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Practical Approach to Minor Burns

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ABSTRACT

Most mild burns may be treated well in an outpatient environment and recover with little intervention. An precise categorization of burns is essential to ensuring effective treatment.

Any non-superficial burn should be treated with a topical antibiotic to avoid infection. Although partial and full-thickness burns frequently require dressings, superficial burns typically do not. Especially in an emergency situation, a simple gauze patch offers enough burn protection. Increasing burn depth and contracture, monitoring for symptoms of infection, and providing appropriate analgesia are all parts of follow-up treatment. All suspected partial or full-thickness burn infections require prompt treatment, which may include hospitalization and parenteral antibiotics. Burn infections can increase the depth and breadth of a burn, turning a superficial partial-thickness burn into a deep partial-thickness or full-thickness burn in addition to producing sepsis.

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INTRODUCTION

The majority of the more than one million burn injuries that occur each year in the United States alone are mild and may be treated without the assistance of a burn specialist. Here is an overview of mild thermal burn therapy.[1]

TREATMENT

Initial care for isolated, small thermal injuries is taking off all clothing and other debris, chilling the area, performing a quick cleanse, applying the proper skin dressing, managing pain, and receiving tetanus shots. [2]

To relieve some pain and prevent tissue damage, burn wounds can be cooled with room-temperature or cool tap water after any clothes, jewelry (such as rings), and nonadherent debris have been taken off. It is recommended to apply cool, calm, or flowing water until the pain subsides, but not for more than five minutes at a time to prevent macerating the wound. A different option is to cover the area with moist gauze or cloths, which can lessen discomfort without submerging the site and can be left on for up to 30 minutes before bandages are placed.[3]

Ice or chilled water should not be applied directly since doing so might worsen pain and burn depth. One efficient method of cooling is to apply gauze that has been soaked in water or saline and chilled to around 12°C (55°F). This may be accomplished in the clinic by combining equal parts of chilled and room temperature saline. When cooling burns that cover more than 10% of the total body surface area, patients, especially young children, should be closely watched for hypothermia (TBSA).[4]

Acetaminophen and nonsteroidal anti-inflammatory medications (NSAIDs), either alone or in combination with opioids, are frequently enough for analgesia in minor burn burns.[5]

Analgesics should be given continuously at first, followed by "rescue" medicine, clothing changes, and greater physical exercise. For many days following the injury, pain and swelling can be decreased by elevating burns to the lower and upper extremities above the level of the heart. A appropriate method for relieving pain shortly after the burn is inflicted is to apply gauze soaked in cold water to the wound for up to 30 minutes.[6]

Once wound epithelization has taken place, the requirement for pain control typically decreases significantly.

However, if rescue drugs are insufficient, the need for analgesia may even rise. Larger or more recent burns might cause patients to experience substantial pain, necessitating the use of intravenous (IV) opioids for early analgesia.[7]

Burn injuries need to be cleansed. Although some medical professionals employ skin disinfectants (such as povidone-iodine), we advise against using them since they may slow the healing process. Instead, we advocate bathing small burn wounds with simply mild soap and tap water, a strategy that's becoming more and more commonplace among burn clinics.

When changing dressings, patients should be told to wash their burns every day with mild soap and water.

It is also effective to clean burn wounds using chlorhexidine wash (without alcohol).[8]

Before putting on a dressing, sloughed or necrotic skin, including burst blisters, should be debrided. Skin remnants from necrotic blisters may lower the chance of infection and prevent topical antimicrobials from reaching the burn site. Rarely is extensive debridement required, and it is frequently postponable until the first follow-up appointment. This additional time helps the patient to get over the fear and agony related to the immediate injury as well as allowing the doctor to more correctly determine the entire nature of the damage.[9]

With shallow or profound partial-thickness burns, blisters can form. Blisters with ruptures should be debrided (ie, remove the entire blister and all loose skin so that no necrotic epidermis remains). Small, unbroken blisters with a diameter of less than 2 cm, however, can be ignored.[10]

