

**ORIGINAL ARTICLE****BUTTER PAPER AS A COST-EFFECTIVE DRESSING FOR SUPERFICIAL INTERMEDIATE THICKNESS BURN****1DR MOOLCHAND PRAJAPAT**

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**ABSTRACT**

**Background:** Majority of facial burns occur in children, which tends to be superficial intermediate type. Such wounds heal without scarring but needs dressing to prevent infection.

**Methods:** The burn area is cleaned and sterilized butter paper is put over the wounds after dipping and soaking it in normal saline, under sterile conditions.

**Results:** Patient treated with butter paper did not need frequent dressing changes, had less pain during treatment and removal, less infections meant reduced need for medications, hospital stay was reduced. All these resulted in reduced scars on healing.

**Conclusion:** The use of butter paper is a cost effective therapeutic method of treatment of superficial burns. It's efficacious in facial burns especially in children, more so in patients who cannot afford collagen or other expensive dressings.

**Keywords:** Superficial intermediate thickness burns, butter paper

**Introduction**

Facial burns are a common occurrence. Majority of the patients are children and get burnt by hot liquids or fireworks. These burns tend to be superficial

intermediate type i.e. involve only the epidermis and dermis superficially. Such wounds heal completely without scarring but, dressings are needed to prevent infection to ensure complete and rapid recovery.

Partial-Thickness burns when devoid of desiccation and infection have the potential for complete recovery with minimal scarring, hence dressings are needed.

## **Methods**

The burn area is cleaned and sterilized butter paper is put over the wounds after dipping and soaking it in normal saline, under sterile conditions.

## **Discussion**

When epidermal and superficial dermal burns heal without infective complications they recover without scars. Deep dermal burns heal spontaneously but, with considerable scarring. Many dressings and medications are available to prevent infections to ensure scar less healing. Wounds are more susceptible to healing in a moist, clean, and warm environment.<sup>1</sup> A moist wound bed will allow growth factors and numerous cell types including epithelial cells to migrate, facilitating wound edge contraction. <sup>1,2</sup>

The ideal burn dressing should be one that maintains a moist pH-balanced wound, absorbs exudates, limits infections, minimizes disturbances of healing tissue beneath the dressing, reduces pain to the patient, and reduces dressing changes.<sup>3</sup> There are numerous dressings that harbor various of these properties, but, they are expensive.

There are also several other factors that are important when choosing a dressing, such as providing protection to the peri wound skin, forming an effective bacterial barrier, conforming to wound shape, producing minimal pain during application and removal, being free of toxic or irritant extractable, not releasing particles or non-biodegradable fibers into the wound, and maintaining the wound at an optimal temperature and ph. <sup>4</sup>

There are indications<sup>5</sup> for such dressings-

Superficial burns with erythema only can be treated without dressing. In infants who show a tendency to blister or scratch, a protective, low-adherent dressing (e.g. Mepitel™ + Melolin™) with crepe bandage may be helpful.

### **Partial thickness burns**

- Cleanse the burn wound and surrounding surface with water or saline and pat dry.
- For small, superficial partial thickness burn wounds, a low adherent dressing (e.g. Bactigras™ + Melolin™ or Mepilex-Ag™) then crepe bandage or tape (e.g. Hypafix™)
- For more extensive or deeper partial thickness burn wound, a low-adherent silver dressing (e.g. Acticoat™ or Acticoat 7™) should be applied.

These products offer advantages such as easy application, non-pyrogenic, pain free as compared to standard gauze dressings that tend to stick to the wound,

they offer greater mobilization.

Most of our patients are daily wage workers or farmers, hence, cost is a major factor for choice of dressings.

Silver Sulphadiazine is used in deeper burns, partial thickness burns but its difficult to use the product over the face and neck without dressings, especially in children. However silver sulphadiazine was consistently associated with poorer healing outcomes than biosynthetic, silicon-coated and silver dressings whilst hydrogel treated burns had better healing outcomes than those treated with usual care.<sup>6, 7</sup>

Paraffin dressings were used in place of these dressings but we noted several problems,

- Cost. All patients were not able to afford even this product
- The part of the dressing which came in contact with intact skin tended to cause maceration of the same.

Human amniotic membrane was used as a biological dressing for thermal injury. It was easy to obtain, it prevented heat and water loss from wound surface, acted as a barrier against bacterial contamination, provided pain relief and promoted healing. But, there were disadvantages such as potential risk of spread of viral infections such as hepatitis, HIV. As the membrane adheres strongly to the wound so attempts of removal can cause bleeding and pain.

Collagen dressings is non immunogenic, non-pyrogenic, allowed healing of the wound in a moist environment. It reduced the need of skin grafts for coverage of such wounds.<sup>8</sup>

But, it's an expensive dressing.

Butter paper was applied to such wounds and certain advantages were noted

- Very cheap. 30X50cm piece was 3 Rupees as compared to paraffin dressing such as Bactigras(10x10cm piece costs about 180 Rupees), Acticoat (5x5cm costs about 280 Rupees).
- Had easy application and management
- prevented bacterial contamination
- soaks discharge
- provided pain relief
- had a good healing rate
- Did not macerate surrounding intact skin.





### **Results**

Patients treated with butter paper did not need frequent dressing changes, had less pain during treatment and removal, less infections meant reduced need for medications, hospital stay was reduced. All these resulted in reduced scars on healing.

### **Conclusion**

The use of butter paper is a cost effective therapeutic method in treatment of superficial burns. It's efficacious in facial burns especially in children, more so in patients who cannot afford collagen or other expensive dressings.

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