An open, prospective randomised, multi-centre clinical evaluation of a hydrocellular silicone foam dressing* in the management of exuding chronic and acute wounds

Authors: Kath Vowden, Bradford Royal Infirmary, (Bradford, UK) Keith Harding, Cardiff University, (Cardiff UK), Nailem Moiemen, University Hospitals Birmingham Foundation Trust (Birmingham, UK), Kate Drysdale, Smith & Nephew (Hull, UK), Chetan Mistry, Smith & Nephew, (Hull, UK)

Introduction
This silicone adhesive hydrocellular foam dressing* consists of an absorbent hydrocellular foam core between a perforated silicone adhesive wound contact layer and a highly permeable waterproof outer form. The dressing is designed to provide a moist wound environment to promote faster wound healing.

The main benefits of the product are the combination of the gentle adhesive with the exudate handling capabilities of the dressing. The adhesive means that dressing changes are associated with minimal pain on removal and trauma to the wound whilst the exudate handling properties means that dressings do not need to be changed frequently.

Aim
The aim of this study was to assess the performance of the silicone hydrocellular foam dressing*. The primary focus was on dressing wear time but other parameters associated with the progress of the wound and the performance of the dressing were also assessed.

Method
The study was carried out in three centres in the UK. 11 patients with chronic or acute exuding wounds were recruited and treated with the study dressing during the period of July 2009 to July 2010. Patients were enrolled into the study and treated for up to 28 days or healing, whichever occurred sooner. The dressing changes were to be done as clinically needed rather than after a set period of time and centres were discouraged from changing the dressing for routine assessments.

Results
This silicone adhesive hydrocellular foam dressing* consists of an absorbent hydrocellular foam core between a perforated silicone adhesive wound contact layer and a highly permeable waterproof outer form. The dressing is designed to provide a moist wound environment to promote faster wound healing.

The main benefits of the product are the combination of the gentle adhesive with the exudate handling capabilities of the dressing. The adhesive means that dressing changes are associated with minimal pain on removal and trauma to the wound whilst the exudate handling properties means that dressings do not need to be changed frequently.

Discussion
The aim of this study was to investigate the performance of the silicone hydrocellular foam dressing. The study showed that the dressing performs well in terms of exudate handling and patient pain and wound/zien wound traumas on dressing removal.

The dressing wear time was 3.6 days however there is some evidence that the dressing changes were not all driven by clinical need but rather were changed due to convention (e.g. pre-determined dressing change regime) or convenience of scheduling appointments. 7 dressings were changed to enable the wound to enable weekly wound assessments.

2 of these dressings were changed only 1 day after the patients’ dressings had been changed at home.

Only one of the dressing changed to assess the wound had the maximum wear time of 7 days.

One patient had dressing wear times of 4, 4, 3, 4, 3, 4, 3 days suggesting implementation of a twice a week dressing change regime.

There were other unlikely patterns of dressing wear time suggesting that factors other than clinical need were driving dressing changes (e.g. 5, 2, 5, 2 days for one patient). Taken together this suggests that when dressing wear time can be determined according to clinical need alone the wear time may be greater than seen when the many factors that normally go into deciding when to schedule a patient’s next dressing change are taken into account.

The cost information shows that the materials used during the dressing change are the main contributor to the total cost of treating a patient’s wound for a week. Dressing wear time is an important driver in this cost as obviously changing the dressings more often increases the cost of treatment. The above findings suggest that if an alternative approach were taken to the scheduling of clinic assessments cost savings could be made.

Conclusion
The data suggests that the dressing meets clinician’s needs based on dressing wear time, exudate management, wound pain and trauma on dressing removal.