Attempted Suicide by Self-Immolation is a Powerful Predictive Variable for Survival of Burn Injuries

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Up to 9% of all burn victims in western countries are reported to have been caused by self-immolation with suicidal intent and usually involve extensive injuries. The authors sought to identify differences between suicide burn victims as opposed to those who sustained their injuries accidentally with regard to injury severity and mortality and determine the possible impact of suicide as a prognostic variable in the context of a scoring system such as the Abbreviated Burns Severity Index (ABSI). The data of all burns patients treated at the Specialist Burns Intensive Care Unit, University Hospital Zürich, between 1968 and 2008 were analyzed retrospectively. Of the 2813 patients included in the study, 191 were identified as attempted suicides, most commonly involving the use of accelerants. Thirty percent of all suicide victims had preexisting psychiatric diagnoses. Suicide victims presented with significantly more extensive burns (53.7%, ±0.98 SEM vs 21.4%, ±0.36 SEM, P < .0001), had higher total ABSI scores (8.4, ±0.23 SEM vs 6.6, ±0.05 SEM, P < .0001), and had higher mortality rates (42.9% [83/191] vs 16.3% [426/2622]) than accident victims. Furthermore, logistic regression revealed suicide to be a significant predictor of mortality as inhalation injury (odds ratio 2.2, 95% confidence interval 1.4-3.5, P < .0003 and odds ratio 2.4, 95% confidence interval 1.4-4.0, P < .0009, respectively). The odds of dying from an attempted suicide are twice as high compared with those of accident patients in the same ABSI category, making suicide a powerful predictor of mortality. The authors therefore suggest including it as a fixed variable in scoring systems for estimating a patient’s mortality after burn injuries such as the widely used ABSI.