

BURN TREATMENT FRAMEWORK IN ISRAEL

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SUMMARY. The treatment and hospitalization policies in various hospitals in Israel are influenced by injury severity and by the existence or non-existence of a designated burn treatment body. Severely injured burn victims requiring designated burn treatment are referred to one of Israel's five major burn units located in the highest level trauma centres that have an advanced burn treatment infrastructure. This national distribution of burn centres ensures designated treatment availability in various areas according to Israeli demographics, geography, and security threats. Israel does not have an obligatory burn report policy. Implementation of a national burn repository such as that in the USA will be able to give burn treatment specialists in our country a basis for comparison of treatment standards and allow for better care for burn victims. The Israeli Burn Association has a major role in the processes discussed in the manuscript.

Keywords: burn treatment, Israel, funding, multidisciplinary approach

Forty-five thousand Israelis suffer from burns annually. Two thousand seven hundred of them require hospitalization.¹ Most burns are house accidents caused by hot liquids and involve less than 20% of the total body surface area (TBSA).^{2,4} The severity of the injury is determined by a number of known determinants: the victim's age, burn depth, TBSA area burned, involvement of specific body areas (i.e. face, hands, feet, perineum, joints), the existence of other injuries (e.g. smoke inhalation, blast injury, crush injury), and pre-existing medical conditions.⁵ The treatment and hospitalization policies in various hospitals in Israel are influenced by injury severity and by the existence or non-existence of a designated burn treatment body. Minor burns are treated in plastic surgery departments or in general surgery departments in hospitals that do not have plastic surgery departments. Paediatric burn victims are treated in paediatric or paediatric surgery departments.⁶ Severely injured burn victims requiring designated burn treatment (*Table I*) are referred to a burn unit in one of Israel's third-level trauma centres that have an advanced burn treatment infrastructure: Rambam Medical Center in Haifa, Rabin Medical Center in Petah-Tikva, Sheba Medical Center in Tel-Hashomer, Hadassah Medical Center in Jerusalem, and Soroka Medical Center in Be'er-Sheva.^{1,3}

These five medical centres were appointed by the Is-

Table I - Burns necessitating referral to a major burn unit

1. Partial-thickness burns (2nd degree) involving TBSA > 10%
2. Burns involving the face, hands, feet, genitals, perineum, or major joints
3. Deep burns (3rd degree)
4. Burns involving electric current or lightning
5. Chemical burns
6. Smoke inhalation
7. Pre-existing medical conditions that might complicate treatment, prolong hospitalization, or increase mortality
8. Multi-trauma patients in whom the burn is the major contributor to morbidity and mortality
9. Burn victims who are expected to be in need of special care: social, mental, or rehabilitative

raeli Ministry of Health in accordance with the recommendation of the Israeli Plastic Surgery Association and the criteria established by the European and American Burn Associations.⁶⁻⁸ This national distribution of burn centres ensures the availability of designated treatment in various areas according to Israeli demographics, geography, and security threats (*Fig. 1*).

The existence of a number of regional burn centres enables several medical teams to gain experience in the

