Case series evaluation: the use of Durafiber on exuding wounds

'When the skin integrity is breached through trauma, the body initiates an inflammatory response'

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Healthcare professionals continue to encounter patients whose lives are adversely affected by wounds, both in the acute sector and increasingly in the community, where treatment is being driven by government initiatives seeking to offer patients more choice about where they receive care (Department of Health [DoH], 2006; 2009).

Wound care as a specialty is high on the UK government agenda at the moment, with pressure ulcers in particular being targeted as a marker of poor care by the NHS's High Impact Actions campaign (NHS Institute for Innovation and Improvement, 2012). Similarly, the government's Any Qualified Provider (AQP) programme specifically targets leg ulcer and wound healing services as areas where care can be improved (DoH, 2012).

As well as the impact of wounds on patients' quality of life, they are also a drain on resources — wound care is estimated to cost the NHS £1.4–£2.1bn each year, representing up to 4% of total NHS expenditure (Dowsett and Shorney, 2010).

One element of wounds that clinicians can find particularly difficult to manage is exudate, partly because of the challenge of absorbing the copious amounts of fluid produced by some wounds, plus the harmful bacteria and enzymes contained within wound fluid (World Union of Wound Healing Societies [WUWHS], 2007).

Pain is also a problem at dressing change, with patients often complaining about trauma when dressings are removed, having adhered to the wound bed and edges (Finnie, 2004).

This article presents a series of case studies into the efficacy of a new dressing that seeks to control wound exudate, as well as reducing pain on removal and increasing conformability.

EXUDATE

Exudate is fluid that has leaked from the circulatory system and is comprised of a range of substances including electrolytes, water, nutrients, inflammatory mediators, white cells, enzymes (e.g. matrix metalloproteinases [MMPs]), growth factors and waste products (WUWHS, 2007).

When the skin integrity is breached through trauma, the body initiates an inflammatory response. Mediators involved in inflammation, such as histamines, increase the permeability of blood vessels and the excess fluid produced enters the wound where it forms the basis of exudate.

Although a certain amount of exudate and a moist wound environment are necessary to a healing wound, stimulating cell proliferation for example, an excess of fluid in chronic wounds due to ongoing inflammatory or other processes can have an adverse affect on healing. This is because the exudate may contain high levels of inflammatory mediators and activated MMPs, which can actually begin to break down the cell-supporting extracellular matrix before it has a chance to heal the wound.

Excess exudate production can also present a management problem for clinicians and carers, necessitating frequent changes due to dressings becoming saturated with fluid.

PAIN

Certain dressings that have been used in the past, such as gauzes and paraffin tulles, and dressings that contain adhesives, accentuate pain at dressing change as they can become attached to the wound bed, causing trauma on removal (Finnie, 2004). It is important that clinicians work

KEY WORDS
- Exudate
- Chronic wounds
- Acute wounds
- Absorbent wound dressings
- Conformability

with patients and carers to minimise pain on dressing change, a process that can be aided by the selection of specifically designed dressings, such as those that form a gel on contact with the wound bed, thus making removal less traumatic.

Wounds that produce an excess of exudate are also at risk of maceration at the periwound area (Cooper et al, 2006). This is where the skin begins to break down through exposure to continual moisture.

WHAT IS DURAFIBER?

Durafiber® (Smith & Nephew) is a highly absorbent, non-woven, gelling fibre dressing composed of a blend of cellulose-based fibres. When the dressing fibres come into contact with exudate, they swell and form a soft cohesive gel sheet. Exudate is locked within the gel dressing structure. It is designed for use in the management of medium to heavily exuding chronic and acute full thickness, partial thickness or shallow granulating wounds.

