

**BURNS INJURIES AT MOI TEACHING AND REFERRAL HOSPITAL**

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## ABSTRACT

**Introduction.** Burns account for over 1% of the global burden for major injuries (Soltani, 1998 and Leistikow, 2000). Five percent of deaths worldwide due to injuries is as a result of burns, out of which 95% came from Africa (W.H.O 2002). In Africa an estimated 39.2 per 100,000 population died due to burns injuries in the year 2002. This was a contribution of a 12.2% to the total global deaths due to burn injuries. Compared to other regions in the world like America at 1.4% and other western countries at 5.4%, this percentage is very high. The purpose of the study was to investigate the causes and some aspects of morbidity and the outcome in burn injuries in MTRH.

**Objectives.** To determine the causes of burns injuries in patients admitted at MTRH; to determine the average length of hospitalization among patients admitted at MTRH following burn injuries; to determine the mortality rate of burns at MTRH.

**Study design.** Retrospective Cross-sectional study.

**Setting.** Moi Teaching and Referral Hospital.

**Methodology.** The sample size was estimated using Fisher's formula. A sample size of 302 was obtained, which represented 78.6% of the required sample size (383).

All consecutive patient files for the period between Jan 1<sup>st</sup> 2006 and March 31<sup>st</sup> 2008 were also reviewed.

**Analysis.** Data was entered cleaned and analyzed in SPSS software V 17. Descriptive statistics was used to establish the means, standard deviations, and frequency distributions. Association between length of hospitalization and age, sex, co morbidity and percentage of burns was done. An attempt was also made to correlate the outcome with cause, age, sex severity and co-morbidity Factors and covariates were considered significant at  $p$  value  $< 0.05$  (confidence interval=95%).

**Results.** The study examined a total of 302 cases of burns injuries between the 1<sup>st</sup> January 2006 and 31<sup>st</sup> March, 2008. Their ages ranged between 4 days and 79 yrs. Mean age of the study subjects was 7.91 years (SD 13.7). Males were 179 (59.3%) while females were 123 (40.7%). Ages between 0-5 years was 221 (73.4%) while those above 5 yrs were 80 (26.6%). The major causes of burn injury to patients admitted in MTRH are scalds and open fires. The leading cause of burn injury in the ages below 5 years was scalds 181 (81.9%), while open fires was the leading cause of burn injury 43 (54.4%) in those above 5 years. The range of duration of hospitalization in general was between 1 to 256 days with a mean of 25.7 days (SD 33.5). Female patients recorded a longer average length of hospitalization of 28.7 (SD 37.6) days compared to the male patients who recorded 23.6 days (SD 30.4). Children between the ages 0-5 years had an average length of hospitalization of 22.6 (SD 29.7) days while those above the 5 years; had their average 34.9 (SD 41.5) days. Further analysis showed an association between age and length of hospitalization ( $P$ -value  $< 0.001$  and  $r=0.27$ ). Out of the 15 patients who died 5 were females and 10 males. There were no deaths reported in minor and moderate burns.

**Conclusion and recommendations.** The major causes of burn injury to patients admitted in MTRH are scalds and open fires. Burn injury patients spend on the average 25.7 days in MTRH before discharge. Mortality rate of burn injuries in MTRH is 5%.

More research should be done to increase the level of knowledge and awareness on burn injuries

**Key words;** Burns injuries, causes, length of hospitalization and outcome.