially at dressing change. The ulcer was diagnosed as being venous in origin and he was started on 4-layer compression bandaging to reduce the venous insufficiency and promote healing. Activon™ tulle dressings (Advancis Medical) were used to rehydrate the slough and eschar. These were topped with Advazorb Silfix soft silicone faced adhesive foam dressings, to ensure that the wound bed was kept moist while simultaneously coping with any increase in exudate caused by the honey rehydrating the wound bed. Advazorb Silfix soft silicone is also designed to minimise pain and trauma



Figure 5. Infected toe in newly-diagnosed patient with diabetes.



Figure 6. 48 hours after treatment with Advazorb.



Figure 7. Complete healing after three weeks of treatment.

at dressing change, thereby ensuring that the surrounding fragile skin and newly-formed granulation tissue is protected.

Four weeks later the ulcer had reduced in size (Figure 3), the wound bed showed 100% granulation tissue and the surrounding skin appeared healthy.

At this stage, Activon was discontinued and Advazorb Silfix was used as a primary dressing under compression bandaging. Four weeks later the wound had healed completely (Figure 4).

Case report two

In this case, Mr B presented acutely with an ulcerated painful left great toe of two weeks' duration. There were two areas of ulceration which were highly exuding (Figure 5). The toe was being dressed with non-adherent dressings, but these were failing to manage the exudate, resulting in extensive maceration of the surrounding tissue. Mr B had no past medical history and was not taking any medication. Blood sugar tests revealed elevated levels and he was later diagnosed with type two diabetes. Oral antibiotics were started and the ulcer was dressed with Advazorb non-adherent foam dressing, due to its absorbent properties and added benefit of being conformable. Additionally, it can be cut to shape for difficult to dress anatomical locations such as the toes.

Within 48 hours there was significant improvement as a result of the Advazorb dressing absorbing and retaining the fluid. The surrounding maceration was resolved, the risk of infection reduced and progression to healing of the ulcerated areas was evident (Figure 6).

Three weeks later complete healing had been achieved (Figure 7).

The absorbent nature of Advazorb ensured that fluid was rapidly absorbed and retained within the dressing, thereby allowing healing to occur. Effective moisture management is an essential component of wound management, especially when dealing with diabetic foot sepsis, where moisture levels, if not effectively controlled, can compromise the viability of the digit/foot.

Conclusion

Healthcare practitioners should have the appropriate skills and training to ensure that they understand the importance of accurate wound assessment. This, combined with knowledge of specific wound dressings, will help with appropriate dressing selection, which

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will promote an optimum environment for healing to occur. It is also important to address patients' needs in terms of pain-free dressing removal, prevention of leakage and minimal dressing changes. In times of stringent financial controls, practitioners should embrace new products that deliver cost-savings without compromising quality of care. **WUK**

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Key points

- ▶▶ Effective management of wound exudate is a key component to promoting successful wound healing.
- ▶▶ Advazorb is a comprehensive range of patient-friendly, absorbent foam dressings presented in non-adhesive and atraumatic silicone adhesives.
- ▶▶ In times of stringent financial controls, methods of reducing cost while maintaining clinical-effectiveness are paramount to the role of healthcare providers
- ▶▶ Wound dressings account annually for about £116 million of prescribing costs in primary care in England, with foam dressings being one of the most commonly prescribed wound management products.
- ▶▶ Clinically, the Advazorb range has been shown to control exudate effectively, while maintaining a moist wound healing environment.

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