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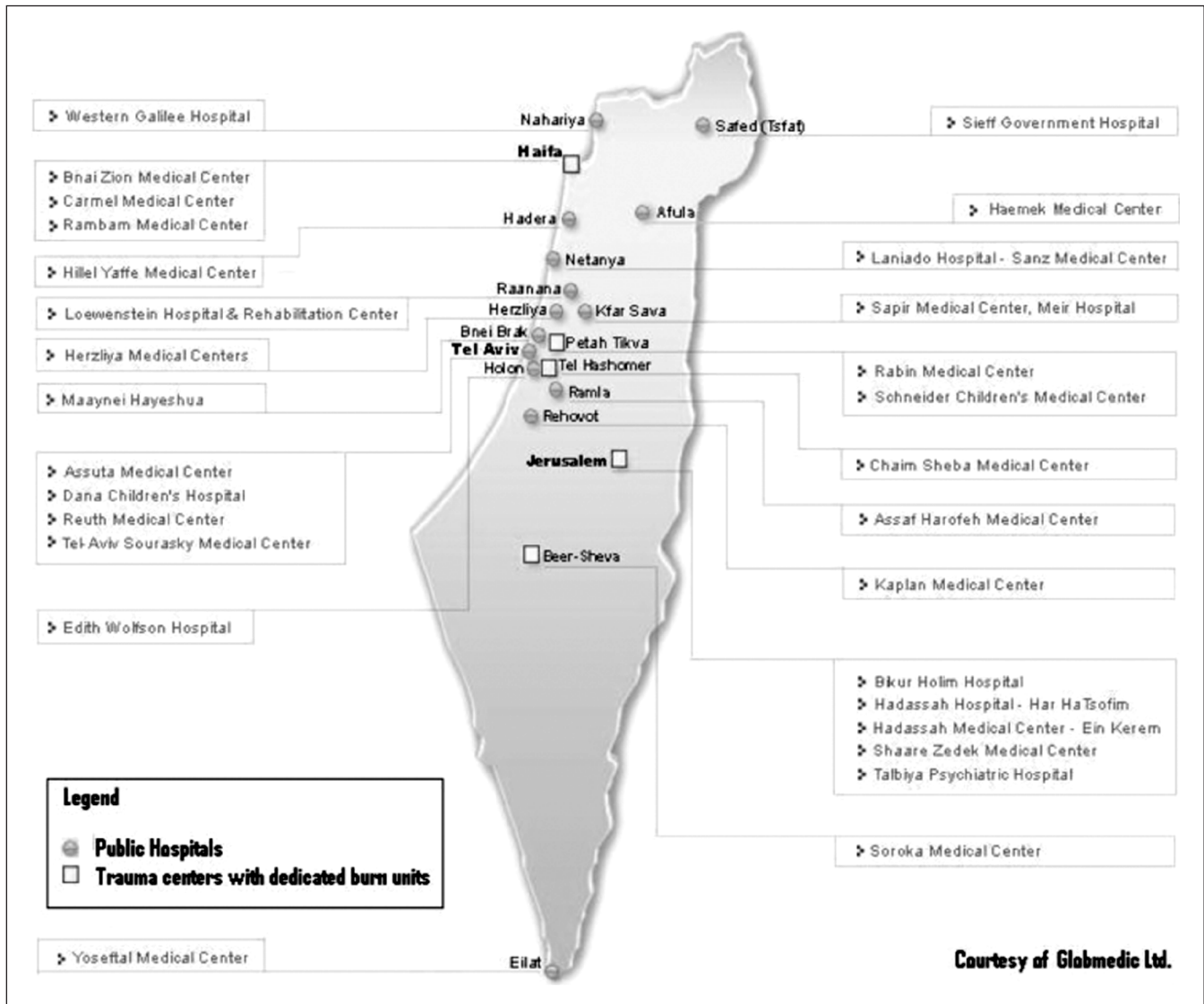


Fig. 1 - Map of public hospitals in Israel.

treatment of burns in various strategic locations, thus enhancing national coping abilities in the event of natural disasters, megaterrorism acts, or war. This distribution also guarantees the maintenance of national burn treatment capabilities in the event of damage to one or more of the national burn centres due to reasons mentioned above.

The burn units rely upon the plastic surgery departments in the five major trauma centres. In Israel these departments are plastic surgery specialists' major source of education. Plastic surgery residents are required to work for a period of at least three months in one of the five major burn centre units as part of their plastic surgery residency curriculum. Owing to this exposure to various methods of burn treatment during residency, every plastic sur-

geon in Israel is capable of integrating into burn unit teams if needed during a national crisis.

