Case series: protecting and promoting healing in moisture lesions and pressure ulcers associated with incontinence
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Introduction
The prevention of pressure ulcers and moisture lesions are considered basic nursing care and a proactive approach is necessary to prevent skin damage. Excess moisture causes the skin’s permeability to be breached, resulting in a reduction of its natural barrier function, which can lead to maceration and excoriation. Moisture damage increases the risk of a combined lesion caused by physical damage from friction and/or shear[1]. Therefore, it is important to protect the skin from the harmful effects of excessive moisture and/or irritant substances e.g. urine, faeces, perspiration, inappropriate cleansing methods etc., and provide an ideal healing environment.

Best practice recommends that if the skin is at risk of moisture damage and/or is excoriated or broken, barrier products should be applied. Additionally soap and water should not be used when cleansing following episodes of incontinence, instead a pH balanced foam cleanser should be part of the cleansing regimen[1].

Method
Since 2012, the Proshield system (Proshield Plus skin protectant and Proshield Foam and Spray cleanser) has become available on Kent Community Health NHS Trust’s, First Choice Dressing List. Proshield Plus is a dimethicone based skin protectant, indicated for the care of intact or injured skin associated with common, severe or chronic diarrhoea, or incontinence and to moisturise and protect dry skin. Proshield Foam and Spray cleanser is a pH balanced foam cleanser for injured or intact skin associated with incontinence[2].

A series of case studies were undertaken to demonstrate the effectiveness of the Proshield system on both superficial pressure damage (category 2) and moisture lesions within a 30 bedded Integrated Care Centre.

Case Study 1
Mrs R is an 84 year old lady with type 2 diabetes and chronic kidney disease (stage 3) who was admitted from home for rehabilitation following multiple falls. Mrs R is doubly incontinent and on admission was found to have a ‘combined’ lesion (category 2 pressure ulcer, and moisture lesion) on her inner right buttock. The pressure ulcer measured 1x1cm and there was extensive moisture damage on the surrounding skin which was also very oedematous, (Photo 1).

Following assessment, all dressings were removed and the Proshield system was applied after every episode of incontinence, three to four times a day.

Results
By day 4 the pressure ulcer had reduced to 0.5cm x 0.4cm in size and the excoriation in relation to the moisture damage reduced significantly.

By day 8 the pressure ulcer had completely healed and the moisture lesion had significantly reduced, the surrounding skin remained exoriated and oedematous, (Photo 2).

Mrs R has continued to wear her incontinence pads along with using the Proshield system to maintain her skin integrity.

Case Study 2
Mr S is a 92 year old gentleman with a medical history that includes heart failure and essential hypertension who was admitted from home in July 2013 following recent falls and a urinary tract infection. The urinary tract infection was treated effectively with antibiotics and Mr S was receiving physiotherapy to support his rehabilitation for his falls. On admission it was identified that Mr S was urinary incontinent and had a moisture lesion on his sacrum. The irregularly shaped moisture lesion was mirrored on both buttocks, the total diameter of excoriation was 20cm, approximately 10cm on each buttock; treatment prior to admission was a moisturising barrier cream.

A care plan for skin care and assistance with toileting and hygiene was implemented immediately and a prescription for the Proshield system was requested.

An interim plan of care was put in place to promote and maintain skin care and the Proshield system was implemented 2 days later when the prescription arrived. Proshield was applied three times a day minimum or post episodes of incontinence.

Results
Within 3 days of using the Proshield system the excoriation was approximately 17cm in diameter, a reduction of 3cm and the skin did not appear as wet. By day 8 the area of skin damage had reduced to only 6cm in size, 3cm on each buttock and by day 15 the excoriation had completely resolved. The Proshield system continued to be applied three times a day as a maintenance regime and following incontinence episodes.

Mr S was referred to the Bladder and Bowel team for assessment, however during his time on the unit a toileting regime was implemented and the size of the incontinence pads were downgraded.

Discussion

<table>
<thead>
<tr>
<th>Date</th>
<th>Total size of excoriation across both buttocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial assessment</td>
<td>20cm in diameter</td>
</tr>
<tr>
<td>Day 3</td>
<td>17cm in diameter</td>
</tr>
<tr>
<td>Day 8</td>
<td>6cm in diameter</td>
</tr>
<tr>
<td>Day 15</td>
<td>Area healed</td>
</tr>
</tbody>
</table>

Due to the anatomical positions where most pressure ulcers and moisture lesions occur, dressings are often difficult to apply and secure in position. Previously, nurses on the unit would apply a soft polymer with absorbent pad dressing, however clinical practice showed that the dressings rarely stayed on for more than 24 hours as they became soiled or rucked up.

Since introducing the Proshield system, dressings are no longer used for superficial pressure ulcers (category 1 or 2) and skin damage caused by excess moisture.

The Proshield system is often used effectively in conjunction with incontinence pads within the unit and no detrimental effects to absorbency or clogging of the pads has been noted. As part of the pressure ulcer prevention programme, all patients within the unit are assessed in regards to the appropriate pressure relieving equipment and requirement for repositioning regimes.

Conclusions
Proactive protection prevents skin damage and by using the Proshield system, healthcare professionals have been successfully able to treat and prevent superficial pressure ulcers and moisture lesions.

In-house training on the unit is ongoing, as further support is required to recognise when to use the Proshield system.

References
1. Best Practice Statement: Care of the older person’s skin (2nd edition) 2012. Wounds UK.

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