



WundForum

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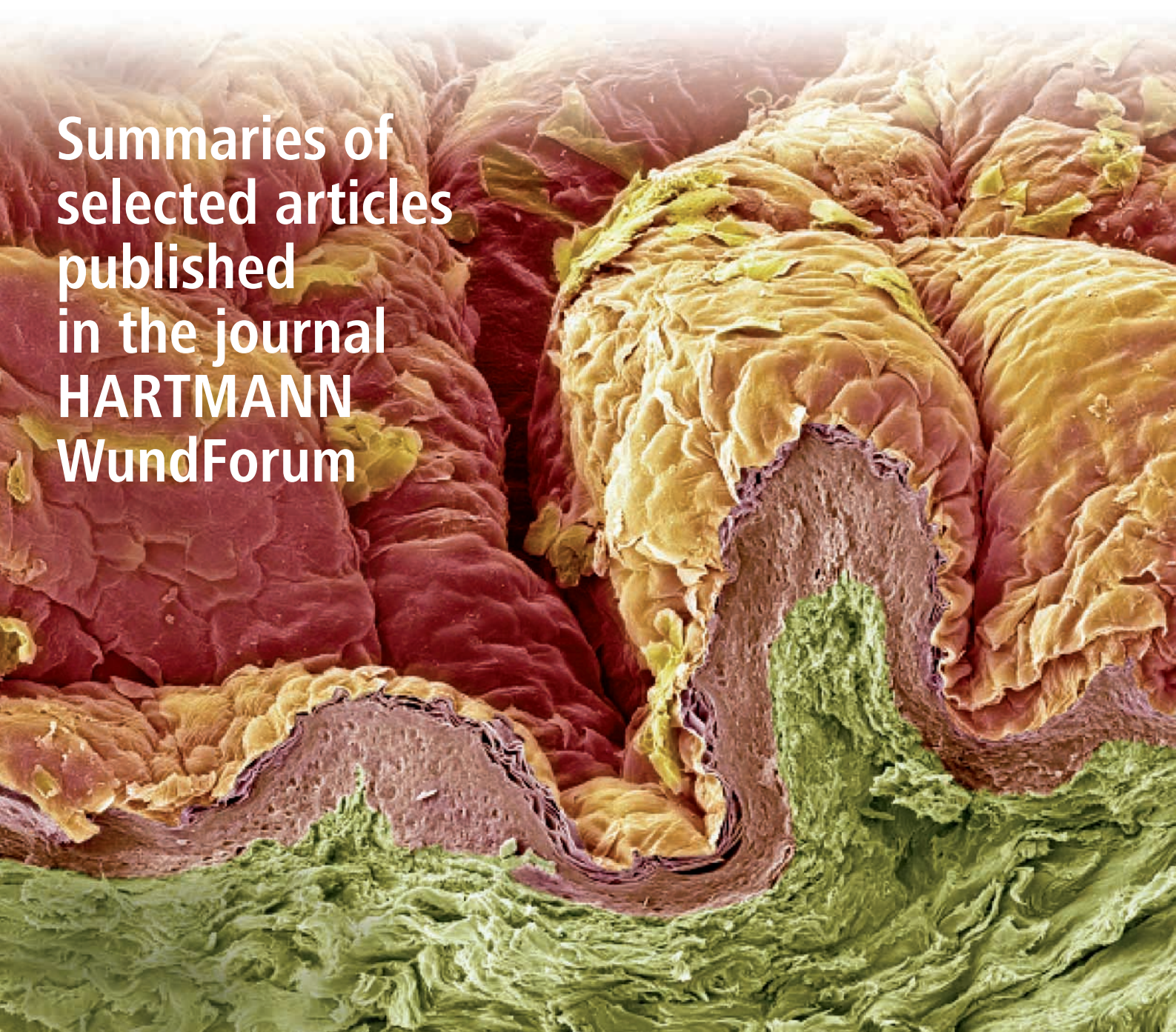
Issue 4/2008 – Volume 16

**Decubitus ulcer:
pathogenesis
and treatment**

**Drug monitoring study:
the hydrogel bandage
Hydrosorb in the treatment
of chronic wounds**

**Use of Atrauman Ag
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Seiler, Walter O.

Decubitus ulcer: pathogenesis, prophylaxis and treatment

(Dekubitus: Pathogenese, Prophylaxe und Behandlung)

HARTMANN WundForum, 4/2008, vol.16, pp. 9–17

One of the most serious complications of immobility is the formation of decubitus ulcers. For the affected person, it means in most cases a serious illness, not even considering the tremendous care and expense that treatment of decubitus ulcers entails.

