

Use of Hydrobalance Wound Dressing in Scleroderma ulcers

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Introduction:

Cutaneous distal ulcers may occur in up to 50% of scleroderma (SSc) patients, heal slowly, tend to be chronic, are extremely painful and largely affect the quality of life.

Treatment of chronic cutaneous ulcers in SSc patients is challenging due to localization, atrophic perilesional skin, frequent infections, concomitant immunosuppressive medications.

To date, there is an unmet need for effective wound dressing that may help to heal chronic cutaneous ulcers in SSc patients.

Material and Methods:

We used Hydrobalance Wound Dressing (4% biosynthetic cellulose and 96% water) with polyhexamethylene-biguanide (PHMB)* as antimicrobial agent for infected ulcers, in eight consecutive patients with a diagnosis of SSc made according to the preliminary American College of Rheumatology (ACR) criteria and referring to our outpatient clinic.

The patients aged 56 ± 4 years, 7 were females, 5 had the limited cutaneous SSc subset, 2 the diffuse cutaneous SSc subset and 1 had the "sine scleroderma" subset.

Each patient was previously evaluated and, when possible, treated for any concomitant risk factor that might worsen the status of the wound and impair healing, as shown in Table 1. In these patients Hydrobalance Wound Dressing was applied along with systemic scleroderma standard therapy with vasodilators (calcium channel blockers p.o. and prostanoids i.v.) and with antiplatelet or anticoagulant agents (see Table 2); some patients also undertook endothelin receptor antagonist therapy.

Overall we treated 27 ulcers (15 newly-formed ulcers and 12 longstanding, refractory ulcers) for 20 weeks.

According to the status of the wound, Hydrobalance Wound Dressing can absorb surplus exudate from the wound and release moisture in case of lightly exuding wounds.

Hydrobalance was applied twice a week for the first 3 weeks and once or twice a week on the basis of clinical judgement the following weeks. Secondary wound dressing was chosen in order to maintain moisture in the wound area. Patient's perception of pain related to the ulcers was evaluated by visual analog scales (VAS) every 4 weeks; physician assessment of the severity of each ulcer was graded on VAS by a single observer.

Results:

The patients' overall perception of pain decreased from the first application.

The assessment of ulcer severity also improved in a similar fashion, as outlined in Graph 1. Overall, we observed a complete healing of all the newly-formed ulcers in 4 - 14 weeks and a complete healing of 4/12 refractory ulcers (30%) in 15 - 19 weeks. In the remaining 8 cases of chronic ulcers an improvement in wound bed preparation according to TIME principles (debridement, control of infections, moisture balance and advancing of wound edge) was observed.

Conclusion:

Hydrobalance Wound Dressing is a valuable therapeutic option in the management of SSc-related cutaneous ulcers. The benefit associated with its use are clear either in newly or in chronic refractory ulcers.

Table 1: Case Series and Risk Factors

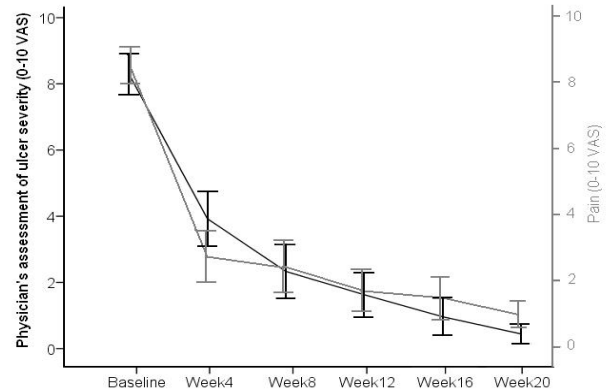
Patients	A	B	C	D	E	F	G	H
Age (yrs)	40	57	77	46	60	37	73	61
Dislipidemia	-	-	-	-	+	-	-	-
Diabetes	-	+	-	-	-	-	-	-
Smoke	+	-	-	+	+	-	-	-
Hypertension	-	-	+	-	-	-	+	-
Pulmonary Hypertension	-	-	+	-	-	-	-	-
Venous Insufficiency	-	+	-	-	-	-	+	-
Arteriopathy	-	-	-	-	+	+	-	-
Hyperomocisteinemia	-	-	+	-	-	+	+	-
Coagulation Factors Deficiency	-	-	n.k.	-	-	-	-	-
Antiphospholipid Antibodies	-	-	n.k.	-	-	n.k.	-	-
Cryoglobulinemia	-	-	-	-	-	-	-	-
Anemia	-	-	+	-	-	-	-	-

Table 2: Patients' therapies

Patients	A	B	C	D	E	F	G	H
Calcium Channel Blocker	+	+	+	+	+	+	+	+
Anti-platelet Agent	+	-	-	+	+	+	+	+
Anticoagulant Agent	-	+	+	-	-	-	-	-
Prostanoid	+	+	+	-	+	+	+	+
Endothelin Receptor Antagonist	+	-	-	-	+	-	-	-
Steroids	+	+	-	-	+	-	+	+
Immunosuppressants	+	-	-	-	-	-	-	-
Biologic Agents	-	-	-	-	-	-	-	+



Graph 1: VAS evaluation



*Suprasorb® X+PHMB
Lohmann & Rauscher (Europe)