Fitting the pieces together B U R N S

Characteristics of Self-inflicted Burn Injuries in a Major Burn Centre in New South Wales, Australia

Dr David Goltsman, Dr Masuma Sarker, Prof Peter Maitz, Mrs Anne Darton, A/Prof Peter Kennedy
Burns Unit, Concord Repatriation General Hospital, Concord, NSW.

BACKGROUND: Self-inflicted burn injuries occur universally. The incidence of self-inflicted burns is believed to be higher in low- and middle-income countries compared more developed countries [1,2,3,4 5]. Not all self-inflicted burn injuries are associated with suicidal intent, and can be classified into those with suicidal intent and those without [6]. In order to prevent and more effectively treat self-inflicted burns, the current study uses data of intentional burn injuries collected over a 10-year period to examine the mechanism, incidence and outcomes of burns among patients with suicidal and non-suicidal intentions.

Methods: Patients with self-inflicted burn injuries presenting between 2004-2014 were identified from the NSW Severe Burn Injury Service database. Demographic and clinical data pertaining to the cause of the burn, treatments received and outcomes were obtained from patient records.

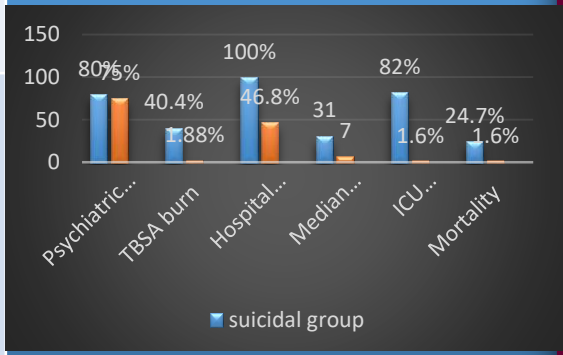
All self- inflicted burn injuries were reviewed by the unit Psychiatrist to differentiate between those who had attempted suicide and those deliberately–inflicted injuries without suicidal intent. The results were statistically analysed using basic descriptive statistics using Microsoft Excel and R-Statistical Software.

Results:

- One hundred and thirty nine patients presented with self-inflicted burns.
- Burns with suicidal intent (n=77) outnumbered those with non-suicidal intent (n= 62).
- There was a high incidence of psychiatric illness in both groups (80% in the group with suicidal intention and 75% among those without).
- The suicidal group sustained much larger burns (mean burn size 40.35% vs 1.88% in the non-suicidal group, p<0.0001), greater admission rate (100% vs 46.8%, p<0.0001), a higher proportion of ICU admissions (82% vs 1.6%, p<0.001), and a greater mortality (24.6% vs 1.6%, p<0.0001) compared to the self-harm group.

There are two distinct groups of self–inflicted burns which differ in their injury characteristics and outcomes. Psychiatric illness is common among all patients with self-inflicted burn injuries. Better treatment of mental illness may result in less morbidity and mortality among burn victims and may be consequently associated with lower treatment costs.

Demographic	Suicidal (n=77)	Self-harm (n=62)	p values
Age, mean (years)	40.23	34.09	0.014
Sex			
Male (%)	49 (64%)	30 (48%)	
Female (%)	28 (36%)	32 (52%)	0.058
Methods of injury			
Flame (%)	70 (91%)	17 (27%)	<0.0001
Explosion (%)	6 (8%)	1 (1.6%)	
Scald (%)	1 (1%)	7 (11%)	
Contact (%)		19 (31%)	
Chemical (%)		12 (19%)	
Electric (%)		4 (6%)	
Other (%)		1 (1.6%)	
Psychiatric illness	62 (80.5%)	47 (75.8%)	0.503
Drug and Alcohol	10 (13%)	7 (11.3%)	0.76



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