In this review, the author provides detailed information on the pathogenesis of decubitus ulcers, five classical sites of decubitus ulcers, classification by degree of severity, as well as risk factors for this chronic syndrome.

The healing of a decubitus ulcer can often drag on for many months and presents a challenge, especially for elderly people, which not infrequently remains unresolved. This may not least be due to the fact that it is very difficult to translate the complexity of the development of decubitus ulcer and chronic wound healing into simple and reproducible standardised therapy concepts. Rather, medicine and nursing must develop an individual concept for each patient that takes into account as much as possible his or her medical and life circumstances. It can be helpful in such cases to follow pathophysiologically sound therapeutic principles that can be used as a checklist.

One example are the therapeutic principles developed by the Geriatric University Clinic of the Canton Hospital of Basel to promote an effective interdisciplinary approach to the treatment of decubitus ulcers:

Complete relief of pressure

Debridement of necrosis

- Treatment of local infection (including osteomyelitis and sepsis)
- Permanent moist therapy with Ringer’s Solution for wound treatment
- Diagnostic and continuous monitoring of local and general factors which disturb wound healing
- Exact diagnosis of malnutrition and subsequent targeted nutritional therapy
- Investigation of the possibility of plastic surgery and plastic surgical intervention when needed

The article is rounded off with several tables and graphical illustrations to support the clinical practice.

Rimmele-Schick, Elisabeth and Fröhlich, Christian Drug monitoring study: the hydrogel dressing Hydrosorb in the treatment of chronic wounds

(Anwendungsbeobachtung: der Hydrogelverband Hydrosorb in
der Therapie chronischer Ulcera cruris)

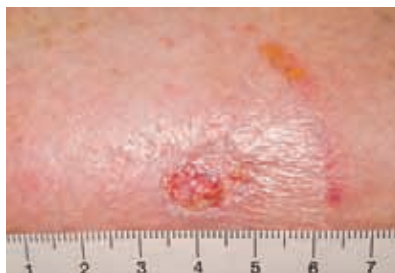
HARTMANN WundForum, 4/2008, vol. 16, pp. 19 – 21

The author, a practicing dermatologist, and the co-author, a wound consultant, document the success of treatment of chronic stasis ulcers with Hydrosorb using five case reports.

Case report 1: 85-year-old female patient with venous stasis ulcer above the lateral malleolus

The ulcer had not been previously treated; existing cardiac insufficiency was treated with diuretics; there was no other concomitant therapy.

The wound was treated with Hydrosorb without adhesive edges. The bandage was changed 2.5 times per week. Epithelialisation and granulation increased with treatment. The physician evaluated Hydrosorb as good; the patient evaluated the product as satisfactory.



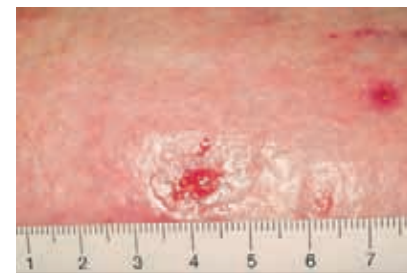
1a

Illustration 1a:

Size of the ulcer on admission examination: 1.2 cm²

Illustration 1b:

Size of the ulcer on discharge examination: 0.5 cm². The size of the wound was reduced by 58% within 6 weeks.

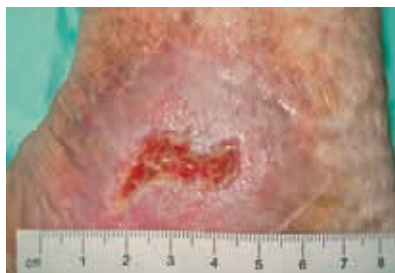


1b

Case report 2: 51-year-old female patient with existing venous stasis ulcer on the inner left ankle for about one year.

The patient was obese. Previous wound treatment with hydroactive wound dressings was unsuccessful. Concomitant therapy with a compression treatment was carried out using short stretch bandages.

