A CLINICAL REVIEW: THE BENEFITS OF USING ALGINATE DRESSINGS COMPARED WITH ALTERNATIVE SYNTHETIC DRESSINGS

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Introduction
The effective management of exudate is recognised as an essential element in wound care. Wounds will heal more quickly and more comfortably if wound exudate is managed effectively. Exudate is a fluid that has leaked from the circulatory system and is comprised of a variety of substances including electrolytes, water, nutrients, inflammatory mediators, white cells, enzymes, growth factors and waste products (WUWHS, 2007). An optimal environment needs to be created and the surrounding skin protected from the risk of maceration and infection. Uncontrolled exudate can lead to complex wound healing. Patients often experience anxiety, fear and social isolation due to macerated and unmanageable leakage from wound dressings (Igle, 2007). A dry environment is considered a prerequisite for healthy wound healing and is still considered a complex and versatile dressing. Despite newer technologies becoming available, alginate dressings are still used due to their ability to absorb, conform and provide moist wound healing properties. Alginates have been used within the wound care industry since the early 1940’s and are indicated for the same wound types. Synthetic dressings continue to be used instead of an alginate due to their similar indications; however, this publication will demonstrate that alginate dressings offer further significant benefits. Alginates have been used within the wound care industry since the early 1940’s and are still considered a complex and versatile dressing. Despite newer technologies becoming available, alginate dressings are still considered flexible enough to deal with moderately to heavily exuding wounds. Studies have examined the effectiveness of alginate dressings on wound healing and they demonstrated the ability of alginate dressings to accelerate wound healing and reduce pain. There is evidence that clinicians have access to evidence based wound care that can improve the quality of life for patients.

Background
Fibrous dressings are popular absorptive dressings that are indicated for wounds with moderate to high levels of exudate. There are two main types of fibrous dressings in wound care, natural fibres and synthetic fibrous dressings. Synthetic fibrous dressings, also commonly known as Hydrofiber® dressings, are similar to alginate dressings and are used for the same types of wounds. Synthetic dressings continue to be used instead of an alginate due to their similar indications; however, this publication will demonstrate that alginate dressings offer further significant benefits. Alginates have been used within the wound care industry since the early 1940’s and are still considered a complex and versatile dressing. Despite newer technologies becoming available, alginate dressings are still considered flexible enough to deal with moderately to heavily exuding wounds. Studies have examined the effectiveness of alginate dressings on wound healing and they demonstrated the ability of alginate dressings to accelerate wound healing and reduce pain. There is evidence that clinicians have access to evidence based wound care that can improve the quality of life for patients.

Method
Patient A, a 93 year old man, was referred with a possible Category 2 pressure ulcer and suspected deep tissue injury to the sacral area. He had a history of transient ischaemic attacks and had received a pacemaker following episodes of atrial ectopic tachycardia with ventricular blocks. Patient A was admitted with pyrexia and confusion and was later diagnosed with a lower respiratory tract infection. Prior to admission the patient had lived at home independently with his wife and mobilised using a walking walker.

On admission, the patient had a Braden score of 15 and was being nursed on a pressure relieving foam mattress. Unfortunately, the patient’s health deteriorated which resulted in reduced mobility. He also became slightly uncooperative when the nurses tried to reposition him.

A full wound assessment of the patient was carried out and the wound was categorised as a Category 4 pressure ulcer. The wound had 20% slough and 80% granulated tissue with a small area of granulating tissue. The exudate levels were high. The aim was to remove the devitalised tissue through autolytic debridement and to maintain a moist wound environment through effective exudate management whilst protecting the peri wound area. ActivHeal Aquafiber® was selected due to its high absorbency, its ability to assist autolytic debridement, along with reduced lateral wicking to protect the peri wound area and high wet strength to aid removal of the dressing.

The wound showed evidence of healing with areas of epithelialisation at the wound edges and 70% granulation. There was approximately 50% slough, 20% granulation and 30% epithelialisation. The exudate levels were high. The aim was to remove the devitalised tissue through autolytic debridement and to maintain a moist wound environment through effective exudate management whilst protecting the peri wound area. ActivHeal Aquafiber® was selected due to its high absorbency, its ability to assist autolytic debridement, along with reduced lateral wicking to protect the peri wound area and high wet strength to aid removal of the dressing.

