

CASE STUDY

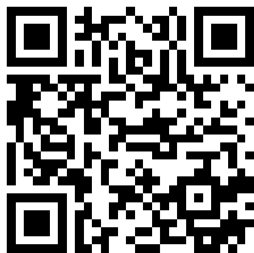


NON-ACCIDENTAL BURN INJURIES IN ADULTS ADMITTED AT MANKWENG BURNS UNIT

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Abstract

Introduction

Burns are a serious public health problem responsible for mortality and morbidity such as infection, contractures, and psycho-social disability.

Aims and Objectives

To obtain information on non-accidental burn injuries admitted to our burns unit.

To record the outcome.

Methods

All patients with a history of non-accidental burn injuries from January 2019 to August 2020 were prospectively included in this study. A data collection tool was created which consisted of data on age, gender, causative agents of burns, mechanism/circumstances that led to injury, total body surface area (TBSA) involved, and the patient's outcome.

Results

We admitted 38 patients. 22 males and 16 females. The mechanisms were intimate partner related violence 21, religious and traditional beliefs 5, self-inflicted 3, mob assault 1, robbery 2, alcohol-related conflicts 3, unclear mechanisms 3. The causative agents were scald 20, open flame 15 and chemical burns 3. The median age was 35,63(19-64) years. The median total body surface area was 24,4 (3-80) %. Mortality was 11(29%).

Conclusion

Burn injuries as a result of intimate partner-related violence were the leading reason for admission at 55,26%.

Mortality was highest among those admitted following religious and traditional beliefs burns.

The mortality was 29%.

Keywords: Non accidental burn injuries, Intimate partner violence, religious and traditional healers burn.

1 | INTRODUCTION

Burns are a major public health problem responsible for high mortality and morbidity such as infection, contractures, and psychosocial disability. In Africa, over a million people are burnt annually, in South Africa burns admission account for 18% with a mortality of 6-10%. (1)

Worldwide, an estimated 6 million patients seek medical help for burns annually, but the majority are treated in outpatient clinics. (2)

Aim and Objectives

To obtain information on adults with non-accidental burn injuries admitted to our burn unit.

To record the outcome

Method

All patients admitted to our burn unit with a history of non-accidental burn injuries from January 2019 to August 2020 were prospectively included in this study. A data collection tool was created, consisting of data on age, gender, causative agents of burns, mechanism/circumstances that led to injury, total body surface area (TBSA%) involved, and the patient's outcome.

Results

Thirty-eight patients were admitted to our burn unit with a history of non-accidental burn injuries from January 2019 to August 2020, 22 males and 16 females.

The mechanisms were intimate partner-related violence 21, religious and traditional beliefs 5, self-inflicted 3, mob assault 1, robbery 2, alcohol-related conflicts 3, unclear mechanisms 3. (table1)

The causative agents were scalds 20, open fire 15 and chemical burns 3. (table1)

The median total body surface area was 24.4(3-80%).

27(71.1%) were treated and discharged.

The mortality was 11 (28,9%).

TABLE 1: Causes and mechanisms of burn injuries

	Intimate Partner-related Violence	Religious/traditional beliefs	Self-Inflicted	Others (Mob assault, robbery, and alcohol-related use)
Scald	13	4	0	3
Open Fire	6	1	3	5
Chemicals	2	0	0	1
Total	21	5	3	9
Died	4	3	1	3
Discharge	17	2	2	6

2 | DISCUSSION

We admitted a total of 38 patients with a history of non-accidental burn injuries from January 2019 to August 2020. Most of our patients were burnt by someone known to them including, spouses, relatives, traditional/religious leaders, friends, and community members.

