

## Assessment of Prevalence of Psychiatric Morbidity in Burn Patients: A Clinical Study

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### Article History

Received: 24 Jan 2016

Revised: 22 Feb 2016

Accepted: 27 Mar 2016

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### ABSTRACT

**Background:** Epidemiological study is an important modality to analyze the cause, magnitude and profile of burn in a particular region and population. Detection of non-accidental injuries is important as up to 30% of children who are repeatedly abused die. Hence; we planned the present study to assess psychiatric morbidity in burn patients.

**Materials & Methods:** We planned the present study to assess the psychiatric morbidity in burn patients. A total of 50 burn patients were included in the present study. Complete demographic details of all the patients were recorded. Complete psychiatric examination of all the patients was done. SPSS software was used for assessment of level of significance.

**Results:** A total of 50 burn patients were included in the present study. Psychiatric morbidity was found to be present in 60 percent of the burn patients. Anxiety and depression were the most common type of psychiatric illness seen among the burn patients in the present study.

**Conclusion:** Psychiatric illness is present in significant proportion of burn patients.

**KEYWORDS:** Burns, Morbidity, Psychiatric.

### INTRODUCTION

Epidemiological study is an important modality to analyze the cause, magnitude and profile of burn in a particular region and population. Epidemiological study is the first step in planning preventive and management strategies; hence, any endeavor in this direction is appreciable.<sup>1</sup>

Burns can be due to thermal injury, electric injury, chemical injury or non-accidental injury. The common mechanisms of thermal injuries are spilling hot drinks or liquids or being exposed to hot bathing water. Some 3-4% of burn unit admissions are caused by electrocution injuries. An electric current will travel through the body from one point to another, creating "entry" and "exit" points. The tissue between these two points can be damaged by the current. Chemical injuries are usually as a result of industrial accidents but may occur with household chemical products.<sup>2-4</sup> These burns tend to be deep, as the corrosive agent continues to cause coagulative necrosis until completely removed. Alkalis

tend to penetrate deeper and cause worse burns than acids. Detection of non-accidental injuries is important as up to 30% of children who are repeatedly abused die. Usually young children (< 3 years old) are affected. As with other non-accidental injuries, the history and the pattern of injury may arouse suspicion. It is natural for non-accidental injury to trigger anger among healthcare workers. However, it is important that all members of the team remain non-confrontational and try to establish a relationship with the perpetrators.<sup>5-8</sup> Hence; we planned the present study to assess psychiatric morbidity in burn patients.

### MATERIALS & METHODS

We planned the present study to assess the psychiatric morbidity in burn patients. Ethical approval was obtained from institutional ethical committee and written consent was obtained after explaining in detail the entire research protocol. A total of 50 burn patients were

included in the present study. Complete demographic details of all the patients were recorded. We didn't include patients with previous history of any psychiatric disorder. Complete demographic details of

all the patients were obtained. Complete psychiatric examination of all the patients was done. SPSS software was used for assessment of level of significance. P-value of less than 0.05 was taken as significant.

**Table 1: Demographic details of all the burn patients**

Parameter	Number
No. of burn patients	50
Males	35
Females	15
Mean age (years)	45.2

**Table 2: Prevalence of psychiatric morbidity**

Parameter	Number	Percentage
Psychiatric morbidity	30	60

## RESULTS

A total of 50 burn patients were included in the present study. Mean age of the patients was 45.2 years. Out of 50, there were 35 males and 15 females. Psychiatric morbidity was found to be present in 60 percent of the burn patients. Anxiety and depression were the most common type of psychiatric illness seen among the burn patients in the present study.

## DISCUSSION

In the present study, Psychiatric morbidity was found to be present in 60 percent of the burn patients. Anxiety and depression were the most common type of psychiatric illness seen among the burn patients in the present study. Dyster-Aas J et al studied psychiatric history in a population-based burn sample and its impact on symptomatology of depression and posttraumatic stress disorder (PTSD) at a 12-month follow-up. Seventy-three consecutive patients admitted to the Uppsala Burn Unit were assessed with the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition for psychiatric disorders, of whom 64 were also assessed after 12 months. Forty-eight patients (66%) presented with at least one lifetime psychiatric diagnosis; major depression (41%), alcohol abuse or dependence (32%), simple phobia (16%), and panic disorder (16%) were most prevalent. At 12-months postburn, 10 patients (16%) met criteria for major depression, 6 (9%) for PTSD, and 11 (17%) for subsyndromal PTSD. Patients with lifetime anxiety disorder and with lifetime psychiatric comorbidity were more likely to be depressed at 12 months, whereas those with lifetime affective disorder, substance use disorder and psychiatric comorbidity were more likely to have symptoms of PTSD. Two-thirds of burn survivors exhibit a history of lifetime psychiatric disorders. Those with a psychiatric

