

Research Report

SELF-INFLICTED UPPER LIMB INJURIES IN A TERTIARY CARE SEMI-RURAL PLASTIC SURGERY UNIT—A PSYCHIATRIC EVALUATION

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ABSTRACT

Background: Deliberate self-harm patients (DSH) with upper limb injuries are commonly admitted in the plastic surgery units. Psychiatric comorbidities are risk factors for these patients with self-inflicted injuries. A multidisciplinary team approach is needed.

Methods: Patients who presented with self-inflicted upper limb injuries in the plastic surgery department were referred for psychiatric liaison services. Socio-demographic data, mode of injury, plastic surgical procedures, and psychiatry diagnosis were noted.

Results and discussion: Out of 48 patients, 20 (41.6%) belong to the 21-30 age group, 30 (62.5%) were males. 43 (89.6%) patients needed major plastic surgery procedures. The major psychiatric comorbidities were depressive disorder (27.1%), adjustment disorder (16.6%), alcohol dependence syndrome (14.6%), and bipolar mood disorder (12.5%). High psychiatric morbidity among self-inflicted hand injuries suggests the need for a multidisciplinary approach and long term follow-up.

Conclusion: Psychiatric liaison services are important in the treatment of self-inflicted upper limb injuries.

Keywords: self-inflicted injuries, plastic surgery, psychiatric comorbidity

INTRODUCTION

Suicide is a deliberately performed act with the knowledge of its fatal outcome. In contrast, the term deliberate self-harm (DSH) or para-suicide is used to describe intentional self-harm, which may or may not be intended to end life.¹ There is an overlap between the two. Of the many who attempt suicide every year, 8,00,000 turn fatal.²

Individuals with self-inflicted upper limb injuries are commonly admitted in plastic surgery units.³ These have low mortality but have a significant disability as a sequel

to the neurovascular injury sustained during these attempts.⁴ The most prevalent form of self-harm is skin cutting contributing to 50- 70%.^{3,5} Personality disorders and other co-morbid psychiatric conditions are risk factors for self-mutilation and suicidal behaviours.⁶

Because of these factors, a multidisciplinary approach with components of emergency medicine, plastic surgery, psychiatry, and rehabilitation is needed in the care of these individuals.⁷ Only a few studies evaluating psychiatric comorbidities among self-inflicted upper limb injuries are reported from Asia.⁵

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METHODS

This study was conducted in a tertiary care medical college hospital in a semi-rural setting. There is a post-graduate psychiatry department with liaison services and a plastic surgery unit handling hand and microvascular surgeries.

This is a cross-sectional study in which patients were selected through consecutive sampling. The patients who presented with self-inflicted hand injuries in the plastic surgery department from January 2018 to December 2019 were included in the study. Psychiatric liaison services were sought for each patient who presented with self-inflicted injuries of upper limbs. Ethical approval was taken from the institutional ethical committee, and informed consent was taken from each patient. The data were collected using a semi-structured proforma for socio-demographic data and clinical details of the patient. The mode of injury and plastic surgery procedures done were recorded. A consultant psychiatrist examined the patient as part of the psychiatric liaison services. The psychiatric diagnosis was based upon ICD-10 diagnostic criteria.

RESULTS

Out of 48 patients who presented with self-inflicted injuries, 20 (41.6%) belonged to the 21-30 age group (Table 1). Table 2 shows that 25 (52.2 %) of patients presented with a cut injury with a knife or blade. 43 (89.6%) of patients had deep injuries that needed major plastic surgery procedures. Table.4 suggests that major depressive disorders 13 (27.1%) were the most common psychiatric comorbidity, followed by adjustment disorder (8;16.6%) and alcohol dependence syndrome (7;14.6%). The highest number of smashing

Table 1 – Socio-demographic data of Individuals with self-inflicted upper limb injuries (N= 48)

	n (%)
Age	
11-20	8 (16.6)
21-30	20 (41.6)
30-40	12 (25)
40 +	8 (16.6)
Gender	
Male	30 (62.5)
Female	18 (37.5)
Marital status	
Single	18 (37.5)
Married	25 (52.08)
Divorced / Separated	5 (10.4)

glass injuries were associated with alcohol dependence (8;44.4%). (Table.5)

