Debridement using a monofilament fibre pad* to aid in the accurate categorisation of pressure ulcer

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Introduction
Within the authors’ Trust and across the UK, accurate categorisation of pressure ulcers has become crucial. Many UK organisations implement complex documentation and a root cause analysis when a category 3 pressure ulcer is identified. The European Pressure Ulcer Advisory Panel (1) state that a category 3 pressure ulcer can contain the devitalised tissue slough, where a category 2 pressure ulcer does not.

Less experienced clinicians often categorise pressure ulcers that contain a yellow material as category 3, despite this material not being slough. For experienced clinicians some pressure ulcers that contain slough may not present as having full thickness dermal loss and therefore they question category 3 damage.

A more experienced clinician can identify these ulcers as being superficial in nature. Callaghan and Stephen-Haynes (2) found that when their community nurses used a monofilament fibre pad as part of the assessment process, they found that in 11 out of 12 cases it helped them to more accurately categorise the pressure ulcer.

Methods
Patients in an acute hospital setting were selected when the category of pressure ulcer was not clear between a category 2 and 3 and where debridement was required to assist in the categorisation process.

Debridement was facilitated by using a monofilament pad* - as it has been reported to be a quick, simple, effective method of debridement, causing virtually no pain to the patient (3, 4).

Data was collected on a specially designed data collection form. Any imaging was taken using either digital or the Eykona 3D camera system to assist the measurement process and add accuracy and objectivity.

Results
Data on 13 patients has been collected to date and the results are summarised in Table 1.

Debridement with the monofilament pad revealed a more superficial pressure ulcer in 61.5% of cases.

No more than 4 minutes of debridement was required to reveal the actual wound bed in 80% of cases.

Debridement was prematurely discontinued in 2 cases as the patients experienced heightened anxiety due to their anxiety disorders and not the monofilament fibre pad.

Pressure ulcers containing thicker and more tenacious slough are not suitable for a quick, one off debridement treatment with the monofilament pad, but may respond to a number of consecutive treatments.

The monofilament pad proved to be a very quick and easy to use debridement technique, ideal to assist pressure ulcer wound assessment at the bedside and reinforces recommendations made in the EWMA debridement document (4) which recognises that this new form of mechanical debridement is the fastest method available.

The authors are not aware of any other product that would allow this rapid assessment to take place at the bedside.

Discussion
The use of a monofilament pad in the debridement of pressure ulcers with superficial slough provides clinicians with a clear view of the wound bed. This allows accurate categorisation and, therefore, the ability to provide safe and appropriate patient care.

It is the view of the authors that pressure ulcer categorisation should be based on an assessment of the depth of damage and not tissue type. When the wound bed is obscured by devitalised tissue this can be very difficult.

This small study has identified considerable potential for cost savings by using the monofilament debridement pad at the bedside. They include:

- effective use of resources such as pressure relieving equipment based on pressure ulcer category and the level of caregiver i.e. generalist or Tissue Viability Nurse
- time savings for Tissue Viability and ward nurses by not having to record as a serious incident that requires investigating – outlined in Table 2
- faster wound healing progression by rapid removal of devitalised tissue

Conflict of Interest
The monofilament pads and the Eykona camera were provided by Activa Healthcare.

Table 1 – Summary of results

<table>
<thead>
<tr>
<th>Patient number</th>
<th>Ulcer location</th>
<th>Estimated category before debridement</th>
<th>Actual category after debridement</th>
<th>Debridment time</th>
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<tbody>
<tr>
<td>1</td>
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<td>3</td>
<td>3</td>
<td>2min</td>
</tr>
<tr>
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<td>heel</td>
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<td>1min</td>
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<td>neck</td>
<td>3</td>
<td>2</td>
<td>1min 20sec</td>
</tr>
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<td>4</td>
<td>buttock</td>
<td>3</td>
<td>2</td>
<td>1min 15sec</td>
</tr>
<tr>
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<td>hip</td>
<td>3</td>
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<tr>
<td>13</td>
<td>right buttock</td>
<td>3</td>
<td>2</td>
<td>1min</td>
</tr>
</tbody>
</table>

Table 2

Data on 13 patients has been collected to date and the results are summarised in Table 1.

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Patient 7
A 91 year old female who fell from her armchair at home fracturing her shoulder and injuring her neck. She sustained device-related pressure damage to her right clavicle from the hard collar she wore. The pressure ulcer contained slough and was categorised as a 3.

Patient 8
A 58 year old male who was very ill following a heart transplant, and had previously had suffered a myocardial infarction and was severely malnourished. He developed hospital acquired sacral pressure damage which was covered with a stringy yellow material and was categorised as a 3.

Patient 4
An 83 year old lady who was admitted with difficulty in breathing and possible heart failure. On admission she was noted to have a lightly sloughy category 3 pressure ulcer to buttock.

Patient 6
A 44 year old man who had suffered a head injury following an assault. Known to be an alcoholic and suffer from depression. A category 3 pressure ulcer developed as a result of incorrect catheter positioning.

References

* Debrisoft – Activa Healthcare