Durafiber has the following properties:
- Provides long-lasting dressing integrity and gelled strength (Smith & Nephew, 2010a). Also provides easy one-piece dressing removal and minimises the risk of leaving dressing residue, which may lead to quicker, more comfortable dressing changes for the clinician and patient (Foster and Moore, 1997; Smith & Nephew 2010a)
- High absorbency: provides excellent fluid management and is able to remain in place for up to seven days (Smith & Nephew, 2010a)
- Minimal dressing shrinkage – for sustained wound bed coverage (Smith & Nephew, 2010a)
- The absorbent properties of the dressing mean that it locks in fluid, helping to remove excess exudate and bacteria from the wound bed and potentially reducing the risk of cross contamination on dressing removal (Smith & Nephew, 2010a; Smith & Nephew, 2010b; Smith & Nephew, 2010c)
- Controls the lateral wicking of fluid — this minimises the risk of periwound maceration (Smith & Nephew, 2010d)
- Forms a soft cohesive gel sheet on contact with wound fluid, conforming closely to the wound bed and helping to promote a moist wound environment (Smith & Nephew, 2010e; WUWHS, 2007).

Durafiber is indicated for use in exuding acute and chronic wounds.

Whilst Durafiber assists the management of wounds prone to bleeding, it is not intended for use as a surgical sponge in heavily bleeding wounds and should be discontinued if reddening or sensitisation occurs.

Durafiber is available in a range of sizes:
- 5 x 5cm
- 10 x 10cm
- 15 x 15cm
- 4 x 10cm
- 4 x 20cm
- 4 x 30cm
- 2 x 45cm.

CASE SERIES

The primary objective of this case series was to evaluate the overall acceptability of Durafiber to a number of patients with a variety of different wound types by clinical staff.

In each case, the clinician used Durafiber on an exuding wound, including leg ulcers (under multi-layer compression), pressure ulcers, diabetic foot ulcers or cavity wounds.

All clinicians taking part in the evaluation were offered specific guidance on the recommendations for use of the dressing, in accordance with the indications in the product insert leaflet and patients were treated in accordance with the instructions for use.

The objective in each of these case studies was to assess the ease of use, exudate handling and conformability properties of Durafiber.

Exclusion criteria

Patients were excluded from this evaluation if they demonstrated the following:
- Subjects under 18 years of age
- Any pregnant woman
- Patients who were unable to understand/unwilling to take part in the evaluation
- Subjects with a history of skin sensitivity to any of the components of the series product.

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- Subjects whose wounds were clinically infected or erysipelas, exhibited malignant changes, or who have had recent deep venous thrombosis or venous surgery within the last three months
- Subjects who have progressive neoplastic lesion treated by radiotherapy or chemotherapy, or ongoing treatment with immunosuppressive agents or high dose corticosteroids
- Patients with a necrotic wound.

Throughout the series, 10 cases were completed in total from three different centres. The four cases considered the most representative are presented in detail below, with results from these and the remaining six cases collated in *Table 1*.

Case 1: Treating foot ulcers with Durafiber (Simon Barrett)

Background

This patient was a man in his early 80s with a history of venous ulceration who was seen at the primary care wound clinic on 20 April, 2012.

Clinic visit 1

On examination, he was found to have two wounds on the right foot, one on the heel and one on the lateral right dorsum. Both wounds measured approximately 5cm x 5cm and were less than 1cm deep. The wounds were potentially caused by ill-fitting footwear and had been present for six months.

Previous dressings used on the wound included Aquacel™ (ConvaTec) and Duoderm™ (ConvaTec). The patient was also undergoing three-layer reduced compression and had emollients applied to the skin, although he was not taking any medication.

Presentation and treatment plan

The wound bed of ulcer one (right heel) demonstrated 80% granulation and 20% slough with an absence of epithelialisation. There was no necrotic tissue. Ulcer two (lateral right dorsum) demonstrated 50% granulation and 50% slough and also had an absence of epithelialisation or necrosis. There was moderate serous exudate present in both wounds and the surrounding skin was macerated.
It was decided to use Durafiber to manage the exudate and reduce maceration in both wounds. The patient was also advised to stop wearing the ill-fitting footwear, which was thought to have contributed to the skin breakdown initially.

The clinician decided to use the 5cm x 5cm Durafiber on both wounds — a non-adhesive, shaped foam dressing (10cm x 10cm) was used as a secondary dressing. The next dressing change was planned for 27 April 2012.

