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The prevalence and clinical profile of adult burns due to assault: a South African adults burn centre review

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ABSTRACT

Burn injuries due to assault reflect complex interactions between societal structure, and social and economic circumstances specific to different populations. Chris Hani Baragwanath Academic Hospital is a tertiary referral academic hospital with a specialist service Adult Burns Unit which services the Gauteng Province. To date, the unit has not published its experience with burn injuries due to assault. In this study, the aim was to explore the demographics (age and sex), clinical profile (mechanism of burn, inhalation injury, and percentage total body surface area) and outcomes (mortality, length of hospital stay and need for intensive care unit admission) for burn injuries by assault at Chris Hani Baragwanath Academic Hospital's Adult Burns Unit.

We conducted a retrospective review of 1928 consecutive adult burns patients admitted between 2005 and 2014. We conducted analyses for the whole cohort, and subsequently divided the cohort into two groups, a burn by assault group, and a control group, which included all burn injuries that were accidental, unintentional, or resulted from intentional self-harm. Overall, and for each group, we performed descriptive analyses for the demographics, clinical profile and outcomes, and for between group comparisons the independent T test was performed.

Overall, twenty one percent of all admissions comprised the burn by assault group and the most frequent mechanism of burns in this group was scald injuries. When compared to the control group, there were no significant differences in the assault group for age and sex distribution; mortality; total body surface area percentage; inhalational injury, intensive care admission; and length of stay in the burns unit.

Contrary to the existing literature, in this study patients with burns due to assault do not have more severe injuries or worse outcomes. This is likely due to the relatively higher prevalence of scald injuries in the assault group. Our data can inform public health strategies for burn prevention that focus on interpersonal violence as a significant cause of burns and the uniquely South African complexities involved.