# HOW WE RESOLVED THE PROBLEM OF POOR COMPLIANCE WITH 20 CHRONIC VENOUS ULCERS PATIENTS BY USING POLYMERIC MEMBRANE DRESSINGS

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## Introduction

Venous ulcers are responsible for 80-90% of all leg ulcers with an estimated prevalence of 0,6% - 2% of the total population. Venous leg ulcers tend to recur and it is essential to empower the patients to make the necessary life style changes in order to prevent recurrence. Despite the belief that venous ulcers are relatively painless, research has shown that venous ulcers decrease the quality of life of patients and cause a significant suffering due to pain at the wound site which, in the past, has often not been taken into consideration by the clinicians. Hoffman et al 1997, pointed out in survey of 94 patients that 90% complained of pain. 64% of these patients reported excruciating pain that affected their sleep.

For the past 10 years we have been faced with the challenge to treat venous ulcers on patients who would not comply with wound dressings or compression bandaging due to distress and pain.

## Aim

To understand why some patients rarely comply with compression bandaging and develop a treatment plan acceptable to them in order to optimize the requirements of healing their wounds.

## Method

20 patients with an average age of 75 years old and with venous ulcer duration of between 7-25 years were chosen. The smallest wound was 10cm x 8cm and the largest 15cm x 10cm. None of these patients had complied with compression bandaging claiming it was too painful; pain level being on an average of 8 out of 10 on a VAS scale. Most of these patients also complained that compression prevented them from wearing normal shoes and it made them feel very conspicuous whenever they left their homes.

A program consisting of patient and family education, class II compression hosiery and polymeric membrane dressings* (PMDs) was put in place. Daily dressing changes the first weeks were gradually reduced to three times a week as exudate levels decreased.

PMDs have been found to reduce the swelling, pain, and bruising often associated with a wide range of soft tissue injuries, including venous ulcers. These dressings have been shown to reduce the pain and itching not only in the open wound, but also all in the periwound area when placed in direct contact with the inflamed, tender, and often itchy periwound tissues. The dressings have been shown to focus the inflammatory cells required for healing into the site of damage, while reducing their spread into the surrounding undamaged tissues (Beitz). This physiological benefit is particularly important when treating venous ulcers because the open venous ulcer is the consequence of tissue inflammation and destruction in the deeper tissues and the open wound is often just the “tip of the iceberg.” Additionally, continued use of the dressings on closed wounds for one month after closure, with weekly new dressing application, has been associated with clinically observable improved wound strength and improved cosmesis for a wide range of wounds.

## Results

All 20 ulcers healed; some were healed in only 12 weeks while others took up to a 1 year. Wound pain, during the first week of treatment, was reduced from an average score of 8 to 3 and continued down to 0 after a couple of weeks. One of the first comments we received was that the patients were finally getting a full night of uninterrupted sleep.

PMDs are suitable for use under compression as they are soft and flexible, follow the conture of the wounds without causing any additional pressure damage. We also found less skin scaling under the areas where the dressing had been used.

Once healed the 20 patients were followed up every three months for the first year, after that twice a year. So far at the end of two years follow-up we have had no recurrence.

## Discussion

Venous leg ulcers tend to recur and it’s essential to motivate patients to make the necessary life style changes in order to prevent development of new ulcers.

We know that many patients refuse compression due to pain as well as cosmetic reasons so it is up to us, the clinicians to offer an acceptable alternative. The combination of class II hosiery and PMDs have proven to be an effective treatment as it was well accepted by our patients. We believe that the pain relieving effect of the PMDs helped enable the use of compression hosiery. Once the patients were used to the hosiery it was easier to motivate their continued use even when the ulcers had healed.

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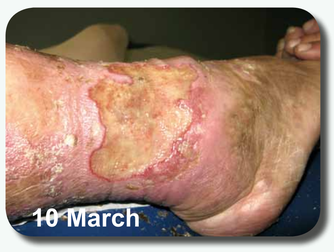
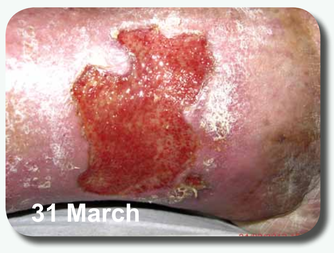
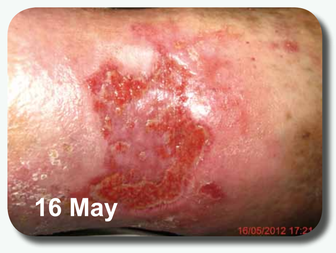



72 year old obese woman with ulcer duration of 11 years. Previous treatments included hydrocolloids, hydrogels, various foams and last treatment, Iodine. She was referred to our clinic due to pain. She truely believed that her wound would never heal and she came to us with the hope to reduce her depilitating pain that was on a constant level of 10 according to VAS. Sleepless nights were spent sitting on a chair. Medication included 100mg tramadol hydrochloride i.m. injections plus Codamol 2x3 daily.



