สาเหตุ ปัจจัยเสี่ยงและผลลัพธ์ทางคลินิกของการบาดเจ็บจากแผลไหม้ในผู้ป่วยเด็กในโรงพยาบาลพระนารายณ์มหาราช

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บทคัดย่อ

การบาดเจ็บจากแผลไหม้เป็นปัญหาสำคัญด้านสาธารณสุขระดับโลก ส่วนใหญ่เกิดขึ้นในประเทศที่มีรายได้ต่ำถึงปานกลาง โดยกลุ่มที่มีความเสี่ยงสูงที่สุดคือเด็ก ส่งผลกระทบทั้งทางด้านร่างกาย จิตใจ อารมณ์ และสังคม ต่อทั้งผู้ป่วยและครอบครัว นอกจากนี้ ยังส่งผลต่อการเจริญเติบโต พัฒนาการ และคุณภาพชีวิตของผู้ป่วย การศึกษานี้เป็นการศึกษาย้อนหลังเพื่อศึกษาสาเหตุ ปัจจัยเสี่ยง และผลลัพธ์ทางคลินิกของการบาดเจ็บจากแผลไหม้ในผู้ป่วยเด็กในโรงพยาบาลพระนารายณ์มหาราช กลุ่มตัวอย่างเป็นผู้ป่วยเด็กอายุ 0-15 ปี ที่ได้รับการวินิจฉัยบาดแผลไหม้และเข้ารับการรักษาแบบผู้ป่วยในในโรงพยาบาลพระนารายณ์มหาราช ระหว่างวันที่ 1 ตุลาคม 2560 ถึง 30 กันยายน 2566 กลุ่มตัวอย่างจำนวน 98 คน เครื่องมือที่ใช้ในการรวบรวมข้อมูลเป็นแบบบันทึกข้อมูล วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา และการวิเคราะห์ถดถอยปัวซง ผลการวิจัยพบว่าผู้ป่วยเป็นเพศชาย 54 คน (ร้อยละ 55.10) อายุ 0-5 ปี จำนวน 69 คน (ร้อยละ 70.40) สาเหตุเกิดจากน้ำร้อนลวก 97 คน (ร้อยละ 98.98) ระดับความรุนแรงเป็นระดับปานกลาง 85 คน (ร้อยละ 86.73) ความลึกของบาดแผลไหม้เป็น superficial-partial thickness burn 57 คน (ร้อยละ 58.16) ตำแหน่งที่พบบาดแผลมากที่สุดคือ รยางค์ล่าง 64 คน (ร้อยละ 65.30) ร้อยละของพื้นที่ผิวกาย (% TBSA) เฉลี่ย 14.01±11.31 ลักษณะการเกิดเหตุเป็นอุบัติเหตุในครัวเรือน 97 คน (ร้อยละ 98.98) มีผู้ป่วยได้รับการผ่าตัด debridement 84 คน (ร้อยละ 85.71) พบภาวะแทรกซ้อน ได้แก่ hypovolemic shock 12 คน (ร้อยละ 12.24) แผลติดเชื้อ 6 คน (ร้อยละ 6.12) แต่ไม่มีผู้เสียชีวิต ปัจจัยที่มีผลต่อการเกิดภาวะแทรกซ้อนในแผลไหม้ในผู้ป่วยเด็กอย่างมีนัยสำคัญ ($p<0.05$) คือ ผู้ป่วยช่วงอายุ 0-5 ปี, พื้นที่ผิวไหม้ของร่างกายมากกว่าหรือเท่ากับร้อยละ 20 และอายุของมารดาที่น้อยกว่า 25 ปี โดยสรุป สาเหตุของบาดแผลไหม้ในผู้ป่วยเด็กในโรงพยาบาลพระนารายณ์มหาราชเกิดจากอุบัติเหตุในครัวเรือน คือ น้ำร้อนลวก บาดแผลส่วนใหญ่เป็นความรุนแรงระดับปานกลาง และเป็น superficial-partial thickness burn โดยปัจจัยที่มีผลต่อการเกิดภาวะแทรกซ้อนในแผลไหม้ในผู้ป่วยเด็กอย่างมีนัยสำคัญ คือ ผู้ป่วยช่วงอายุ 0-5 ปี, พื้นที่ผิวไหม้ของร่างกายมากกว่าหรือเท่ากับร้อยละ 20 และอายุของมารดาที่น้อยกว่า 25 ปี