Hydrosorb without adhesive edges was used; the dressing was changed 2.5 times per week. The appearance of the wound did not change with treatment. The physician evaluated the properties of Hydrosorb as good; the patient as evaluated the product as very good



2a

Illustration 2a: Size of the ulcer on admission examination: 3.5 cm²

Illustration 2b: Size of the ulcer on discharge examination: 2.32 cm². The size of the wound was reduced by 34% within 6 weeks.



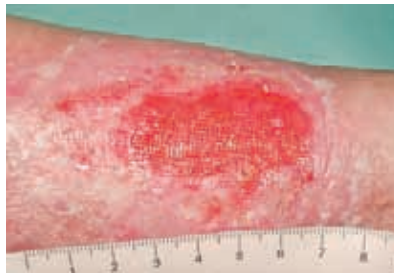
2b

Case report 3:

75-year-old female patient with existing ulcers on both shinbones and the right outer ankle for 7 months

The previous wound treatment was performed in the conventional manner with ointment compresses. The patient also had diabetes mellitus and hypertension which required therapy.

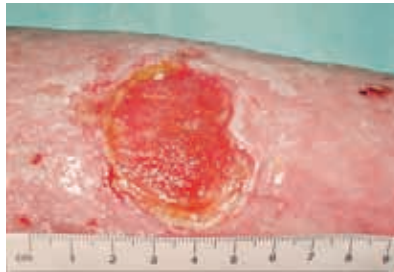
The wound was treated with Hydrosorb without adhesive edges; the bandage was changed 2.5 times per week. Both physician and patient evaluated Hydrosorb as good.



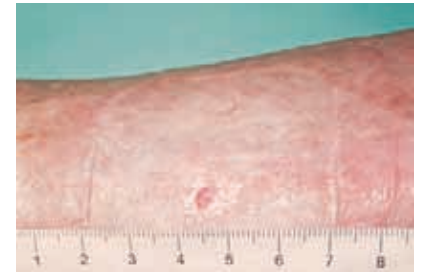
3a



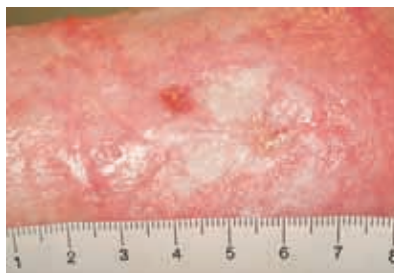
3b



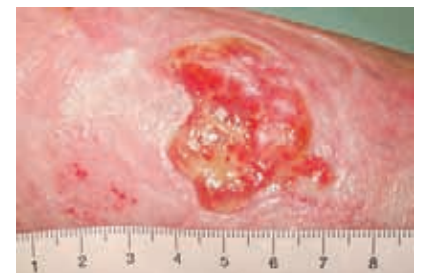
3c



3d



3e



3f

Illustration 3a – 3c: Size of the ulcer (total) on admission examination: 27.8 cm².

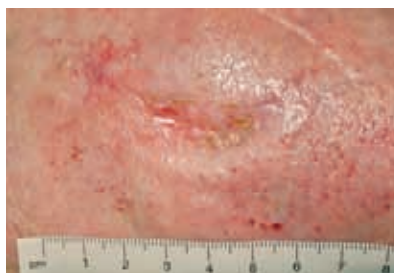
Illustration 3d – 3f: Size of the ulcer (total) on discharge examination: 8.3 cm². The size of the wound (total) was reduced by 70% within 6 weeks.

Case report 4:

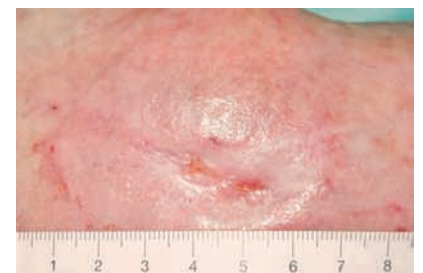
62-year old female patient with an ulcer on the right inner ankle. The ulcer had already existed for 6 months.

The patient's underlying diseases were peripheral arterial disease (PAD) and chronic venous insufficiency (CVI). The patient was obese and took pentoxifyllin.

Pre-treatment with hydroactive wound bandages led to analgesia and a reduction of the ulcer to a wound surface area of 1.2 cm². Hydrosorb without adhesive edges was used. The bandage was changed 2.5 times per week. Epithelialisation increased during further treatment. Physician and patient evaluated Hydrosorb as good.