Clinic visit 2

At the next clinic visit on 27 April, 2012, the Durafiber dressing proved easy both to apply and remove and was found to conform well to the wound bed. The dressing also demonstrated excellent fluid-handling properties and was effective at managing the wound exudate. The dressing remained intact on removal.

The condition of the skin surrounding the wounds at this change was healthy and the exudate level was moderate. The patient had no pain when the dressing was *in situ*.

Both wounds had improved, with ulcer one having decreased to 4.8cm in length and 4.5cm in width. Ulcer two had decreased to 4.6cm in length and 4.6cm in width. There was also 5% epithelialisation in each wound.

The clinician noted that the size reductions were due in part to less maceration.

The clinician decided to continue with the Durafiber with the same secondary dressing. It was also decided to continue with reduced compression due to the oedema in the patient's lower limb.

Clinic visit 3

The patient was seen again by the reporting clinician on 11 May, 2012. The dressing had been briefly changed by a different clinician to another gelling fibre product, which had resulted in some maceration to the periwound skin.

However, when the clinician reapplied the Durafiber, there was an immediate improvement in this maceration.

On application of the Durafiber at this visit, there was no pain and the ease of application remained very good. The dressings continued to demonstrate very

'The dressing demonstrated excellent fluid-handling properties and was effective at managing wound exudate'

References

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'Patient comfort was described as very good and the dressing was easy to remove and remained intact'


Figure 1

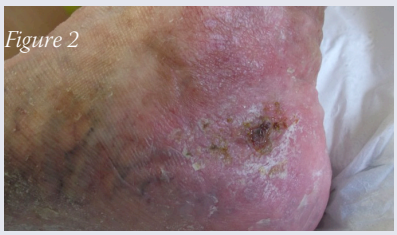
Figure 2


Figure 3

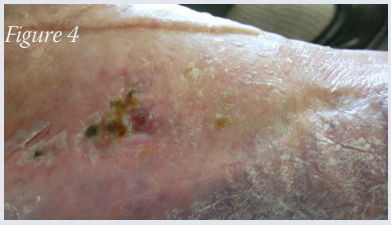
Figure 4

Figures 1–4: Pictures showing the ulcers described in case 1. Figures 1 and 2 show the healing progression of ulcer 1, while Figures 3 and 4 do likewise for ulcer 2.

good ability to conform to the wound beds. Exudate management remained excellent and the dressing proved comfortable for the patient.

Possibly due to the application of a different dressing the wound sizes had remained static and there was still only 5% epithelialisation. The clinician decided to continue with Durafiber and compression.

Clinic visit 4

The patient was reviewed again on the 18 May, 2012 and the dressings were changed. At this change, the Durafiber was managing exudate well and the exudate was reducing in part due to the compression therapy. The periwound skin was now healthy and the exudate levels in both wounds had reduced to low. There was also no pain reported by the patient.

Overall, at this visit the wounds had improved and they continued to reduce in size. The clinician decided to continue with Durafiber due to its ability to cope with exudate and the lack of pain. Reduced compression was also continued.

Clinic visit 5

On the next review on 25 May, 2012, the patient was still following the appropriate dressing instructions. Ease of application was excellent, while conformability, exudate handling, patient comfort and ease of removal were all found to be very good.

The periwound skin on both ulcers was healthy and there was also a reduced level of exudate in both ulcers. At this review the patient did not complain of any pain while the dressing was *in situ*.

Both wound beds now consisted of 90% epithelialising tissue and 10% granulating tissue and the wound was almost healed. The plan was to continue with Durafiber through to complete healing.

The clinician noted that although there had not been a direct comparison in clinical practice, the Durafiber was performing better than the usual dressing used for this type of wound.

Discussion

After the final evaluation, the clinician recorded the following benefits to using the Durafiber dressing:

- There was a considerable improvement in the condition of the periwound skin
- Both wounds were almost healed in the treatment period
- The maceration at initial presentation had resolved
- The dressing was easy to remove and apply and there was no fibre shedding
- The patient was very pleased with the outcome
- The wound bed had improved at each clinical review.

