



# Evolution in the use of transparent film dressings to foam dressings in the early management of superficial partial burns

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## Introduction

Our Children's Emergency saw about 360 young children presented with burn injuries in 2016. The vast majority of these children are below 5 years with 85% presented with superficial partial to deep partial burns of less than 5% TBSA from scalds by hot water and soup. The blisters were lanced, devitalized tissue debrided and covered with transparent film dressing. Although this dressing allows inspection of the wound and good barrier to external contaminations, some returning patients were observed to have moderate to highly exudate pooling under the film dressing, leakage and loosening of the transparent dressing causing the wound to be exposed which can be very traumatic and painful.

## Aim

To evaluate the effectiveness of foam dressing in the initial management of superficial partial to deep partial burns within the first 36 hours of burns.

## Methods

Use of soft and conformable skin friendly polyurethane foam dressing was initiated in line with burns practice of Plastic department following discussion with the physicians from Children's Emergency and Plastic.

Series of formal lectures were conducted by plastic nurses, complete with hands-on sessions of applying foam dressing on limbs and body areas to the nurses in Children Emergency.

Clinical evaluation on the foam dressing to burns wound applied at Children Emergency were carried out over a period of one month by Plastic clinic nurses.

Criteria called for minimal maceration and leakage, superior absorption and exudate retention, ease of application layer, comfort and removal without causing pain to the child.

## Using conventional film dressing



Exposed burns areas with dried exudate, degree of maceration due to collection of exudates under film dressing especially on hands and feet

## Use of foam dressing



Simulated training on applying foam dressing over dorsum of hands and fingers



No maceration seen over limb 36 hours after 1<sup>st</sup> foam dressing was applied at Children's Emergency. Dressing change was quick with minimal pain.

## Results

Foam dressing has effective exudate control to control moisture balance over film dressing.

Flexible foam dressing can be cut to allow for little fingers and toes to be covered individually. The non-adherent properties of foam dressing also help minimise pain and covers the wound bed well against infection.

Foam dressings remain intact, the degree of maceration, exposed burns wounds from active toddlers were reduced with no return visit record to Children Emergency as such foam dressing following tissue cooling is adopted as an integral part of paediatric burns procedural management.

## Conclusion

Appropriate dressing should be considered to reduce frequency of dressing change. Patients seen at the Plastic surgery department for burns review and dressing are observed to be more comfortable, and less fretful when foam dressing is removed and wound redressed. Surrounding areas of burns using foam dressing are no longer macerated.

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