

ORIGINAL RESEARCH

Evaluation of psychiatric illness among burn patients

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ABSTRACT

Background: Pain and depression represent suffering for burn patients, thus deserving attention in research and clinical settings. The study was conducted to evaluate psychiatric illness among burn subjects. **Materials & methods:** A total of 100 burn patients were enrolled. Complete demographic and clinical data of all the patients was obtained. The p- value less than 0.05 was considered significant. **Results:** A total of 100 subjects were included. Mean age of the patients was 48.2 years. Majority of the patients were males while the remaining were females. Among these 55% patients were facing psychiatric illness. **Conclusion:** Depression and post-traumatic stress disorder are the most common psychiatric illness among burn patients.

Keywords: Depression, Psychiatric illness, Burn.

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INTRODUCTION

Across the globe, burns pose a public health challenge with approximately 180,000 deaths annually. Burns also figure among the foremost causes of disability-adjusted life-years (DALYS) lost. ¹ Majority of these cases occur in low or middle-income countries and almost two-third occur in the World Health Organisation (WHO) African and South-East Asia Region. In India, annually, over 1,000,000 people are moderately or severely burnt. ¹ With an immensely high disease load and majority of the Indian population residing in villages, burns are among the commonest conditions which a primary care physician encounters. ² Burn injuries are defined as injuries caused by the application of heat, chemicals, electrical current or radiation to the external or internal surface of the body, which causes destruction of the tissue. ³ Burns are acute, unpredictable and devastating forms of trauma which affect both the physical and psychological health of the victim. ⁴ With improving medical care, many patients survive the acute phase of recovery and are left to deal with the long-term psychological effects of burns, which are complex and vary from patient to patient. ⁵ The most common psychological problems faced by burn injury patients are pain, anxiety, depression, post-traumatic stress disorder, concern about bodily disfigurement, social

isolation and financial burden due to the prolonged duration of hospitalization and treatment required. ⁶ Resolving the psychological problems that affect burn injury patients leads to a greater enhancement of their quality of life and wellbeing. ⁷ Non resolution of these problems in the acute phase may cause them to progress to chronic psychiatric morbidities. ⁸ Many studies have attempted to describe the burden of mental illness in burn survivors, suggesting that mood- and anxiety-related disorders are prevalent, ⁹ and that up to one-third of patients suffer from post-traumatic stress disorder. ¹⁰ Unfortunately, the interpretation of these studies is limited by small sample sizes, short follow-up intervals, and high rates of loss to follow-up. More importantly, existing studies were unable to explicitly account for pre-burn mental illness; many did not collect any pre-injury data, or relied on potentially biased self-reporting of earlier psychiatric morbidity. Psychological distress is among the most frequent and debilitating complications post-burn injury. Preliminary reports using the Burn Model System (BMS) dataset indicated that one-third of patients with major burns had clinically significant psychological distress at the time of discharge, ¹¹ and the mean level of psychological distress in the BMS sample ¹² was significantly higher than that reflected in published

data from a normative sample.¹³ In addition, psychological distress of in-patients of the hospital predicted significantly greater physical impairment for at least 1 year post-burn.¹¹ Clinically significant psychological distress also accounted for substantial variance in concurrently assessed quality of life at 2 (58%), 6 (68%), and 12 (51%) months post-burn injury.¹⁴ Hence, this study was conducted to evaluate psychiatric illness among burn subjects.

MATERIALS & METHODS

A total of 100 burn patients were enrolled. Complete demographic and clinical data of all the patients was obtained. Clinical examination was done. Assessment of psychiatric illness among burn patients was

recorded. Data was collected. The results were analysed using SPSS software. The p- value less than 0.05 was considered significant.

RESULTS

A total of 100 subjects were included. Mean age of the patients was 48.2 years. Majority of the patients were males while the remaining were females. Among these 55% patients were facing psychiatric illness. Depression and post-traumatic stress disorder was seen in 15 and 25 percent of the patients respectively. Assessing the correlation of psychiatric illness with total body surface area in burn patients, significant results were obtained.

