An accident seldom comes alone: Severe wounds - a challenge in rehab for patients with multitrauma

Madeleine Stenius - Training & Education Coordinator/Assistant nurse, Rehab Station Stockholm, Sweden

INTRODUCTION: Rehab Station Stockholm conducts rehabilitation for patients from all over Sweden and sometimes also from other countries.

Many of our patients have undergone various traumas where they have been injured in traffic, in falls, in various sports or violent incidents. Some of them have to learn to live their lives with paralysis, others may adapt to a life without legs and sometimes even hands. Some of the patients have suffered both bodily injury and a changed face, following a burn or necrotizing fasciitis.

Following a trauma with bodily injury, highly specialized treatment in emergency care is provided with advanced equipment and operations. But unfortunately, health care does not spend as many resources on after care and prevention of care related injuries because it is not as "cool" to spend money on.

Patients who have survived a serious accident can sometimes also receive and suffer from a pressure ulcer or an infection that can lead to Acute Fecal Incontinence dermatitis - AFId, or that the operating wounds do not heal. This can lead to extended time in the hospital, bedrest with the result that one cannot fully utilize one's rehabilitation period.

When you have a hard-to-heal wound that does not heal even though you have used all the most common modern treatments, you may try something "outside the box"

Contact networks and the opportunity to meet other wound interested people both nationally and internationally allow you to give and receive tips and ideas that others have already tried.

IMPLEMENTATION: At the Skin Integrity Expert Conference in April 2018 in Rome, I met with colleagues from 13 different countries in Europe who all tested Cavilon Advance Skin Protectant - CASP developed for Incontinence Associated Dermatitis - IAD. I then got tips that CASP also worked on other hard-to-heal wounds such as superficial pressure ulcers, donor sites, burns and radiation damage.

After the conference, I started to apply CASP to a some of my patients with hard-to-heal wounds of

various wound diagnoses. These wounds had not healed despite wound adapted dressings with modern wound treatment.

Patient safety is important and in every case we must consider whether there are any risks. We need to have approval of both the physician and patient, and always check and follow up with the patient carefully.

RESULTS: Wounds that did not heal in 10-52 weeks had now healed in a short period of time. We already saw good results after the first treatment and the patients reported that the pain and stiffness were reduced at once. The patients could more easily move and become more active in their rehabilitation.

DISCUSSION: It may be difficult to introduce new treatments because staff do not always follow treatment recommendations. The results of an ongoing treatment can be delayed or even be absent if someone lubricates an ointment routinely or uses a dressing that is not adapted to the wound or the surrounding skin.

Healing can also be compromised when the patient is on a follow-up visit to another clinic where they do not want to try new treatment methods. Unfortunately, it is common for doctors to lack knowledge about modern wound treatment and instead use and prescribed old-fashioned methods that are no longer relevant.

The key to success is collaboration across clinic boundaries as well as occupational categories. Management must also be involved in the development of improvements work in order to achieve long-term and sustainable results at the clinic/ward.

Continuous follow-up by the same person with knowledge of wound healing makes the patients (and staff) feel safe and then become more motivated to follow the restrictions of the treatment. This, together with a good product, was the key to the successful result in these cases.

But how can we provide a continuous and patient safe care in today's stressed society with reduced care times and less staff? What is patient safety in these days, are they just nice words?

Patient case with Cavilon Advanced Skin Protectant - CASP

All cases have previously been treated with modern dressing techniques such as various polyurethane foam dressings, honey, Ag dressings - without complete healing.



Cases I-4 were all exposed to friction or shear due to reduced mobility ability. We therefore used a dressing over the Cavilon Advanced Skin Protectant treated area in order to protect the fragile tissue during the treatment period.

PATIENT CASE I - Patient diagnosed with pressure ulcer, but correct diagnosis had been IAD/AFId. Patient who after a traffic accident was treated in the ICU where he got a bowel infection with several daily episodes of diarrhea. The patient has been in a half-sitting position in bed, which has also caused pressure and shear on the open skin perianally. The patient is overweight and disabled but he makes transfers standing and turning to his manual wheelchair with tecnical aid. He has a lot of pain from the wound and tells me that the wound causes him more problem and pain than his accident.



Healing and pain relieving had started with PolyVic & PolyMem dressings the 28th of december. The pain and the wound decreases rapidly after treatment with CASP 1-2 times / week from 7th of January, despite continued stool leakage (less than before). PolyMem is used as secondary dressing to protect the area from E-coli. The wound heald within 1 month.

PATIENT CASE 2 - Patient with burn injurey is also a doubleamputee. Burns with open wounds over her back, sitting surface and on the legs that have not healed in I year. She also has IAD on her genitalia, groin and perianal. She has a catheter and Flexi-Seal(fecal catheter) due to damaged bowel. The wounds healed well dispite some staff not following the ordination and dressing the wound with honey between the CASP applications. The wounds on her back also got worse due to friction when lifting sheet was applied. We started to apply sliding sheets HandySheet which contributed to healing. As the patient begans to sit more in her wheelchair, the wounds on the sitting surface deteriorated due to increased pressure, despite short moments of sitting on a pressure-relieving air cushion.

The treatment starts 29th of May with CASP and protective dressing (Sårdyna) that was put underneath her elastic pantyhose. IAD healed in 3 weeks and back in 6 and a half weeks. Treatment with CASP ended after 8 weeks due to the lack of CASP at her new caregiver.









After 5 weeks

After 3 weeks After I week

Her back was healed after another 3 treatments according to a telephone call from the patient that has moved to another caregiver. Heald with 13 times of applications with CASP.

PATIENT CASE 3 - Patient with donor sites on both thighs that did not heal for 10 months. Woman who, after a traffic accident received a skin graft in order to save her legs. The donor site would not heal and she had pain and was stiff which affected her ability to move and walk. We started to treat both thighs with CASP and Mepilex Transfer as protection. After I treatment, the pain and stiffness had been reduced, which improved the possibility of rehabilitation, as the patient could now move and walk.







Left thigh healed after 2 treatments = 1 week. Right thigh healed after 5 treatments = 3 weeks.

PATIENT CASE 4 - Patient with donor sites that did not heal in 10 weeks. Healed in 1 week = 2 treatments with CASP and Mepilex Transfer as protection. The pain and the stiffness was reduced after the







28th of August 3 x 3 cm

4th of September I x I cm

10th of September Healed

PATIENT CASE 5 - Patient with Irritating Contact Dermatitis - ICD. Patients who has had one eczema-like spot on the upper part of her foot for several years. When the skin gets hard, dry and irritated, wounds occur. The wound was healed after one treatment with CASP and the skin was not irritated any longer after 2 treatments (I/week). No sign of skin problems has been seen one year after the treatment, but she needs to lubricate the skin regularly.







Start with CASP

After I week

2 weeks later





Madeleine Stenius Assistant Nurse and Training & Education Coordinator

Rehab Station Academy Frösundaviks allé 4, 169 89 Solna, Sweden madeleine.stenius@rehabstation.se