Improvement of treatment in patients with venous leg ulcer by a new pain-reducing wound dressing with HydroBalance

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Introduction:
The aim of this study is to investigate the influence of a HydroBalanced wound dressing (HWD) on wound size reduction, pain control and properties of the wound surrounding skin, before and after treatment with the bio-cellulose based HWD by means of non-invasive objective skin techniques in patients with venous leg ulcers. The bio-cellulose based HWD can absorb exudate and donate moisture.

Material and Methods
A single-blinded, monocentric, prospective, controlled, randomized, explorative comparison trial of HWD* and foam** (secondary dressing) versus foam** alone over 3 months (interim evaluation), with ambulatory leg ulcer patients (n=50) has been conducted. As non-invasive parameters transdermal water loss (vapometer, for skin barrier), redness (chromametry, for inflammation) and skin hydration (corneometry) were additionally used. The wound size was analyzed by a digital wound documentation software with 2D-3D measurement device. The pain measurement was carried out by a Visual Analogue Scale (VAS, 0-10). For the compression therapy a short stretch compression system was applied.

Results
Up to now 25 patients (Day 0: HWD*+Foam** n=12, Foam* n=13) were recruited and evaluated for interim results. The dressings were changed every 3 days. During the period of four weeks treatment the healing of the wounds started in both groups. A higher reduction of the wound size and faster onset was seen with HWD*+Foam** (49.4%, n=10) vs Foam** alone (26.1%, n=8) after 4 weeks (Fig 1).

The patients reported a subjective better pain control during application and the whole period of treatment. The pain - reported in the Quality of Life (QoL) form - decreased in both groups - after three months for

HWD*+Foam** from 7.5 (n=12) to 2.3 (n=10) and for Foam** from 7.8 (n=13) to 3.8 (n=7).

The transepidermal water loss TEWL (for skin barrier) of the surrounding skin decreased and the skin hydration increased in both groups.

Conclusions
After four weeks treatment the HWD*+Foam** demonstrated a very good wound size reduction, pain control, skin barrier improvement as well as comfort in application and formability as interim result. The HWD*+Foam** showed very good tolerability.

* HWD = Suprasorb® X; ** Foam = Suprasorb® P; *** Rosidal® sys; Lohmann & Rauscher products

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