คำสำคัญ: แผลไหม้ในผู้ป่วยเด็ก; แผลไหม้; สาเหตุ; ผลลัพธ์ทางคลินิก

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Etiology, risk factors and clinical outcomes of pediatric burn injuries at King Narai Hospital

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Abstract

Burn injuries are a significant global public health problem, predominantly occurring in low- to middle-income countries, with children being the highest-risk group. These injuries impact patients and their families physically, mentally, emotionally, and socially. Additionally, they affect the growth, development, and quality of life of the patients. The aim of this retrospective study was to investigate the etiology, risk factors, and clinical outcomes of pediatric burn injuries at King Narai Hospital. The sample group consisted of pediatric patients aged 0–15 years who were diagnosed with burn injuries and admitted to King Narai Hospital between October 1, 2017 and September 30, 2023. There were 98 patients enrolled in the study. Data collection tools included a data recording form, and the data were analyzed using descriptive statistics and Poisson regression analysis. The research findings showed that 54 patients (55.10%) were male, and 69 patients (70.40%) were aged 0-5 years. The main cause was scalding in 97 patients (98.98%). The severity level was moderate burn in 85 patients (86.73%), and the depth of the burn was superficial-partial thickness burn in 57 patients (58.16%). The most common injury location was the lower extremities, found in 64 patients (65.30%). The average percentage of total body surface area (% TBSA) was 14.01±11.31. The incidents predominantly occurred as household accidents in 97 patients (98.98%). A total of 84 patients (85.71%) underwent debridement surgery. The most common complication was hypovolemic shock, observed in 12 patients (12.24%). This was followed by burn wound infection in 6 patients (6.12%), with no fatalities reported in the study. The factors significantly associated with complications in pediatric burn injuries ($p<0.05$) were patients aged 0-5 years, Total Body Surface Area (TBSA) greater than or equal to 20% and maternal age under 25 years. In conclusion, burn injuries in pediatric patients at King Narai Hospital were caused by household accidents, specifically scalds. Most injuries were moderate and superficial-partial thickness burns. The factors associated with complications in pediatric burn injuries were patients aged 0-5 years, TBSA greater than or equal to 20% and maternal age under 25 years.

Keywords: pediatric burn; burn; etiology; clinical outcomes

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Introduction

Burn injuries are a significant global public health problem, ranking as the fifth leading cause of injury among pediatric patients[1,2]. Most occur in low- to middle-income countries, with nearly two-thirds happening in Africa and Southeast Asia[2,3]. Southeast Asia has the highest rate of burn injuries per year, at 243 people per 100,000 population[4] with the highest burn mortality rate in Southeast Asia is 16.8 per 100,000 population. One-third of burn patients treated in hospitals are children[5].

Pediatric burn injuries often occur in patients younger than 5 years old, typically due to household accidents. In young children (ages 0–2 years), burns are commonly caused by scalding from hot water or contact with heated objects. As they grow older (aged 2-4 years), the incidence of fire-related burns increases. In older children or adolescents (aged 5-13 years), burns are often caused by mischievous behavior, such as playing with matches or fireworks, which can lead to fires[4,6]. However, pediatric burn injuries may also result from child abuse or neglect by parents or caregivers. About 5% of pediatric burn patients admitted to hospitals are victims of abuse. These children often exhibit signs of previous abuse, such as cigarette burns, bruises, or pre-existing fractures[7]. The most common cause in abuse cases is scalding with hot water, and the mortality rate among abused pediatric patients is twice as high as those who suffer accidental burns[8].

Pediatric burn injuries are a significant and life-threatening emergency that requires immediate intervention. These injuries affect nearly every major system of the body, causing severe and continuous pain, often requiring long-term hospitalization and resulting in high treatment costs. The emotional, psychological, and social impacts on both the child and their family are profound, contributing to stress and anxiety, particularly regarding the child's altered appearance following recovery or during the rehabilitation phase. This could include burn scar contractures, or disabilities, all of which affect the child's growth and development as well as quality of life[9]. Particularly in patients under 15 years old, reports indicate a reduction in Disability-Adjusted Life Years (DALYs)[2,3], a measure that reflects the loss of one year of healthy life due to disability or premature death.

