

DEVELOPING A PROTOCOL FOR BURNS IN A PRIVATE OUT-PATIENT WOUND CLINIC

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INTRODUCTION

Our private clinic is small with a team of doctors with different specialities, physiotherapists and nurses as well as our own lab. We see all types of wounds. Burns however, have always presented an extra challenge as they are painful and prone to infections.

AIM

To develop a protocol for burns treatment focusing on preventing infections, promoting faster healing and reducing pain.

METHOD

Ten burn patients were initially included. Polymeric membrane dressings (PMDs) were used to achieve our set goals. We often prefer to use the so called cavity version of the PMDs as that one also works as a transfer dressing and can be used on highly exuding wounds together with a superabsorbent dressing.

We included new acute burn injuries as well as stalled burns that had previously been treated with other dressings. Infected wounds were treated with silver versions of PMDs. Dressing changes were performed at the clinic every other day or daily according to exudate levels.

RESULTS

Pain scores according to VAS reduced by 2-3 levels within 24 hours. We also noticed exceptionally fast healing on the partial thickness burns; they healed from a few days to several weeks faster than with previously used dressings. With the deeper wounds covered with eschar we also saw very fast improvement, the eschar dissolved into the dressing within days of treatment.

30 year old male with deep partial thickness burns on his right arm and shoulder. Self-treatment with an over-the-counter ointment dressing for a week. On the 7th post traumatic day he came to us with very painful, wet and fibrinous infected wounds. We applied a silver PMD cavity dressing covered with a superabsorbent dressing in order to manage the high exudate levels. Due to his streptococcus infection the healing process was delayed and took 1,5 months to heal with a soft flexible scar. The patient reported that he was pain free the entire time he was treated with PMDs.



Initial visit

Six weeks later

55 year old male with partial thickness and full thickness burn on his foot caused by hot grease. The first week the patient was treated with silver ointments as well as silver hydrofiber dressings. Came to us one week after the trauma occurred. We used silver PMDs, cavity version covered with a superabsorbent dressing due to the heavy exudate. When exudate levels normalised we used the regular silver PMD pad with less frequent changes. Patient reported that the pain decreased dramatically when he was using PMDs. Wound healing took longer in the areas he had full thickness burns. By two months the wound had closed without the need for grafting. Scar very soft and pliable.



Initial visit 7th post traumatic day



Six weeks later



Initial visit 2nd post traumatic day



Epithelialized after 8 days



1 month follow-up

1 year old girl with partial thickness burns on her hand and fingertips from a glass hatch on a fireplace. Initially treated with a silver-based contact layer. She arrived at our clinic the 2nd post-traumatic day with a lot of pain and wounds that had not yet been debrided. Our treatment consisted of debridement, a silver PMD and a light compression glove. Dressing changes every 2-3 days depending on exudate output. The parents reported that as soon as she had received her first PMD the child played and used her hands as normal and did not complain of pain. Day 8 all the wounds had epithelialised. Follow-up one month later showed a soft supple almost indistinguishable scar.



Initial visit 2nd post traumatic day



One week later



One month follow-up

40 year old male with a deep partial thickness burn on his thumb caused by an electrical device. Initial treatment consisted of a hydrofiber dressing. We saw him on the 2nd post traumatic day, the thumb was very painful and wet. We applied silver PMDs that were changed on a daily basis the first week, after that we used a finger/toe version of PMD that only need changing every 2-3 days. One month later the injury was indistinguishable.



Initial visit 3rd post traumatic day



After 1 week with PMDs



One month follow-up

30 year old male with deep partial thickness burn on his foot caused by boiling water. Came to us on the 3rd post traumatic day. The burn had not been debrided and was extremely painful and wet. We initially used a hydrofiber but necessitated daily debridement which was very painful for the patient so we opted for a silver PMDs. According to the patient the pain decreased after a few hours. After one week with PMDs the patient experienced so little pain he could go back to work. Two weeks later the wound was epithelialized. Scar tissue soft and pliable.



Initial visit 2nd post traumatic day



Almost fully epithelialized after 2 weeks



One month follow-up

25 year old male with partial thickness burn on his thigh. Came to us 2nd post trauma day. Wound bed was clean but very painful and heavily exuding. After using PMDs with changes every 2-3 days the burn rapidly started to epithelialize. Pain decreased after the first dressing application. The burn had completely epithelialized by 18 days.

DISCUSSION

The initial evaluation gave such positive results in terms of healing and pain that we have been using PMDs on all our burns for the past 5 years. During this period we have noted;

- The scar tissue on the healed burns treated with PMDs is more elastic and pliable than when using other dressings.
- Many of our patients have been able to avoid grafting due to the accelerated healing results.
- There is a definite reduction in pain medication and antibiotic use.

The burns shown here are our more recent cases as we didn't photograph the evaluation cases five years ago.