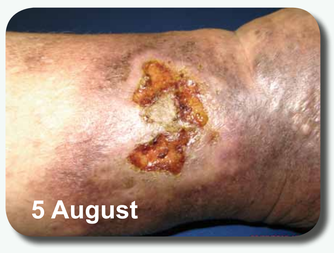



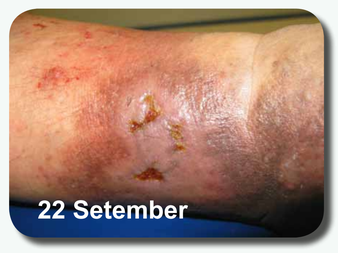


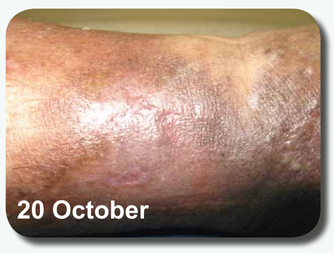
PMDs were moistened with 2 ml warm saline prior to application the first week with changes every 48 hours, after that we changed every 76 hours. Class II compression hoisery was prescribed and daily leg elevation recommended. After the first week pain levels dropped to 6 and she no longer need her injections. For the first time in 10 years she actually slept in her bed.

Her pain level dropped down to 4 at week 2 and by the fourth week she no longer experienced any pain. It took us a bit longer to convince her to stop taking her pain medication as she was too scared to stop, however she agreed to gradually reduce the amount and within a couple of months was completely medication free. This 11 year old ulcer took 4,5 months to close.

68 year old woman with wound duration of 12 years. She was quite determined that she knew what was best and insisted to dry her leg ulcer in the sun every day. She took both brufen 400mg and paracetamol several times a day. Previous treatments consisting of hydrocolloids and foams were perceived as too painful and she would remove the dressings as soon as she came home. Any type of compression was out of the question.

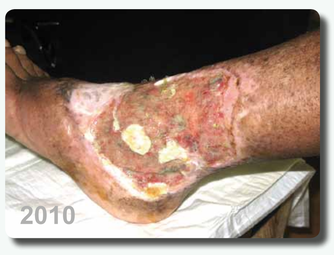


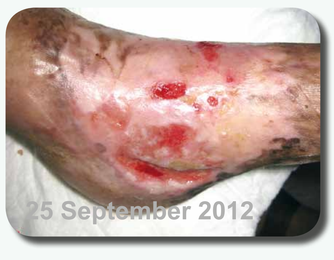

At initial assessment we saw a dry wound covered with yellow fibrin. Pain level 7. Since the patient did not allow us to touch the wound due to pain we moistentened PMDs with 4 ml normal saline solution to facilitate faster debridement.. Daily dressing changes according to the patients wishes as she wanted to keep an eye on her wound.

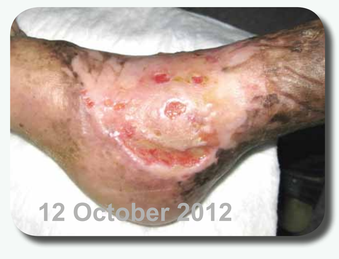
After two weeks of treatment we had gained enough trust to be allowed to continue to treat her wounds till healing, By then she did not experience any pain at all and could discontinue all her analgesia. She also started to leave her house and take walks for the first time in several years. First when the wound had healed did she agree to use prophylactic compression hoisary.






This woman has had her ulcer since she was 45 years old, she is now 70. During our first two treatment years, 2010-2012, she refused to use any type of compression. We also discovered that she used to remove and replace whatever dressings or compression we had applied to Iodine and gauze. It took us until September 2012 to get her to accept and understand the need to do something about her leg. She initially insisted that there was no point as she was past her prime. With the help of a psychologist, we managed to change her behaviour and eventually agree to use PMDs and class II compression stockings.





She stopped removing the PMDs and agreed to use compression stockings in September 2012. From that moment her wound started to clean up, her pain levels reduced and her ulcer started to close. The wound closed after 6 months use of PMDs. The patient has agreed to monthly follow-up visits.

*PolyMem® Wound Dressings with and without Silver. Manufactured by Ferris Mfg. 5133 Northeast Parkway, Fort Worth, TX 76106, USA . This case study was unsponsored.