The treatment of burn injuries in pediatric patients differs from that in adults. Children have a higher proportion of body surface area compared to their body weight, and their skin is thinner, making it more susceptible to injury[10]. Even brief exposure to heat can result in deeper and larger burns. Children are also more prone to developing hypermetabolism, which can slow wound healing, suppress the immune system, and increase the risk of infection[11]. Additionally, pediatric patients have less muscle mass, which impairs their ability to regulate body temperature when burns are present, leading to hypothermia which can cause an imbalance in electrolyte control, coagulopathy, and

impaired oxygen delivery to peripheral organs[12]. However, children have a better capacity for wound healing compared to adults. Furthermore, young children require closer care from parents and medical personnel while in the hospital, as they are unable to care for themselves. Therefore, specialized knowledge is essential to ensure the best outcomes when treating this patient group.

According to the statistics from the Surgery Department of King Narai Hospital from 2017 to 2022, an average of 18-22 pediatric burn patients were recorded per year, accounting for 25.82-32.38% annually, which is quite a significant number. Thus, the objective of this study is to investigate the etiologies, clinical outcomes, and risk factors contributing to complications of burn injuries in pediatric patients at King Narai Hospital. The findings aim to guide treatment and provide recommendations for preventing pediatric burn injuries, as most of these injuries are preventable. Additionally, this study contributes to burn injury data in Thailand and Southeast Asia, where such information remains limited[13].

Materials and Methods

This retrospective study was performed in accordance with the Declaration of Helsinki and the protocol was approved by the Research Ethics Committee (REC) of King Narai Hospital, reference No. KNH 31/2567.

Population and Sample size: Pediatric burn patients who were diagnosed and treated at King Narai Hospital between October 1, 2017, and September 30, 2023, totaling 102 patients. The sample size was purposefully selected based on specific criteria.

The inclusion criteria for this research were:

1. Male and female pediatric patients aged from birth to 15 years.
2. Admitted as inpatients at King Narai Hospital.
3. Complete and accurate medical records.

The exclusion criteria were as follows:

1. Incomplete medical records.

A total of 98 patients were selected for the study. The data collection tool was a record form developed by the researcher, divided into four sections:

- Section 1: Baseline characteristics of the patient, including gender and age.
- Section 2: Baseline characteristics of the parent or caregiver, including gender, age, marital status, education, occupation, and income.
- Section 3: Burn injury details, including injury characteristics, cause, nature of injury, type of burn, severity level, burn depth, injury locations, and percentage of body surface area (% TBSA).
- Section 4: Treatment outcomes, including surgery procedures, type of dressing material, complications, discharge status, length of hospital stay, and medical expenses.

A quality assessment of the research tools was conducted by three qualified individuals. Content validity was assessed by calculating the Item-Objective Congruence (IOC)

index value and the congruence coefficient; the IOC was 0.90. The reliability was assessed at 0.87 using Cronbach's alpha coefficient. Data analysis was conducted using STATA. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were calculated. Categorical data were analyzed using the Chi-square test and Fisher's exact test, while continuous data were compared between groups using the t-test. Univariable and multivariable Poisson regression analyses were performed to identify factors associated with complications in pediatric burn injuries. Statistical significance was set at $p<0.05$.

Results

Among 98 pediatric burn patients, most were male and aged 0-5 years, with the youngest being 7 months old and the oldest being 14 years old. Scald burns from household accidents were the primary cause, with the most common incidents involving spilled hot water and boiling instant noodles. Moderate burns were the most frequent accounting for 85 patients (86.73%), with superficial partial-thickness burns predominating. The lower extremities and trunk were the most affected areas. The average TBSA affected was 14.01%. Debridement surgery was performed in 84 cases (85.71%), with Bactigras as the most used dressing. The most common complications were hypovolemic shock (12.24%) and burn wound infections (6.12%). The average hospital stay was 12.99 days, and no fatalities occurred. One patient was referred for further treatment at King Chulalongkorn Memorial Hospital, while the rest recovered and followed up at King Narai Hospital, as shown in Table 1.