4a



4b

Illustration 4a: Size of the ulcer on admission examination: 1.2 cm².

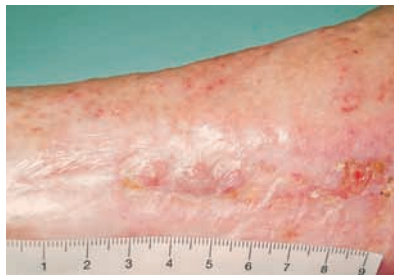
Illustration 4b: Size of the ulcer on discharge examination: 0.6 cm². The size of the wound was reduced by 50% within 6 weeks.

Case report 5:

82-year-old female patient with existing non-healing ulcers on the left medial malleolus for several years

Four months before the start of the case report, Reverdin plastic surgery was performed to cover the defect. The patient had polyneuropathy of unknown origin. The medications taken were tramadol hydrochloride, amlodipine, enalapril, and esomeprazole magnesium.

Hydroactive wound dressings were used after the Reverdin plastic surgery. The size of the ulcer was thereby reduced. Only Hydrosorb was used for the remaining defect; the bandage was changed 2.5 times per week. Physician and patient evaluated Hydrosorb as good.



5a



5b

Illustration 5a: Size of the ulcer on admission examination: 1.3 cm²

Illustration 5b: Size of the ulcer on discharge examination: 0.8 cm². The size of the wound was reduced by 38% within 6 weeks.

Lang, Friedhelm

Use of Atrauman Ag in a wound with MRSA colonisation

(Der Einsatz von Atrauman Ag bei einer mit MRSA besiedelten Wunde)

HARTMANN WundForum, 4/2008, vol. 16, pp. 22–23

In this case report, the author describes wound treatment with Atrauman Ag in a patient with type 1 diabetes mellitus.

The 30-year-old female patient presented in the clinic with bullous changes on the toes of both feet. The diagnosis was second and third degree burns to plantar and dorsal surfaces of both forefeet, necrosis in the second to fifth toes on the right foot, and erysipelas on both forefeet and the dorsal surface of the feet. Microbiological findings of pooled nasal, pharyngeal and perianal swabs confirmed methicillin-resistant and penicillin-binding protein 2 positive *Staphylococcus aureus*. Surprisingly, no evidence for MRSA could be found in the microbial swabs of the wound secretion.

The patient was hospitalised with appropriate MRSA isolation. Blisters were removed from large areas of both forefeet.

In the first five days after the blister removal, bandage changes were performed daily with the hydroactive ointment dressing Hydrotüll to guarantee seamless



1



2



3

Illustration 1: Condition after border zone amputation; D 2–5 with central wound down to the bone

Illustration 2: Fibrin und remaining necrosis on the amputation stumps

Illustration 3: Loose tamponade with Atrauman Ag in the centre of the wound stumps

control of wound necrosis. Subsequently, bandage changes every 2 days under stringent hygienic conditions was sufficient for wound care.

After discharge of the patient to further ambulatory treatment, wound treatment was carried out by social services and the family physician. There was visible mummification of the toes, which were kept free of infection with a protective cotton bandage.

After clear demarcation of the necrosis, the patient was again hospitalised for a border zone amputation of the second to fifth toes of the right foot. In the operation room a bandage with the silver-containing ointment dressing Atrauman Ag was applied to the wound and the amputated forefoot covered with a protective cotton bandage. The further course of the wound healing was free of complications. Bandage changes with Atrauman Ag were carried out daily, in which Atrauman Ag was loosely tamponaded in the amputation stumps and covered with compresses.

The small area of remaining necrosis and the fibrin coating were gently removed with a scalpel. The forefoot stump was protected and kept warm with a tube bandage wrapped with cotton.

Fresh, granular and well-perfused granulation tissue quickly formed on the amputation surfaces.

On the tenth day after the border zone amputation, the patient was discharged, with further MRSA positive swabs, to ambulatory treatment. Social services took over the recommended therapy concept and cared for the amputation wound with Atrauman Ag and a protective cotton foot bandage.

The forefoot healed slowly but without complications. The forefoot became weight-bearing, soft and nicely rounded forefoot, so that today the patient is free of complaints, has a good gait, and is able to work again.



4



5



6

Illustration 4: Atrauman Ag saturated with detritus before bandage change

Illustration 5: Stumps filled with granulation tissue before epithelialisation

Illustration 6: Healed stump