The overall performance of Durafiber in terms of application, conformability and exudate management was found to be very good.

Case 2: Treating a mixed aetiology leg ulcer with Durafiber (Simon Barrett)

Background

The patient was a female in her early 80s who presented at the wound clinic on 25 May, 2012. She had a history of ischaemic heart disease, atrial fibrillation, arthritis and osteoporosis. She had no history of previous wounds. Her mobility was limited by her arthritis, but she was independent and living at home with the support of her daughter who was a nurse.

The wound of seven months' duration was located on her right lateral malleolus and measured 1.8cm long by 1.5cm in width. It was thought to be of mixed aetiology and the plan was to perform a Doppler ultrasound on 29 May to assess the presence of arterial disease. The wound was very sloughy (80% slough) with approximately 20% granulation tissue.

There were moderate levels of exudate and the surrounding skin was quite macerated. A Durafiber 5cm by 5cm dressing cut to size with a 1cm border was chosen. It was thought that the trauma may have initially occurred as a result of pressure due to awkward positioning when the patient was in bed and the plan was to provide a pressure-relieving mattress with supportive education and advice.

Week 1

The dressing was changed after four days. The clinician found the dressing performed well and was very easy to

remove and stayed in one piece. It was also very good at conforming to the wound bed. The wound at week 1 remained much the same in appearance as at initial presentation with moderate exudate levels and lots of slough present (80%). The ABPI for the left ankle was 0.88 and 1.09 for the right. Although the ABPI was within normal limits, the patient had a history of pain being relieved by rest, and had also suffered from night cramps. In view of her increasing arterial problems and pain experience, the patient was advised to return to the GP for onward vascular referral.

Week 2

After two weeks of treatment, the wound had improved and reduced in size, measuring 1.6cm in length and 1.2cm in width. The dressing had proved effective at coping with exudate and had remained *in situ* for five days. Overall, the wound was healing and although still quite sloughy, the thickness of the slough seemed to be reducing and the surrounding skin was less macerated.

Week 3

After three weeks of treatment the wound had reduced further in size to 1.5cm in length and 1cm in width. There was 30% granulation tissue present and the slough had reduced to 70%. In view of this positive healing progress, the plan was for the patient to continue with Durafiber and to go on her previously booked holiday and have her dressings changed by her daughter (a nurse) with a review appointment booked for 25 June.

Week 4

The Durafiber dressing had been in place for four days and continued to perform well with excellent ease of application, ability to conform to the wound bed and ability to remain intact during removal. The wound measured 1.5cm in length and 1.2cm in width and although this had increased from the previous visit, the patient had been more active than usual while on holiday. The surrounding skin was no longer macerated and appeared healthy.

Discussion

This patient with a chronic mixed aetiology ulcer of long duration seemed to respond positively to the dressing regimen used. The clinician found that Durafiber performed well and was easy to apply and remove in one piece.

The patient's daughter was able to manage the dressing changes while the patient was on holiday. The wound reduced in size over the four-week period and the condition of the skin surrounding the wound had improved from the macerated state at initial presentation to being healthy by the end of the evaluation period.

Case 3: Durafiber used to treat a toe pressure ulcer (Jackie Stephen-Haynes; Rosie Callaghan)

The patient was a female in her late 90s who was being cared for in a nursing home. She had a history of cerebrovascular accidents, arthritis, peripheral vascular disease and poor nutritional status. She was immobile and had developed a grade four pressure ulcer on her foot due to poor circulation and rubbing from her shoe.

The toe joint on the left foot was hot and red and turning black. The ulcer was on her big toe joint and measured 3cm x 2cm with an unmeasured depth and had been present for six weeks. It had been treated with Sorbsan™ (Aspen Medical) and was unsuitable for compression.