Table 1 Baseline characteristics and treatment of the study population

Characteristics	Frequency (%)/mean ± SD
Sex	
Male	54 (55.10)
Female	44 (44.90)
Age (years)	4.57±3.82 (min=0.7, max=14)
0-5 (preschool age)	69 (70.40)
6-15 (school age)	29 (29.60)
Injury characteristics	
Household accident	97 (98.98)
Outside accident	1 (1.02)

Table 1 Continued

Characteristics	Frequency (%)/mean ± SD
Cause of burn incidents	
Hot water burns from cooking	21 (21.43)
Burns from instant noodle boiling water	24 (24.49)
Burns from hot water spilled from a thermos	17 (17.35)
Falling into a pan/pot of boiling water while playing	8 (8.16)
Child reaching for a hot cup and spilling it	27 (27.55)
High-voltage electrical injury while shooting birds	1 (1.02)
Burn types	
Scald burn	97 (98.98)
Electrical burn	1 (1.02)
Severity levels[14]	
Minor burn	5 (5.10)
Moderate burn	85 (86.73)
Major burn	8 (8.17)
Burn depth	
Second-degree burn; superficial partial-thickness burn	57 (58.16)
Second-degree burn; deep partial-thickness burn	32 (32.65)
Third-degree burn or full-thickness burn	9 (9.19)
Injury locations (multiple answers allowed)	
Head and neck	27 (27.55)
Trunk	48 (48.97)
Upper extremity	45 (45.92)
Lower extremity	64 (65.30)
Buttocks and genitalia	23 (23.47)
Percentage of total body surface area (% TBSA)	14.01±11.31 (min=1, max=74)
0-5 years (preschool age)	14.66±10.28 (min=1, max=74)
6-15 years (school age)	10.47±9.03 (min=4, max=32)
Surgical procedures (multiple answers allowed)	
STSG (Split-Thickness Skin Graft)	29 (29.59)
FTSG (Full-Thickness Skin Graft)	12 (12.24)
Debridement	84 (85.71)

Table 1 Continued

Characteristics	Frequency (%)/mean ± SD
Dressing materials (multiple answers allowed)	
Aquacel Ag	48 (48.98)
Bactigras	62 (63.27)
Mepilex Ag	12 (12.24)
SSD (silver sulfadiazine)	2 (2.04)
Complications	
Hypovolemic shock	12 (12.24)
Burn wound infection	6 (6.12)
Pneumonia	3 (3.06)
UTI	1 (1.02)
Length of hospital stay (days)	12.99±9.49 (min=3, max=72)
Medical expenses (Thai baht)	109,274±35.14 (min=8,630, max=198,500)

Abbreviations: TBSA - total body surface area, STSG - split-thickness skin graft, FTSG - full-thickness skin graft, Ag - argentum = silver, SSD - silver sulfadiazine, UTI - urinary tract infection

Baseline characteristics of the patients' maternal parent showed an average age of 30.55 years, with the youngest being 17 and the oldest 42. The majority were under 25 years old, totaling 38 mothers (38.78%). Regarding marital status, 83 mothers (84.69%) were in a partnership. Most had completed lower secondary education, with 66 mothers (67.35%), and the predominant occupation is unskilled laborer, with 69 mothers (70.41%). Additionally, the majority reported insufficient income, totaling 52 mothers (53.06%), as shown in Table 2.

Table 2 Baseline characteristics of patients' maternal parent in the study population

Characteristics	Frequency (%)
Maternal age (years)	
<25	38 (38.78)
25-30	22 (22.44)
>30	38 (38.78)
Marital status	
Married	81 (82.65)
Separated	9 (9.19)
Divorced	8 (8.16)

Table 2 Continued

Characteristics	Frequency (%)
Education	
Primary school	13 (13.27)
Lower secondary school	66 (67.35)
Upper secondary school	14 (14.28)
Bachelor's degree	5 (5.10)
Occupation	
Farmer	9 (9.18)
Laborer	69 (70.41)
Merchant	9 (9.18)
Government employee	4 (4.09)
Unemployed	7 (7.14)
Family income	
Sufficient	46 (46.94)
Insufficient	52 (53.06)

Factors contributing to complications of pediatric burn injuries at King Narai Hospital were examined using univariate analysis, and they were found to include patients aged 0-5 years, TBSA greater than or equal to 20%, maternal age under 25 years, primary education level, separated marital status, and insufficient family income, which were statistically significantly associated with the occurrence of complications of pediatric burn injuries (p<0.05), as shown in Table 3.