Following twice weekly dressing changes, the wound continued to progress and at one month later there was only 5% slough now visible and 50% granulation tissue. There was also an area of epithelial tissue and the surrounding skin remained healthy. The dressing regimen continued and the patient was discharged to a nursing home.

Discussion
Caring for patients with chronic wounds and controlling exudate is one of the biggest challenges for clinicians. Managing wet wounds is costly in terms of resource including dressing choice and nursing time. In the present climate healthcare needs to ensure that resources are used efficiently. Alginate dressings remain a familiar method to treat a variety of wounds due to the additional benefits from its composition and therefore should be considered as a cost effective treatment in managing highly exuding wounds. There is a need for a higher level of wound dressing accountability, as well as the importance of clinical effectiveness alongside cost effectiveness. From the case study presented it is clear that ActivHeal Aquafiber® has the ability to manage moderate to high levels of exudate effectively, aid autolytic and wound healing. In turn, this resulted in reduced wound dressing changes, a reduction in nursing time and a reduction in costs but more importantly a reduction in pain and discomfort to the patient. There is no robust evidence that suggests that one particular type of dressing is better than another at managing exudate or promoting healing. Assessing the clinical effectiveness in terms of exudate management between different products can be difficult as there is no current standard approach in use (White and Cutting, 2006). In an era when wound care is increasingly prominent on the government’s agenda, it is vital that clinicians have access to evidence based wound care that can improve the quality of life for patients.

Conclusion
The number of dressings available within the wound care arena is increasing this year may result in added difficulty for clinicians when trying to decide on the most appropriate dressing choice. Alginate dressings have been used within a clinical setting since the 1940’s (Clark, 2012) and many studies have proven the clinical effectiveness when compared with other synthetic made fibrous dressings. Whilst remaining cost effective the natural composition of alginate dressings also offers the clinicians a number of additional benefits to aid healing. The ActivHeal Aquafiber® range of dressings have been clinically proven to aid wound healing. Clinical feedback has also provided successful evidence that the additional properties of the dressings provide an invaluable offering which can be considered during dressing selection (Ousey, 2011). Alginate dressings have an important role to play in wound care due to their ability to absorb, conform and provide moist wound healing properties and they shouldn’t be forgotten when determining the most suitable dressing for a wound and the patient.

References
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Coagulation is an important part of haemostasis and is an essential part of the healing process for both acute and chronic wounds. Blaire (1951) demonstrated that alginate dressing were haemostatic. Calcium ions released from the dressing in exchange for sodium ions in the blood activate the clotting cascade by stimulating platelets and clotting factors. In certain clinical situations the absorption of blood by dressings is paramount. Alginate dressings are used to pack or cover the wound to aid in haemostasis, absorb blood and exudate and provide a moist wound healing environment. Alginate dressings are used to pack or cover the wound to aid in haemostasis, absorb blood and exudate and provide a moist wound healing environment. Alginate dressings are used to pack or cover the wound to aid in haemostasis, absorb blood and exudate and provide a moist wound healing environment. Alginate dressings are used to pack or cover the wound to aid in haemostasis, absorb blood and exudate and provide a moist wound healing environment. Alginate dressings are used to pack or cover the wound to aid in haemostasis, absorb blood and exudate and provide a moist wound healing environment. Alginate dressings are used to pack or cover the wound to aid in haemostasis, absorb blood and exudate and provide a moist wound healing environment. Alginate dressings are used to pack or cover the wound to aid in haemostasis, absorb blood and exudate and provide a moist wound healing environment. Alginate dressings are used to pack or cover the wound to aid in haemostasis, absorb blood and exudate and provide a moist wound healing environment. Alginate dressings are used to pack or cover the wound to aid in haemostasis, absorb blood and exudate and provide a moist wound healing environment. Alginate dressings are used to pack or cover the wound to aid in haemostasis, absorb blood and exudate and provide a moist wound healing environment. Alginate dressings are used to pack or cover the wound to aid in haemostasis, absorb blood and exudate and provide a moist wound healing environment.