Modern burn care makes it possible to treat vast injuries and encompasses a multidisciplinary approach. Treatment for severely injured victims requiring intensive care and mechanical ventilation can be provided in a designated burn unit or, as widely accepted in Israel, via a burn unit model where all severely injured patients are treated in separate suites in a paediatric or an adult general intensive care unit (ICU). In the critical phase these victims are treated by both the ICU and the burn unit team in an integrated approach. This integration facilitates a high level of professional multidisciplinary advanced care, including resuscitation methods, lung injury care, handling of se-

Table II - Minimal acceptable data report to the American National Burn Repository

1. Demographics: age, sex, race
2. Injury date
3. Admission date
4. Description of event causing burn
5. Body areas burned
6. TBSA
7. Burn depth
8. Inhalation injury
9. Total hospitalization days
10. Total intensive care unit days
11. Number of procedures performed
12. Number of operating room visits
13. ICD-9 diagnosis codes
14. Aetiology of injury code (E-code)

vere infections, metabolic care, early surgical intervention, advanced wound dressings, skin substitutes, rehabilitation, and mental care.⁹⁻¹² The implementation of a national policy, together with improvement of current infrastructures, is essential if appropriate burn care is to be maintained. These skills and this expertise contribute to the enhancement of the burn centres' capacity to deal with severe extensive burns and guarantee the best possible rehabilitation of burn victims. In addition, this set-up allows for flexible case management and facilitates the immediate expansion of treatment capacity in an emergency or a crisis. For adequate burn care to be maintained, it is essential to implement national policy, at the same time improving current infrastructures.

Israel does not have an obligatory burn report policy. Burn data are collected from general trauma reports and they are therefore incomplete and even susceptible to mistakes.¹³ In the USA, burn centres accredited by the Amer-

ican Burn Association are obliged to report burn data (*Table II*) to the national burn repository.^{14,15} Such a repository permits examination of care standards, costs, readiness for mass casualty events, and implementation of prevention programmes.¹⁶

The existence of such a laboratory in Israel will provide burn specialists with a basis for comparison of treatment standards and allow for better care for burn victims. Accurate data can provide a basis for deliberations regarding organizational and monetary changes in burn treatment. Suitable pricing and funding of burn care will facilitate the upgrading of standards of care by the utilization of advanced medical equipment, the proper use of skin substitutes, and the improvement of manpower capabilities.¹⁷

Funding for the major burn centres in Israel should be enhanced so as to ensure high standards of care, even in cases of multiple victims due to disasters or national crises. Simultaneously, funding should be related to educational prevention programmes in order to reduce the incidence of burn injuries.¹⁸

Of special importance is the maintenance of the current geographic distribution of the five major burn centres that rely upon the plastic surgery and intensive care departments. In this way an adequate response can be made to changing needs, as proved in the past during mass casualty terrorist attacks and wars.

The Israeli Burn Association, founded in 1989, plays a major role in all these processes. It is a non-profit organization consisting of a consortium of physicians, nurses, paramedical professionals, rescue response personnel, firefighters, researchers, and educators. The goals of the Israeli Burn Association are to spread burn care knowledge, promote burn research and prevention programmes, achieve higher standards in burn care, expand collaboration between burn units, and promote dialogues and connections with national and international bodies dealing with burn care.

RÉSUMÉ. Les principes qui gouvernent le traitement et l'hospitalisation dans les divers hôpitaux en Israël sont influencés par la gravité des lésions et par l'existence ou la non-existence d'un organisme dédié à la thérapie des brûlures. Les grands brûlés ayant besoin d'un traitement spécifique sont renvoyés à une des cinq grandes unités de brûlures en Israël, qui sont situées dans les centres des brûlés du niveau le plus élevé qui possèdent une infrastructure pour le traitement des brûlures. Cette répartition nationale des centres des brûlés permet la disponibilité des traitements spécifiques dans les diverses zones de la nation, selon les données démographiques et géographiques et les menaces contre l'Etat. Il n'existe aucune ligne politique officielle sur le caractère obligatoire de ce type de relation. La mise en œuvre d'un centre dépositaire comme celui qui existe aux Etats-Unis offrira aux brûlologues de notre pays les bases pour effectuer une comparaison de la qualité des soins que l'on peut recevoir dans les deux pays, ce qui pourra conduire vers l'amélioration des soins. Les Auteurs de cet article discutent le rôle de premier plan joué dans ce champ par l'Association Israélite des Brûlés.

Mots-clés: traitement des brûlures, Israël, mobilisation des fonds, approche multidisciplinaire

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