Referral to a burn center or surgeon with experience treating burns is required if a blister lasts for several weeks without healing. Deep partial or full-thickness burn may also be present. [10]

Surfaces of significant burn wounds are vulnerable to quick bacterial colonization and the risk of invasive infection. A topical antimicrobial treatment is not necessary for surface burns (such as sunburns) or superficial partial-thickness burns, which seldom ever get infected. For minor burns, using a fragrance-free moisturizing lotion is usually sufficient. Only burns with a partial or full thickness should be treated with a topical antibiotic. No of the size or location of the acute burn, systemic prophylactic antibiotics are not recommended to prevent infection in patients with acute burns.[11]

Topical steroids have no place in the initial care of small burns since they raise the risk of infection and slow healing.[12]

Updated tetanus vaccinations are advised, especially for burns that are deeper than the surface thickness. Patients who have not had a full round of primary vaccination should be administered tetanus immune globulin. [13]

Dressings are not required for minor burns. Some very mild burns may be treated without dressings even though partial- and full-thickness burns are often covered with bandages. For instance, it is frequently preferred to treat lesser burns on the face or hands (without affecting fingers) without bandages; the recommended course of therapy is to first gently cleanse the area with a light detergent before using a topical agent two to three times daily. [14]

By allowing for range-of-motion exercises, this method may help improve the look of face burns and minimize joint stiffness with hand burns. For newborns, young children, young adults who are active, and those who are at risk for wound infection, this strategy might not be feasible. Dressing adequately for burns involving the fingers or toes is necessary.[15]

During the healing phase, itching is a typical issue. There are several contributing factors causing pruritus. Environmental extremes (particularly heat), physical exercise, and stress frequently cause it or make it worse. In most cases, pruritus ends when a superficial burn's wound has fully healed. Until then, there are several ways to manage itching. First-line treatment is often systemic antihistamines (such as oral diphenhydramine), although there are a variety of topical options as well, such as baths with bicarbonate of soda and moisturizing creams. Avoid using topical products that contain a lot of lanolin. Loose, soft cotton clothing is preferred by many patients.[16]

Ingestion of extremely hot liquids or solids, inhalation of hot vapors or liquids, or holding flammable or caustic items in the mouth can all result in oral burns. Tea, cheese, potatoes, and noodles are among of the most often cited sources, along with food that has been microwaved or beverages that are almost boiling. Although there hasn't been much written on treating individuals with oral burns, effective treatment should involve cooling with water and keeping an eye out for signs of airway impairment. Topical antibiotic ointment and sporadic Vaseline application are two methods of treating small burns along the lips and oral commissure.[17]

Burns that include the oral commissure are more complicated, and scarring can result in more serious problems that might be crippling, such the emergence of microstomia. Consultation with a burn expert should be sought if there is any doubt regarding the extent of a burn involving the oral commissure. Biting an electrical cord can result in serious electrical damage to the oral commissure that may induce labial artery hemorrhage and necessitate transport to a burn center.[18]

Saline rinses and basic oral hygiene are usually all that are needed to treat minor oral mucosal burns. Mouthwashes with alcohol in them should be avoided since they might aggravate wounds and make them more painful.[19]

In several case cases, epiglottitis brought on by thermal damage following an oral scald burn is described. Young children with oral scald burns should need special attention since their airway structures are more delicate, more susceptible to blockage, and have milder degrees of edema and inflammation. The patient is examined best in the emergency department (ED), where a more thorough examination of the epiglottis and airway may be carried out, if there is any worry about an airway compromise or about the severity of the damage.[20]

CONCLUSION

Burn debridement and dressing changes are both difficult operations that must be managed carefully. In an acute hospital environment, oral or IV opioids, as well as sedative or dissociative drugs, may be required. For patient

disposition, the amount of IV medicine required for analgesia is an acceptable consideration.

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