The wound bed exhibited 80% granulating tissue with the possibility of overgranulation, and 20% slough. The area was prone to damage and trauma and had been protected using a Parafricta™ (Parafricta) boot. The surrounding skin was macerated and it was difficult to see the wound margins. The wound had moderate exudate levels and the exudate was described as serosanguinous. It was decided to try Durafiber (5cm x 5cm) to treat the wound in conjunction with an absorbent pad and a retention bandage.

Week 1

The dressing was changed every three days and proved easy to apply, even though it was necessary to trim the dressing (it was easy to trim and cut cleanly without the fibres fraying). Its ability to handle exudate and conform to the wound bed was very good and the patient was comfortable when wearing the dressing. The appearance of the wound had improved after a week of treatment. The wound bed was still 80%

'This patient with a chronic mixed aetiology ulcer of long duration seemed to respond well to the dressing regimen'

Figures 5–7: Pictures showing the progression of the toe ulcer in case 3.

'The clinician noted that the size reductions were due in part to less maceration'

granulation and 20% sloughy. It was decided to continue with the treatment regimen.

Week 2

After two weeks of treatment the dressing was being changed every 3–4 days. The clinician had some difficulty applying the secondary dressing as it was time consuming because of the position of the wound. Durafiber was easier to apply and its ability to conform to the wound bed and handle exudate was still deemed very good. Patient comfort was good and the dressing stayed intact on removal. The surrounding skin was healthy and the exudate levels had reduced and were now low.

The wound was improved although it still had the same dimensions. It now comprised 100% granulation tissue.

Week 3

The wound was described as looking 'much better' and it had become shallower. It now measured 2cm x 2cm. The surrounding skin was healthy. There was now a moderate level of exudate. There had been fewer problems with the secondary dressing. Durafiber continued to perform well and the clinician commented that 'it seems gentle and easy to use.'

Week 4

At week four the wound was reassessed by the TVN. The wound was greatly improved and measured 2cm x 2cm with 100% granulation in the wound bed. The surrounding skin was healthy and the exudate levels low.

Discussion

The tissue viability nurse was pleased with the dressing and the progress made with the treatment. At times there had been difficulties with application and removal but once staff had been shown how to cut the dressing to fit the awkward position of the wound these teething problems were reconciled.

Staff were also told that they did not need to stick to a strict four-day change and that they should assess the need to change the dressing based on exudate strike-through levels. The staff liked the dressing and found that it was effective in managing the wound. The patient reported that the dressing was very comfortable and she had no pain, although she was taking co-dydramol.

Case 4: Treating a sacral pressure ulcer with Durafiber (Jackie Stephen-Haynes; Rosie Callaghan)

Background

The patient was a female in her mid-80s who was being cared for in a nursing home. She had a history of cerebrovascular accident, hypertension and dysphagia. She was immobile and had a urinary catheter and a percutaneous endoscopic gastrostomy (PEG) tube *in situ*. She had developed a grade three sacral pressure ulcer five months earlier when her mobility had reduced and she had been sitting for long periods of time without adequate pressure relief. She was now being repositioned using a hoist and a turning regimen was in place.

Presentation and treatment plan

The cavity wound was on the sacrum and measured 3.5cm x 5cm and was 2cm deep. The wound exhibited 100% granulation tissue. There were heavy levels of serosanguinous exudate. The surrounding skin was macerated and there was undermining at the edges, up to 1cm at the wound's proximal margin. Negative pressure wound therapy had been considered but the patient was known to become agitated easily and may have found the associated equipment difficult to tolerate. Durafiber (2cm x 45cm) was chosen as a treatment option because of the heavy levels of exudate. Allevyn* Gentle Border (Smith & Nephew) was used as a secondary dressing.

Week 1

The wound was assessed after one week. The clinician found that the dressing was excellent for ease of application and removal. In addition, patient comfort was found to be excellent. The dressing provided good conformability to the wound bed, remaining intact on removal.

The exudate was still heavy at this point and the surrounding skin remained macerated and inflamed. The pain levels remained the same (the patient was receiving regular analgesia related to spasms linked to her cerebrovascular accident, but experienced no pain from the dressing changes).

