

COMPLICATIONS OF BURNS

THESIS

Submitted in Partial Fulfilment for
The Master Degree (General Surgery)

By

JOSEPH HALIM GHOBRIAL
M. B., B Ch

Supervised by
Dr.

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Professor of
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To My Wife

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INTRODUCTION

Introduction

An extensive burn is a catastrophic injury-catastrophic in the overwhelming insult to the patient, catastrophic in its psychological aspects and catastrophic in cost and suffering to the family involved. (Artz ; 1979).

Among the accidents, excluding traffic, burns are the leading cause of death in children under four years, the second leading cause of death in children from 5 to 14 years. In the age group of 45 years and over, burns resulting from nontransport accidents are again the most common cause of death. (Lewis, 1973).

All who treat burn cases will accept the fact that there is no other injury with problems as difficult to manage as those resulting from a severe burn. (Lewis, 1973).

The cause of early death is mostly the reactionary syndrome namely hypovolemic shock, while late deaths are due to complications mainly sepsis. (Bauzieli et al, 1973).

Recently the study done by Monafu, (1978) showed that shock now can be easily resuscitated whatever the extent of the surface area and septicemia can be avoided by application of cerium nitrate to silver sulfadiazine topically but inhalation injury was still the

problem which can't be solved uptill now.

The age of the patient and the surface area of the burn will largely determine the prognosis. (Feller et al, 1976).

It has long been known that scar tissue contracts as it gets older. Burns take longer to heal than wounds due to mechanical traumas. Infection helps the development of more fibrous tissue in the wound. Contraction commences with resultant contracture, the severity of which is largely determined by the attachment to underlying structures as in the mouth, eye lids and the neck, the resulting contracture may be sufficiently severe as to cause gross deterioration of the facial features.

In an area where tissues are firmly bound to the underlying structures; as in the scalp, forehead, bridge of the nose or over the tibia growth of epithelium may either be retarded or arrested an unhealed ulcer results.

Burns can produce scars which may vary from a flat, paper thin hairless patch, often seen over the scalp, to the broad raised hypertrophic scar producing contractures and ugly itching keloid. (Matter et al, 1971).

If the contractures are permitted to go untreated in growing

children, this will cause the formation of many underlying bony maldevelopments that may never be corrected, in addition, the functional disturbances will be accentuated and also the cosmetic deformity will likewise be aggravated, these conditions may contribute much to the future psychologic and economic failure of the patient.

REVIEW OF LITERATURE

CAUSES OF BURNS

Etiology of burns

In the estimated 5.6 million fire accidents occurred during a one year period ending 1 April 1974, according to the National Household fire survey, 169,000 were injured in activities such as cooking and smoking when flames, smoke or sparks were emitted from a product. Burns, including scalds, contact and fabric burns, represent 89% of the estimated 169,000 injuries, 63% were to hands and arms and 34% were to the face and legs. Other injuries including fractures, sprains and smoke inhalation. Most fires from appliances include stoves, televisions, toasters and clother drying. Stoves, ovens and ranges accounted for over two thirds of the appliance incidents. Over half of the stoves fires were confined to the appliance only and did not ignite other items. Thus, the fire and injury involvement was generally minor. The remaing third of the 5.6 million fire incidents (those not associated with house hold appliances) in which ignition sources were known were attributed to cigarettes cigars, pipes, matches, lighters, electrical wiring, candles, fire places heaters, electric lamps and electric toys. (Artz, 1979).

The outstanding feature of domestic burn accidents is that those in which clothing catches fire produce the most extensive and severe injuries (Bull 1958).

Although fire and scalding were almost equally common causes of burns, there was a significant difference in age groups; in children, 54% of the burns were caused by scalding (13% in adults) and 20% were caused by fire (49% in adults) (skoog, 1963). In young children scalds are reported to be more common in boys, whereas clothing burns are more common in girls because girls clothing is more flammable (Artz, 1979).

At all ages impairment of consciousness can predispose to a burning accidents and the abuse of alcohol and drugs increase the risk of these injuries (Batchelor, 1977).

Flash burn result from sudden ignition or explosion of gases. If the flash ignites the victims clothing a combination flash and flame burn results (Moncrief, 1979).

Mabrouk (1966) mentioned that in the villages of Egypt the straw is used mainly for baking and cooking and is stored on the roofs of farmers houses, the dry straw catches fire easily and leads to dreadful disasters.