Table 1: Psychiatric illness among burn patients

Psychiatric illness	Percentage
Anxiety	10
Depression	15
Post-traumatic stress disorder	25
Others	5

Table 2: Correlation of psychiatric illness with total body surface area affected by burns

Psychiatric illness	95% CI	p- value
Anxiety	-1.5 to 3.01	0.001
Depression	-2.12 to 1.55	0.01
Post –traumatic stress disorder	-1.20 to 1.56	0.001
Others	-2.05 to 2.08	0.01
Overall	-1.42 to 2.20	0.001

DISCUSSION

Many psychiatric disorders are seen in burn survivors including anxiety, psychosis and social phobia. Depression as well as Post-traumatic stress disorder (PTSD) are commonly found among patients with burns.¹⁵ Quality of life is composed of many facets including disease symptoms, functional capacity, impact on role performance, perceived well-being and satisfaction.¹⁶ The long road to recovery for these patients involves dealing with pity, stares, unsolicited questions about appearance, name-calling, strained relationships, sexual dysfunction and returning to work.¹⁷ Hence, this study was conducted to evaluate psychiatric illness among burn subjects.

In the present study, a total of 100 subjects were included. Mean age of the patients was 48.2 years. Majority of the patients were males while the remaining were females. Among these 55% patients were facing psychiatric illness. A study by Mason SA et al, among 1,530 patients with major burn injury, mental health visits were common both before (141 per 1,000 person years) and after (154 per 1,000 person years) injury. Mental health visits were most common in the 12 weeks immediately preceding injury. No significant difference in the overall visit rate was observed after burn (RR 0.97; 95% CI 0.78 to 1.20), although among patients with less than 1 pre-injury visit, mental health visits tripled (RR 3.72; 95% CI 2.70 to 5.14). Self-harm emergencies increased 2-

fold (RR 1.95; 95% CI 1.15 to 3.33). Mental health emergencies are prevalent among burn-injured patients. Although the overall rate of mental health visits is not increased after burn, the rate increases significantly among patients with one or fewer visits pre-injury. Self-harm risk increases significantly after burn injury, underscoring the need for screening and targeted interventions after discharge. An increased rate immediately before burn suggests an opportunity for injury prevention through mental healthcare.¹⁸

In the present study, depression and post-traumatic stress disorder was seen in 15 and 25 percent of the patients respectively. Assessing the correlation of psychiatric illness with total body surface area in burn patients, significant results were obtained. Another study by Jain M et al, a cross-sectional study included 100 patients with burn injuries admitted to a tertiary care private hospital in an urban metropolis in India. Assessment was carried out within 2-8 weeks of injury following medical stabilization. The study sample was predominantly male (54%), married (69%), with a mean age of 34.1 ± 10.8 years. Accidental burns (94%) were the most common modality of injury. The majority (46%) suffered burns involving 20-59% total body surface area (TBSA), and facial burns were present (57%). No significant association was found between TBSA and anxiety, depression or self-esteem, and the same was true for facial burns. Deep burns, however, were significantly

associated with anxiety ($p=0.03$) and depression ($p=0.0002$). High rates of anxiety and depression are associated with burn injuries and related to burn depth.¹⁹ A diagnosis of PTSD requires the presence of at least one intrusive symptom and three avoidant and two arousal symptoms, each of which must persist for at least 1 month.²⁰ Three of the dissociative symptoms included in the ASD diagnosis (depersonalisation, derealisation, and time distortion/daze) are new to the DSM-IV; the other two (numbing, amnesia) have been previously classified as avoidant symptoms within the PTSD diagnosis. Burn injury has occupied a unique role in the trauma literature. Beginning with the work of Cobb and Lindemann in 1943^{21,22} documenting acute psychological responses to the Cocoanut Grove fire, studies of burn injury have offered perspectives which have helped validate the idea that trauma has mental health consequences. In a study, Cobb and Lindemann described dissociation, re-experiencing, avoidance, and acute grief in those people hospitalised for burns following the Cocoanut Grove fire.²³ Analysis of the relationship between grade of burn and depression showed that the extent of total body surface area (TBSA) involved did not have any bearing on the severity of depression seen in the subjects. This was in keeping with findings reported in the literature.²⁴ The same was true for anxiety. This, however, was in contrast with literature showing a positive association between total body surface area involved and severity of anxiety.²⁵

CONCLUSION

Depression and post-traumatic stress disorder are the most common psychiatric illness among burn patients.

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