history have a higher risk of postburn psychiatric problems.<sup>9</sup>

Sveen J et al assessed burn-specific attentional bias 1 year after burn, and its associations with risk factors for PTSD and symptoms of PTSD. A total of 38 adult patients with burns were assessed with a structured clinical interview and a Swedish version of the Impact of Event Scale-Revised up to 1-year after burn. The Emotional Stroop Task was used to assess attentional bias 1 year after burn. In total 29 participants displayed burn-specific attentional bias. This group had more previous life events, perceived life threat, larger burns, and higher PTSD symptom severity. In conclusion, the majority of the patients had burn-specific attentional bias 1 year after burn and this was related to symptoms of PTSD.<sup>10</sup>

Corry NH et al clarified the prospective and concurrent associations of posttraumatic stress disorder (PTSD) and pain with functioning and disability after burn injury. The sample was composed of consecutive patients admitted to a regional burn center with major burn injuries (N = 171) who were followed at 1, 6, 12, and 24 months postdischarge. The predictor measures were the McGill Pain Questionnaire and Davidson Trauma Scale, and the outcome measures were Short Form-36 Health Survey subscales administered at 6, 12, and 24 months after discharge. Linear mixed-effects analyses were conducted to evaluate pain and PTSD as predictors of functional outcomes. Higher PTSD symptom severity soon after hospital discharge was prospectively related to poorer physical and social functioning and greater psychosocial disability (P < .001). However, significant PTSD-by-time interactions also predicted future physical functioning and disability, indicating that the deleterious effects of early PTSD were ameliorated by time. In addition, at each follow-up, PTSD symptoms were

concurrently related to greater physical and psychosocial disability, poorer social functioning, and less vitality ( $P < .001$ ). More severe pain at each follow-up, but not PTSD, was correlated with poorer concurrent physical functioning ( $P < .002$ ). Significant interaction terms indicated that the concurrent effect of PTSD on psychosocial disability, social functioning, and vitality attenuated during the 24-month recovery period. These findings suggested that assessing PTSD and pain following burn injury may aid in predicting future functioning. Future work should confirm this and evaluate whether aggressively treating both PTSD and pain helps improve functioning after major burn injury.<sup>11</sup> McGhee LL et al examined the relationship between early acute pain and severity of PTSD symptoms in soldiers with burn injuries. Of the soldiers injured in Overseas Contingency Operations who had pain scores recorded at admission to the Emergency Department, 113 had burn injuries. Of those transferred to the military burn center, 47 were screened for PTSD using the PTSD checklist-military (PCL-M) survey at least 1 month after injury. Soldiers with mild, moderate, and severe pain scores had similar Injury Severity Scores and TBSA burned ( $P = .339$  and  $.570$ , respectively). However, there were significant differences in PCL-M scores between the mild and severe pain groups ( $P = .017$ ). The pain levels positively correlated with the PCL-M score ( $\rho = 0.41$ ,  $P = .004$ ) but not with injury severity markers (Injury Severity Score and TBSA). These data suggest that early acute pain may be related to increased PCL-M score and PTSD symptoms. The intensity of pain was not related to the injury severity, and these data also show no association between pain intensity and physiological measures, including blood pressure and heart rate. However, this is a small sample size, and many other factors likely influence PTSD development. Further study is necessary to explore the relationship between early acute pain and subsequent development of PTSD symptoms.<sup>12</sup>

## CONCLUSION

Psychiatric illness is present in significant proportion of burn patients. However; future studies are recommended.

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**Source of Support:** Nil.

**Conflict of Interest:** None Declared.

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**Cite this article as:** Seema Singh Parmar, Prerana Gupta. Assessment of Prevalence of Psychiatric Morbidity in Burn Patients: A Clinical Study. *Int J Med Res Prof*. 2016, 2(2); 381-83.