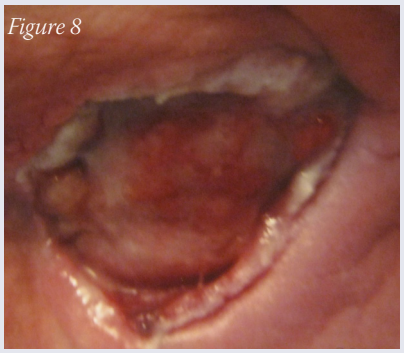
Figure 8

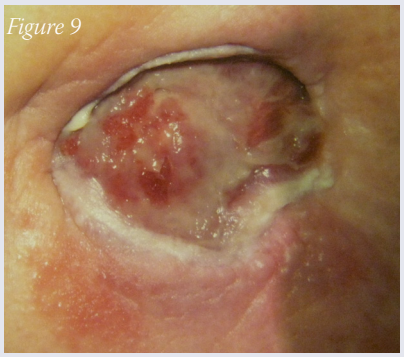
Figure 9


Figure 10


Figure 11


Figure 12


Figure 13

Figures 8–13: Pictures showing the progression of the wound in case 4, a sacral pressure ulcer.

The wound dimensions had not altered, but the undermining had reduced and was barely measureable and the wound was healing at the edges. The wound bed exhibited 100% granulation. It was decided to continue with the treatment regimen but switch to Allevyn* Gentle Border Multisite (Smith & Nephew) as a secondary dressing.

Allevyn Gentle Border Multisite was chosen as the secondary dressing as it was easy to apply and the specific shape of the dressing would aid dressing retention. Patient comfort was described as very good and the Durafiber dressing was easy to remove and remained intact.

Week 2

After two weeks of treatment the wound exhibited very heavy exudate. There were signs of infection (thought to be caused by incontinence) and the surrounding skin was inflamed. It was decided to introduce a silver dressing in order to address this, however, Durafiber was used again after five days. The dressing was being changed every 2–3 days depending on the exudate levels.

Week 3

After three weeks of treatment (including five days using the silver dressing) the wound had reduced in size to 3cm x 4cm and 0.5cm deep, with no undermining areas. There were still heavy levels of exudate and the wound bed exhibited 90% granulation tissue and 10% epithelialisation — the surrounding skin was now described as healthy with reduced maceration.

It was decided to continue with Durafiber and a switch was made to a different size —

‘As previously recorded, the dressing was found to be very easy to remove in one piece’


Figure 14

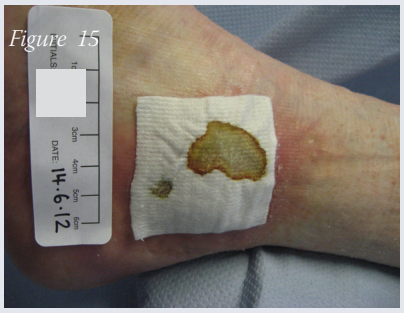
Figure 15


Figure 16

Figures 14–16: Pictures charting the progression of the wound in case 6, a venous leg ulcer. Figure 15, shows the Durafiber dressing in situ.

'The dressing was easy to use and comfortable for the patient'

from the 2cm x 45cm ribbon to the 10cm x 10cm flat sheet.

Week 4

The Durafiber dressing had been in place for three days. The dressing was said to be as good as the one that was usually used for this clinical indication at the care home. Exudate levels had reduced and were now described as moderate. The wound had again improved and now measured 3cm x 3cm with a 0.5cm depth. The wound bed exhibited 10% epithelialisation at the wound margins and 90% granulation. There were still concerns about infection as the wound was very near the peri-anal area. It was decided to continue treatment with Durafiber (now using the 5cm x 5cm size cut into a spiral so that it could be packed into the shallow wound).

Discussion

The cavity wound had greatly improved since the beginning of the treatment. The temporary step up to a silver dressing had helped with the infection caused by incontinence and the wound had gradually improved over the treatment trial. The dressing was easy to use and comfortable for the patient. It was felt to be as good as the standard dressing that would have usually been used for this complex wound by the care home staff.

