
60 Running Water While Bathing Is a Risk Factor for Pediatric Scald Burns

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Introduction: Scalds are the most common mechanism of burn in children, and a significant proportion of these injuries are associated with bathing. Burns sustained while bathing present a unique opportunity for injury prevention; previous studies have examined lowering water heater temperatures, however reputable infant bathing educational resources do not explicitly recommend avoiding running water and the risks that it could pose. In an effort to inform prevention programs, this study seeks to determine the incidence and circumstances of running water in bathing scald burns at our institution.

Methods: A retrospective review was performed of records from an American Burn Association verified center over a ten year period (1/1/2010 to 12/31/2019). This center treats both children and adults and is affiliated with an academic hospital in a major urban center. The burn database was queried for scald injuries in children less than three years involving bathing. The Child Advocacy and Protective Services team provides inpatient consultation for all children less than three years old with burn injuries allowing us to analyze the specific events surrounding the bathing scald burns in this cohort.

Results: A total of 123 patients met inclusion criteria. Three bathing safety risk factors were specifically noted in the chart review: (1) running water, (2) lack of caregiver presence for duration of bathing, and (3) failure of caregiver to check water temperature before bathing. Of the cases identified, 107 (87%) had clear documentation of running water as part of the history of injury, 66 (54%) cases involved failure of caregiver to check the water temperature before bathing and 53 (43%) cases did not have a caretaker present for the duration of the bath. In cases with only one risk factor, running water was identified in 34 (94%) out of 36 cases, and in cases with one or two risk factors, running water remained the primary risk factor with 38 (90%) out of 42 cases. When looking at the combination of risk factors, only three (2%) cases had no risk factors while 77 (63%) involved two or more risk factors.

Conclusions: The vast majority of bathing burn injuries in this series involved running water. In addition, a significant number of scald burns occurred from running water alone, even without the other identified risk factors. Conversely, only 2% of scald burns associated with bathing featured none of these three risk factors, suggesting that these injuries could be greatly impacted by safe bathing education.

61 A Burn Center's Experience with COVID-19 Positive Burn Patients

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Introduction: The emergence of SARS-COV-2 and the COVID-19 pandemic has complicated the presentation, treatment, and prognosis of all types of patients. Further characterization and analysis of how concomitant COVID-19 infection impacts different patient populations is important for improving treatment strategies. Patients with burn injuries often require ICU-level care, mechanical ventilation, and extensive surgical intervention. Concomitant COVID-19 infection in this population presents a new challenge to clinical teams. The purpose of this project is to compare COVID-19 positive burn patients treated at a regional burn center with those that are not.

Methods: Following IRB approval, our institution's burn registry was queried from March 2020-June 2021. Data on demographics, injury circumstances, COVID-19 status, and outcomes were collected. Continuous variables were nonparametric and compared using Mann-Whitney U test. Categorical variables were compared using Chi-squared with Fischer's Exact test, where appropriate.

Results: Of the 622 patients admitted at our institution, 19 tested positive for COVID-19 during their hospitalization. Demographic and injury information is reported in Table 1. There were statistically significant differences between the COVID-19 positive and negative groups in regard to race and presence of inhalation injury ($p=0.0002$, $p=0.0002$). The TBSA burned was slightly higher in the COVID-19 positive group (9.1 vs 6.7%). COVID-19 positive patients spent more time ventilated (48 ± 32.5 vs 12.2 ± 16.2 days, $p=0.0035^{**}$) and had both longer ICU (42.71 ± 37.41 vs 11.1 ± 15.4 days, $p=0.0175^{*}$) and hospital (26.32 ± 32.14 vs 8.177 ± 11.95 days, $p < 0.0001^{***}$) lengths of stay (LOS). No COVID-19 positive patients died while 5% of the COVID-19 negative patients did. All outcomes were statistically significant.

Conclusions: Despite similar TBSA injury burden and age breakdown, patients at our institution who tested positive for COVID-19 required more time on the ventilator and were hospitalized longer. People of color had a higher percentage of positive tests than their Caucasian counterparts. While mortality rates were higher in the COVID-19 negative cohort, morbidities associated with longer LOS must be considered.