



The Looming Threat of Burns Epidemic in Pakistan: Challenging Issues and the Way Forward

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Burn injuries represent one of the most common and most important public health issues in developing countries like ours (Pakistan). Following road traffic accidents (RTAs), burns constitute the second most common cause of accidental deaths. The overall incidence of burn injuries per 100,000 population is 76.3 for emergency visits, 17.0 for hospitalization, and 0.3 for emergency deaths. Our country is faced with a dual challenge. On one hand, we have a disconcertingly higher frequency of burn injuries. On the other hand, we have a relative scarcity of specialized burn care centers where the unfortunate victims of burn injuries can get the required level of professional burn care. Additionally, our nation is plagued by a host of issues such as the lack of awareness on the part of patients, lack of education, poverty, ignorance, lack of coordinated epidemiological data, poor population with a lack of access to specialized units, and hence sub-optimal utilization of the existing burn care facilities. Owing to these formidable issues, burn care continues to be an unmet dream in Pakistan.¹⁻⁴

Burn injuries are devastating and frequently cause significant morbidity, emotional distress, and a reduced quality of life. These injuries often require long-term treatment, including hospitalization, reconstructive surgical procedures, and frequent outpatient follow-up visits. Burn injury victims, as well as their families, not only suffer economically but also take a significant psychosocial brunt of the misfortune. They may develop disabling post-burn contractures, chronic non-healing wounds, and sometimes Marjolin's Ulcers in their wounds. The management of these complications is even more difficult and expensive than the appropriate initial management of burn injuries in their acute phase.^{5,6}

Severe burn injuries require prompt, specialized treatment, and the demand for cellular and tissue-based products is increasing, mainly when there are limited donor sites for grafting tissue from uninjured skin areas.⁷ However, there is a shortage of burn centers in Pakistan, with existing centers lacking resources and located mainly in large urban centers. Consequently, treatment is delayed, and survival and recovery rates are lowered. This gap in resources and infrastructure often leads to suboptimal patient outcomes.^{8,9} People with a lack of rehabilitation and psychological support, even many years after their first injury, many burn survivors continue to face physical and mental health difficulties.

Numerous significant issues exacerbate this crisis. For initial reasons, there is a lack of preventive education on the prevention of fire and burning risk, particularly in congested and populated areas and low socioeconomic populations. A shortage of rules and regulations for properly using stoves with gas, burning materials, and industrial equipment increases the risk of accidental injuries. Acid attacks and domestic violence also lead to deliberate burn injuries, resulting in a complicated combination of social and health problems that require immediate intervention.

Several different strategies have become important in overcoming this



This article may be cited as:

Iqbal T. The looming threat of burns epidemic in Pakistan: challenging issues and the way forward. *J Postgrad Med Inst* 2024;38(4):240-41. <http://doi.org/10.54079/jpmi.38.4.3546>

disease. Enhancing the number and breadth of burn care centers is a first step toward ensuring that medical care is available even in rural areas. Furthermore, adding burn preventive measures into public health campaigns could boost understanding of fundamental fire safety and first-aid procedures. At the same time, community education programs could assist in minimizing the number of both accidental and purposeful burn injuries. Proper training of healthcare workers to recognize and properly manage burns, particularly in emergency situations, is also critical. Subsequently, it is necessary to incorporate psychological counseling into burn care procedures, ensuring that survivors receive comprehensive treatment, which includes physical as well as psychological healing.

Robust acute management of burn injuries, timely instituted surgical excision and resurfacing, physiotherapy, and physical rehabilitation are all the stepping stones toward the early social reintegration of unfortunate burn victims. All these facets of management demand coordinated teamwork via a multidisciplinary approach. The acute care physician, confident surgeon, intensivist, anesthetist, nutritionist, specialist nursing staff, social nurses, and physiotherapist constitute the multidisciplinary team that collectively manages the patient.

Given the magnitude of burn injuries in Pakistan, the following recommendations constitute the way forward to address the menace of burns in a National perspective:

1. We need to start a national burns prevention and awareness program. This program should promote education and raise public awareness of several burn prevention topics.
2. National burn injury funds should be generated to ensure the finances of the poor patients who suffer burn injuries. This will help ensure that no one with burns is left untreated due to lack of money.
3. As we have a relatively higher frequency of electrical burn injuries in Pakistan, stringent occupational safety protocols should be in place, especially for Water and Power Development Authority workers. It should be mandatory to provide all safety gadgets to workers at high risk of sustaining burn injuries. These include special protective gloves, protective long shoes, safety masks, etc. The transformers, meters, and live wires should be well-protected and inaccessible to the public, particularly children. Safety codes should be developed for the high-tension wires passing in residential areas. Power poles should be placed well away from roads, playgrounds, and rooftops, among other things. All residential and business sectors should have well-planned electrical codes in place.
4. Safe home and safe kitchen initiatives should be launched. Awareness and public education about the risky places of home, as well as the dangerous activities of children, would help to curb the menace of pediatric burn injuries in Pakistan.
5. Social reforms and justice should help to curtail the high incidence of suicidal burns, particularly among our urban women.
6. Collaboration and coordination are imperative for addressing the looming threat of burns. All public health personnel, nurses, doctors, paramedics, public health authorities, religious leaders, social leaders, and non-governmental organizations should promote healthy attitudes to reduce the incidence of burns,
7. The lawmakers should legislate to ensure the actualization of the aforementioned strategies

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