Table 3 Univariable analysis of factors contributing to complications of pediatric burn injuries at King Narai Hospital

Factors	No complication (n=76)	Complication (n=22)	RR (95% CI)	*p*-value
Patients aged (years)				
0-5	53 (69.74)	16 (72.73)	3.49 (1.248-9.307)	0.001
6-15	23 (30.26)	6 (27.27)	reference	
TBSA				
≥ 20%	24 (31.57)	14 (63.64)	4.81 (2.247-7.423)	0.001
< 20%	52 (68.43)	8 (36.36)	reference	
Maternal age (years)				
<25	21 (27.63)	17 (77.27)	6.32 (2.408-29.297)	0.001
≥25	55 (72.37)	5 (22.73)	reference	

Table 3 Continued

Factors	No complication (n=76)	Complication (n=22)	RR (95% CI)	*p*-value
Education				
Primary school	9 (11.84)	4 (18.18)	3.17 (1.434-11.849)	0.001
Lower secondary school	55 (72.36)	11 (50.00)	1.90 (0.822-8.346)	0.084
Upper secondary school	8 (10.52)	6 (27.27)	0.98 (0.940-7.639)	0.248
Bachelor's degree	4 (5.28)	1 (4.55)	reference	
Marital status				
Separated	5 (6.57)	4 (18.18)	2.16 (1.408-9.338)	0.021
Divorced	3 (3.96)	5 (22.73)	1.43 (0.924-3.847)	0.814
Married	68 (83.47)	13 (59.09)	reference	
Occupation				
Laborer	54 (71.05)	15 (68.18)	1.09 (0.914-5.893)	0.843
Farmer	7 (9.21)	2 (9.09)	1.68 (0.825-5.109)	0.334
Merchant	6 (7.89)	3 (13.63)	1.23 (0.628-3.717)	0.524
Unemployed	6 (7.89)	1 (4.55)	0.94 (0.439-3.806)	0.810
Government employee	3 (3.96)	1 (4.55)	reference	
Family income				
Insufficient	34 (44.74)	12 (54.55)	2.17 (1.432-11.392)	0.042
Sufficient	42 (55.26)	10 (45.45)	reference	

Multivariable regression analysis indicated that patients aged 0-5 years, TBSA greater than or equal to 20%, and maternal age under 25 years had an increased likelihood of developing complications from pediatric burn injuries, as shown in Table 4.

Table 4 Multivariable analysis of factors contributing to complications of pediatric burn injuries at King Narai Hospital

Factors	RR	95%CI	*p*-value
Patient aged 0-5 years	3.96	1.831 - 10.390	0.001
TBSA ≥ 20%	4.10	1.247 - 9.827	0.024
Maternal age <25 years	5.82	1.703 - 24.814	0.001

Discussion

Burn injuries in pediatric patients lead to both physical and psychological suffering, with fatalities and residual disabilities. According to the World Health Organization (WHO), burns remain a major cause of injury-related deaths, with children being among the most vulnerable populations[5]. In Thailand, reports from the Burn and Wound Healing Association over the past three years (2021-2023) indicate that pediatric burn patients aged 0-5 years rank second after the 20-60 age group[15,16,17]. This trend is consistent with statistics from 2017 to 2022 at King Narai Hospital. Our study found that most patients were male and aged 0-5 years (preschool), a period characterized by curiosity and active exploration, leading to a higher risk of accidents. The majority of burn injuries in children occurred in the household due to scald burns. Preschoolers, who often stay at home with their mothers or caregivers, are frequently left to play in kitchen areas. This increases their risk of scald injuries from hot liquids such as hot water, instant noodles, or food being prepared by adults. These accidents occurred both when children were alone and when they were with family members. These findings are also similar to those of Han D et al.[18] who found that scalds accounted for the majority of pediatric burns.

In our study, burn injuries were predominantly of moderate severity, with superficial partial-thickness burns being the most common. These findings align with a retrospective study on pediatric burn patients in Chinese hospitals[19]. The lower extremities were the most frequently affected areas, followed by the trunk and upper extremities, a pattern consistent with reports on pediatric burns in central China[18].