SUMMARY OF CASES 1–10

Wound type and patient characteristics

Of the 10 individual cases comprising the overall report, there were a total of five males and five females included, with the youngest patient observed being 69, while the oldest was 97 years of age. The average age of patient was 81.8.


Figure 17

Figure 17: The venous leg ulcer referred to in case 7.

A range of aetiologies and wounds were involved in the study, including venous leg ulcers, mixed aetiology ulcers, pressure ulcers, foot ulcers and a failed graft site.

Dressing performance

Clinical feedback determined that the experiences of using Durafiber were, overall, very good when considering a range of factors.

Clinicians were asked to evaluate the following areas:

- Ease of application
- Ability to conform to the wound bed
- Ability to handle exudate
- Patient comfort during wear
- Ease of removal
- Ability of dressing to remain intact during removal
- Wear time.

For each of these categories, the clinician was then asked to rate Durafiber as being either: 'poor,' 'fair,' 'good,' 'very good' or 'excellent.' It was found that for each parameter, the majority of clinicians had rated the dressing as either 'very good' or 'excellent' (see *Table 1*).

Further investigation in this area could focus on the evaluation of Durafiber using a standardised secondary dressing regimen, in order to better understand the frequency of dressing changes.

CONCLUSION

Exudate, comformability and pain present significant management problems for the wound care clinician. These case studies demonstrate that Durafiber has the capability to contain high exudate levels as well as providing patient comfort and lack of pain on removal, due to its gelling structure and lack of adhesive.

In an era when wound care is increasingly prominent on the government's health agenda, it is vital that clinicians have access to evidence-based wound care that can improve the quality of life of their patients. WUK

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Table 1
Summary of key dressing performance characteristics.

Patient/wound type	*Exudate management*	*Conformability*	*Ease of application*	*Ease of removal*
Case 1: Man in his early 80s with ulceration to foot	*First week: Excellent Final week: Very good*	*First week: Excellent Final week: Very good*	*First week: Very good Final week: Excellent*	*First week: Very good Final week: Very good*
Case 2: Woman in her early 80s with mixed aetiology leg ulcer	*First week: N/A Final week: Excellent*	*First week: Very good Final week: Excellent*	*First week: Excellent Final week: Excellent*	*First week: Very good Final week: Excellent*
Case 3: Woman in her late 90s with toe ulcer	*First week: Very good Final week: Excellent*	*First week: Very good Final week: Excellent*	*First week: Good Final week: Very good*	*First week: Fair Final week: Very good*
Case 4: Woman in her mid 80s with cavity wound	*First week: Fair Final week: Good*	*First week: Good Final week: Excellent*	*First week: Excellent Final week: Excellent*	*First week: Excellent Final week: Good*
Case 5: Man in his early 80s with venous leg ulcer	*First week: Good Final week: Fair*	*First week: Good Final week: Good*	*First week: Good Final week: Very good*	*First week: Very good Final week: Very good*
Case 6: Man in his early 70s with venous leg ulcer	*First week: Very good Final week: Very good*	*First week: Very good Final week: Very good*	*First week: Very good Final week: Very good*	*First week: Very good Final week: Very good*
Case 7: Man in his late 80s with venous leg ulcer	*First week: Very good Final week: Very good*	*First week: Excellent Final week: Very good*	*First week: Excellent Final week: Very good*	*First week: Very good Final week: Very good*
Case 8: Woman in her early 80s with pressure ulcer	*First week: Excellent Final week: Very good*	*First week: Very good Final week: Very good*	*First week: Very good Final week: Good*	*First week: Very good Final week: Excellent*
Case 9: Man in his late 60s with venous leg ulcer	*First week: Excellent Final week: Very good*	*First week: Excellent Final week: Very good*	*First week: Excellent Final week: Very good*	*First week: Good Final week: Fair*
Case 10: Woman in her early 80s with failed graft site **Week 3 at the time of going to press*	*First week: Very good *Final week: Very good*	*First week: Very good *Final week: Very good*	*First week: Very good *Final week: Very good*	*First week: Good *Final week: Very good*