

# HARD TO HEAL INFECTED WOUNDS CLOSED WITH POLYMERIC MEMBRANE SILVER DRESSINGS\*



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## INTRODUCTION

In our practice we often see wound patients with recurring infections. They have often taken several courses of antibiotics only to have the infection come back since the wound remains open. In our opinion it is crucial not only to treat the infection systemically with the use of antibiotics but also at the wound site in order to ensure that the wound heals quickly preventing painful re-infections which will delay or prevent the healing process.

## AIM

Our goal is to provide a rapid relief and improve healing in heavily infected wounds. We need an antimicrobial dressing that does not affect the microclimate of the wound or is toxic to the fibroblasts. Polymeric membrane silver dressings (PMSDs) fulfill our criteria perfectly.

PMDs contain components which draw and concentrate the natural healing substances from the body into the wound bed to promote rapid healing while facilitating autolytic debridement.

## METHOD

Patient 1 had a severe erysipelas infection with a large draining malodorous wound. Pat 2 a diabetic with a post op infection after femoral popliteal bypass. Both wounds were extremely painful, had periwound edema, erythema, localized heat and malodor.

Both these patients been treated with iodine dressings prior to PMSDs. Patient 1 was so embarrassed over the odor she insisted on changing the dressing herself at home, we needed to convince her to let our nurses come and inspect the progress after a few days and then every fortnight. Patient 2 was helped by our nurses in her home. Dressing changes every 1-2 days the first 2 weeks, then according to exudate level. Most dressing changes (on both patients) did not require additional cleansing or debridement; it was enough to replace the old PMSD with a new one, making the changes very quick and easy to perform.

## RESULTS

Pain levels reduced dramatically after a few days. Patient 1 let us inspect the wound every 2 weeks and managed all the other dressing changes herself. Patient 2 had a slightly slower but still consistent improvement. Total wound closure achieved by 2 resp. 4 months without any recurring infection episode.

## DISCUSSION

Polymeric membrane silver dressings are easy to use, and do not require any specific training, making them perfect for home use. These are the only silver dressings we feel comfortable to use for more than 4 weeks since they don't release silver ions into the wound-bed, therefor no risk of systemic absorption.

56 year old obese but otherwise healthy woman. She was admitted to the hospital with a red hot swollen leg that was covered with blisters. This developed into a red and later sloughy firm "patch" with a sharp edge. Her rash was similar to an orange peel, also known as "peau d'orange". and the diagnosis was erysipelas infection. Since she was allergic to penicillin (drug of first choice) she was treated with erythromycin for 10 days.

Elevation and rest of the swollen leg was recommended in order to reduce local swelling, inflammation, and pain together with saline compress soaks. The patient came back to us a few months later with a large sloughy, painful, exuding, malodorous circumferential wound. She had been self-treating with iodine soaks the entire time. The increased pain and malodor had a negative impact on her life causing her to become depressed and isolate herself.

### Side view



### Back view



During our first contact with the patient it became clear that she was too ashamed to leave her home or let anyone help her with her wound, visiting our wound clinic was too embarrassing for her. Since she insisted on treating the wound herself our obvious choice was to use PMSDs due to the efficacy and ease of use. She also agreed to let us inspect the wound progress to make sure it was going in the right direction. The silver dressing was used more than 4 weeks despite the EWMA guidelines on silver dressings. Since PMSDs don't release any silver ions in the wound bed, instead the "killing" takes place in the dressing, there is no danger of systemic absorption of Ag ions.



72 year old woman with type 1 diabetes since the age of 16. She has retinopathy; hypertension and she had a femoral popliteal bypass.

She arrived at the hospital with classical claudication symptoms, shiny, pale, cold hairless leg, and severe pain at elevation or walking and absent foot pulses. After an angiogram a femoral popliteal bypass was performed. Post op status was positive for the patient who no longer experienced any pain. After the sutures were removed the incision opened up and she started to show signs of infection. The leg was red, hot to touch, and painful. The woman was discharged with instructions to clean the wound with iodine solution three times daily and was also given oral antibiotics and analgesics.

A week later she was referred to our clinic. Her pain had increased. We saw periwound edema, erythema, localized heat and malodor. Her pain was 9 out of 10 on a visual analogue scale (VAS). All her symptoms indicated an infection but she was still taking antibiotics. We decided to complement with an antimicrobial dressing and chose PMSDs due to positive previous experience of these dressings. Nurses came to her home to assist with dressing changes 2-3 times a week. After the first application of PMSDs the patient told us that her pain level had dropped to 5. A week later she experienced no pain at all. The photos below show the progress of the wound till healing.



\*PolyMem® Wound Dressings with and without Silver.  
Manufactured by Ferris Mfg. 5133 Northeast Parkway, Fort Worth, TX 76106, USA.  
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