More than half of the patients underwent wound debridement surgery, and were treated with modern dressings such as Bactigras, Aquacel Ag, and Mepilex Ag. This approach reduces the need for frequent dressing changes, minimizes disruption to the re-epithelialization process, decreases pain associated with dressing changes, and lowers overall costs[20,21]. These findings are consistent with studies by Hundeshagen et al.[22] and Kruchevsky et al.[23] Additionally, this method helps alleviate the workload of insufficient medical staff. For patients with deep partial-thickness burns and full-thickness burns requiring STSG (split-thickness skin graft) and FTSG (full-thickness skin graft), most underwent skin graft surgery within two weeks. Previous studies have shown that appropriate early excision and skin grafting within two weeks post-injury help reduce the formation of burn scars[24,25].

The complications observed in our study included hypovolemic shock, followed by burn wound infection, pneumonia, and urinary tract infection (UTI). These findings are comparable to a study conducted in Romania, where wound infections were the most frequently reported complication. Another study in Ethiopia identified sepsis as the most prevalent complication[26] followed by hypovolemic and septic shock[27]. The majority of patients in this study were discharged

with clinical improvement and without complications. This outcome aligns with findings from studies conducted in Ethiopia, India, and Nigeria, which also reported a high proportion of patients recovering without significant post-treatment complications[28,29,30].

The duration of hospitalization in our study was similar to that reported in a study from Laos[4], averaging within two weeks. Most patients had moderate severity, superficial partial-thickness burns, and a limited TBSA involvement, allowing for self-healing within two to three weeks. In contrast, patients with deeper wounds, such as deep partial-thickness and full-thickness burns, often required longer recovery periods and more intensive medical intervention.

Univariate analysis of factors influencing burn injury complications in children at King Narai Hospital identified several significant associations, including maternal education at the primary level, marital separation, insufficient family income, patient age of 0-5 years, TBSA of 20% or greater, and maternal age under 25 years. Mothers with primary education or less were less likely to have basic first-aid knowledge, delayed seeking timely medical care, and frequently used inappropriate treatments, such as applying alcohol or toothpaste. These factors contributed to more severe wounds, increased infection risk, delayed healing, prolonged hospital stays, and greater complications[26,31]. Regarding marital separation, family instability or lack of support systems may contribute to delays in seeking care or inadequate post-injury management, leading to complications. Furthermore, several studies have also demonstrated a relationship between low family income, economic and social deprivation, and an increased risk of burn injuries and complications in children[27,32,33].

When analyzing the relationships using multivariate analysis, it was found that the significant factors affecting complications of burn injuries in children at King Narai Hospital were patients aged 0-5 years, TBSA greater than or equal to 20%, and maternal age under 25 years. A relationship between younger age, larger burns, and an increased risk of complications of burn injuries in children[34]. Younger children had underdeveloped immune systems and thinner skin, which made them more susceptible to infections and fluid imbalances. Larger burns were strongly associated with complications, likely due to increased fluid loss, higher infection risks, and systemic inflammatory responses. Maternal age under 25 years is a factor influencing the occurrence of complications of pediatric burn injuries. Teenage mother may have less experience and awareness regarding child safety. Although direct studies on maternal age and burn injury complications are limited, these findings highlight the need for targeted education and support for young mothers to improve child safety and reduce burn-related risks.

Burn injuries in children primarily result from scalding during household cooking activities; therefore, it is important to inform the public about the risk factors. These injuries can be prevented by creating a safer

environment, organizing kitchens to be enclosed and well-partitioned, and educating children about the dangers of hot water, fire, and electricity with an aim to reduce the incidence of burn injuries. Additionally, providing first aid training for parents and caregivers is crucial in reducing the severity of burn injuries, and the role of elder family members in caregiving should be strengthened. There may also be a need for national policies to strengthen prevention measures for burn injuries.

A limitation of this study is the incomplete information in medical records, particularly regarding the individual responsible for the child's care at the time of the incident. This data gap hinders analysis and the development of effective preventive measures. Future studies should aim to collect more comprehensive data to address this limitation. Additionally, it is essential to monitor and document both chronic physical and long-term psychological complications, such as burn scar contractures that may impair function, hypertrophic scars, post-traumatic stress, and depression. Such information can contribute to improving patient care and rehabilitation strategies.

Conclusions

The causes of burn injuries in pediatric patients at King Narai Hospital are primarily due to scalding from household accidents. The majority of the injuries are classified as moderate and superficial-partial thickness burns. Risk factors associated with complications in burn injuries in pediatric patients include patients aged 0-5 years, TBSA greater than or equal to 20%, and maternal age under 25 years.

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