Intimate Partner-related Violence had the most admissions, 21, 5 females and 11 males with 5 cases of female to female violence fighting over a partner. When the assailant was a male partner, the mortality was high. 3 female patients died after being set alight by their male partners. The only male who died from intimate partner related violence was set alight by his wife's boyfriend. In a study done in western cape it was noted that poor relationships within marriages and extramarital affairs were aggravating factors of intentional burn injuries. (3)

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In a typical extramarital relationship, a 29 years old pregnant lady at 34 weeks of gestation was scalded by the wife of her boyfriend after the wife found out from the community that her husband impregnated the patient. She sustained 20% TBSA scald burns, and on day 2 of admission, she went into premature labour and delivered a healthy baby.

Non accidental burns as a result of religious and/or traditional healers had a high mortality of 60%. There was a 24 years old female university student who was burnt with petrol by a traditional healer who was claiming to be treating her herpes simplex, she had 68% TBSA burns and died on the day of admission. Two mental health care users who consulted traditional healers got burnt by steam that was used as a form of treatment of their psychiatric conditions, unfortunately one of them died. From religious beliefs aspect, a 60-years old male died from inhalational burns with 45% TBSA which he sustained during the treatment of his respiratory infection.

There were 3 cases of self-inflicted burns which were as a result of open fire. A 22 years old male prisoner who was trying to cause commotion in order to escape from prison, together with his other two fellow inmates used methylated spirit to set a mattress on fire, the other two prisoners died on the scene, he survived with burns of 36% TBSA and inhalation injury. There was a 33 years old male patient known with cerebral palsy who sustained 4% TBSA burns with inhalation injury. He was locked inside a shack by his relative, he then started a fire to seek attention from the neighbours who eventually rescued him and a 30 years old female who used paraffin to set herself on fire after having a conflict with her husband, sustained 32% TBSA burns with inhalational injury and demised few days after admission.

The common causative agent was noted to be scalds with 22 admissions followed by open fire 15, also noted in other studies done in South Africa (4) (5). The least causative agent was chemical, which accounted for 3 admissions.

The majority were males 22, and females were 16 as shown in other studies done in Harare and North Carolina. (6) (7) Contrary to other studies that reported a majority of females. (8) (9) and no difference in

gender. (10)

The median age was 35,63 (19-64) years which was also reported in other studies [11] (11) Studies were conducted in Harare and Nepal on intentional burns which showed a younger population. (12) (13) The majority of patients were between 20 and 40 years. (figure 1.)

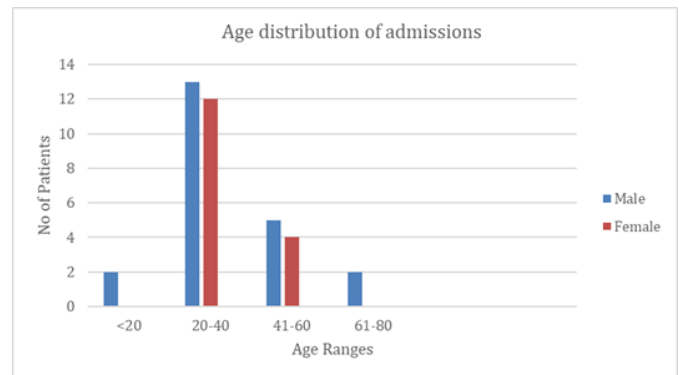


FIGURE 1: Age Distribution of Admissions

The median total body surface area was 24.4(3-80) %.

Out of 38 admissions 11 patients died. Intimate partner-related violence had the highest admissions, 21. Religious and traditional beliefs had the highest mortality of 60%.

3 | CONCLUSION

Burn injuries as a result of intimate partner-related violence were the leading reason for admission at 55,26%.

Mortality was highest among those admitted following religious and traditional beliefs burns.

The mortality was 29%.

4 | RECOMMENDATIONS

We recommend anger management by a multidisciplinary team which consist of psychologists and social workers.

We recommend prosecution of assailants of non-accidental burns.

We recommend awareness campaign against non-accidental burns

Acknowledgment

We would like to thank the sisters in our burns unit for their dedication in taking care of these severely injured patients.

The preliminary results of this study were presented at the Pan African Burn Congress, Durban on 01/10/2019.

This study was approved by our ethics committee (PMREC 27/09/01/2017)

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