Table.2; Mode of injury and plastic surgery diagnosis (N= 48)

	n (%)
Mode of injury	
Smashing glass sheet/window associated with aggression	18 (37.5)
Cut injury wrist with knife/blade	25 (52.08)
Self-injury above wrist level	5 (10.4)
Plastic surgery diagnosis	
Skin and superficial fascia	5 (10.4)
Multiple tendons	11 (21.4)
Nerve injuries	4 (8.3)
Vascular injuries	3 (6.2)
Combined neurovascular and tendon injuries	25 (52.08)
Surgical procedure	
Simple repair	5 (10.4)
Tendon repair	11 (22.9)
Microneural repair	4 (8.33)
Arterial repair	3 (6.2)
Exploration and repair of an artery, nerve and tendons	25 (52.08)

Table.3: No of injuries (N=48)

No of injuries	n (%)
Single cut	42 (87.5)
Multiple level superficial injuries	3 (6.2)
Multiple level deep injuries	2 (4.2)
Bilateral upper limbs	1 (2.1)

Table. 4 Psychiatric diagnoses among Individuals with self-inflicted upper limb injuries (N= 48)

Psychiatric diagnosis (ICD-10)	n (%)
Major depressive disorder	13 (27.1)
Adjustment disorder	8 (16.6)
Alcohol dependence syndrome	7 (14.6)
Bipolar mood disorder	6 (12.5)
Personality disorder (Two anti-social and two borderline)	4 (8.3)
Acute stress reaction	3 (6.2)
Schizophrenia	2 (4.2)
Obsessive-compulsive disorder	1 (2.1)
No current psychiatric diagnosis	4 (8.3)

Table 5. Patients presented with smashing glass injuries associated with aggression and psychiatry diagnosis (N= 18)

Alcohol dependence syndrome	8 (44.4)
Bipolar mood disorder	3 (16.7)
Anti-social personality disorder	2 (11.1)
Adjustment disorder	1 (5.6)
No diagnosis	4 (22.2)

DISCUSSION

The maximum number of patients were in the 21-30 age group, and there was a male preponderance which is similar to the study done by S Mac Learie et al.³ Another study done by Rashid A and Brennen showed that the average age was 28 years with a male to female ratio of 2:1.⁸ This finding is in contrast to the study done by Hawton and Harris, which showed that 63% were female patients.⁹

89.6% of the patients presented with extensive injuries, which needed major surgeries, including neurovascular repair, as also seen in the study by Ersen et al.⁴ This showed that only major injuries were referred to the plastic surgery department and minor injuries were managed in the emergency department. Psychiatric diagnosis, based on ICD-10 criteria, showed depressive disorders (27.1%) were the commonest cause of lethal self-inflicted injury, as was reported in the study by Learie et al.³ and VD Krishnaram, et al.¹⁰ Alcohol-related problems contributed to 14.6% of the injuries as in the study by Ersen et al.^{4,7} An Indian study by Gupta et al. on non-depressed substance abuse patients showed that 32.7% had DSH.¹¹ In this study, 44.4% of patients with smashing glass injuries under aggression had alcohol dependence syndrome. The current study also showed that personality disorders (two anti-social and two borderline) were more often seen among subjects with self-inflicted injuries as discussed by Krysinska et al.⁶

There is a high chance of repeated suicidal attempt after DSH.^{7,9,12,13} It highlights the need for collaboration between plastic surgeons and psychiatrists. Many patients get discharged from surgical departments without proper psychiatric evaluation.^{8,9}

Consultation-Liaison Psychiatry (CLP) is an upcoming speciality of psychiatry in developing countries like India. The main objective of CLP is the integration of clinical expertise and skills of mental health professionals with that of other clinicians enabling the provision of multimodal care to the patients.

Limitations

This study could not include details about psychiatric comorbidity, management and follow-up. The association between the variables could not be assessed. More prospective multi-centred studies are needed for

evaluation of the patients with DSH.

CONCLUSION

Psychiatry liaison services among plastic surgery patients with self-inflicted injuries showed high psychiatry comorbidity, which needs further evaluation and follow-up. A multidisciplinary approach to these patients might prevent further repeated episodes of self-harm.

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Conflict of interest:

None declared.

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