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Psychological Management of the Severely Burned Patient: A Case Series of 14 Patients

M. S. Azzouzi[1]*, A. Zennour[1], A. Hajjar[1], A. Ait Yahya[1], M. Ait Abdellah[1], O. Elatiqi[1], S. Boukind[1], M. D. Elamrani[1], Y. Benchamkha[1]

[1]Department of Reconstructive, Plastic and Burns Surgery — Mohammed VI University Hospital, Marrakech, Morocco

***Corresponding author:** M. S. Azzouzi
Department of Reconstructive, Plastic and Burns Surgery — Mohammed VI University Hospital, Marrakech, Morocco

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Abstract: **Original Research**

***Background*:** Severe burns represent a dual physical and psychological aggression. Psychological sequelae, often underestimated, may significantly compromise global recovery outcomes. This study aims to identify the main psychological disorders occurring during the acute phase in severely burned patients and to describe the management modalities implemented. ***Methods*:** A retrospective descriptive study conducted over 18 months in the Department of Reconstructive, Plastic and Burns Surgery at Mohammed VI University Hospital, Marrakech. Fourteen patients hospitalized in the burn intensive care unit who developed a documented psychological disorder during the acute phase were included. ***Results*:** Mean age was 19 years (range: 8–60 years). Female predominance was noted (64.3%, n=9), with a sex ratio of 0.55. Burns were accidental in 80% of cases, primarily caused by flame. Mean total body surface area burned (TBSA) was 26% (range: 3–45%). Mean hospital stay was 45 days (range: 15 days–7 months). Post-traumatic stress disorder (PTSD) was the predominant disorder (60% of cases). The onset of psychiatric symptoms was earlier in patients with a history of substance use (mean: 4 days) compared to non-users (mean: 15 days). Favorable outcome was achieved with simple psychological follow-up in 60% of cases; specialized psychiatric management with pharmacological treatment was required in 33% of cases. ***Conclusion*:** Early and multidisciplinary psychological care is essential in severely burned patients. A positive therapeutic relationship provides an auxiliary psychic containment that profoundly influences the patient's overall recovery.

Keywords: Severe Burns, Psychotrauma, Post-Traumatic Stress Disorder, Psychological Management, Aromatherapy, Marrakech.

1. INTRODUCTION

Severe burn injury is a medico-surgical emergency involving both physical and psychological trauma, requiring a multidisciplinary approach integrating surgeons, intensivists, nurses, psychologists, and psychiatrists [1]. Beyond somatic sequelae, burns represent a genuine transformation of the self: they expose pre-existing vulnerabilities, surface hidden difficulties, and profoundly disrupt affective and family relationships [2]. Significant advances in burn care have considerably reduced mortality, shifting clinical attention toward long-term psychological sequelae [3].

The prevalence of PTSD in burn patients ranges from 8% to 58% across published series, making it the most commonly reported psychiatric sequela in this population, followed by depressive and anxiety disorders [4]. Burns constitute a major global health challenge, causing not only physical trauma but also significant psychosocial and emotional disturbances [5]. These disorders can emerge during the acute phase and persist after discharge, affecting social, familial, and professional reintegration [6].

The aim of this study was to characterize the psychological disorders observed during the

acute phase in burned patients hospitalized at Mohammed VI University Hospital, Marrakech, and to describe the management modalities employed.

2. Materials and Methods

2.1 Study Design and Setting

This was a retrospective descriptive study conducted over 18 months in the Department of Reconstructive, Plastic and Burns Surgery at Mohammed VI University Hospital, Marrakech, Morocco [2].

2.2 Study Population

Inclusion criteria: Any patient hospitalized in the burn intensive care unit presenting a documented psychological disorder during the acute phase of hospitalization.

Exclusion criteria: Patients with impaired consciousness (coma, severe confusion) precluding psychological assessment, and patients with incomplete medical records.

Sample size: 14 patients included.

2.3 Data Collection

The following variables were collected from medical records:

- **Sociodemographic data:** age, sex
- **Medical history:** psychiatric (depression, anxiety disorders) and substance use (tobacco, cannabis, other)
- **Injury data:** burn mechanism, circumstance (accidental/non-accidental), TBSA (%), individual or collective context
- **Outcome data:** length of hospital stay, time to onset of psychological disorder, type of disorder expressed, management modality, and clinical outcome

2.4 Psychological Assessment

Psychological evaluation was performed by the clinical psychology team. As this was a retrospective study, disorder identification relied on medical record documentation without systematic use of standardized tools. For future prospective studies, systematic use of the **IES-R** (Impact of Event Scale – Revised; threshold ≥ 36) for PTSD screening and the **HAD scale** (Hospital Anxiety and Depression Scale; threshold ≥ 8) for anxiety and depression assessment is recommended [7, 8].

2.5 Definition of Favorable Outcome

Outcome was considered **favorable** when the patient demonstrated clinically significant regression of initial psychological symptoms at discharge, not requiring structured psychotherapy or psychotropic medication beyond simple psychological follow-up.

3. RESULTS

3.1 Epidemiological Data

The study included 14 patients. There was a female predominance with 9 women (64.3%) and 5 men (35.7%), yielding a sex ratio of 0.55 [2]. Mean age was 19 years (range: 8–60 years), as shown in Table 1.

Table 1: Age and sex distribution of the study population (n=14). Female predominance noted with 64.3% (n=9) versus 35.7% (n=5) for males. Mean age: 19 years (range: 8–60 years)

Sex	Effective	Percentage
Female	9	64.3%
Male	5	35.7%

Regarding medical history:

- 2 patients (14.3%) had a prior history of depression
- 2 patients (14.3%) had a history of substance use (tobacco and cannabis)

3.2 Injury Characteristics

The majority of burns were accidental (80%), primarily caused by flame. Mean TBSA was 26% (range: 3–45%). Burns occurred in an individual setting in 87% of cases, with 13% occurring in a collective setting where 2 patients lost a relative. Mean hospital stay was 45 days (range: 15 days–7 months). Detailed injury characteristics are presented in Table 2.

Table 2: Injury characteristics of the study population

Parameter	Result
Accidental burns	80%
Primary mechanism	Flame burn
Mean TBSA	26% (3–45%)
Individual setting	87%
Collective setting	13%
Mean hospital stay	45 days (15 days–7 months)

3.3 Psychological Disorders

Post-traumatic stress disorder (PTSD) was the predominant psychiatric disorder, present in 60% of cases, followed by depressive disorders [2]. The distribution of psychological disorders is illustrated in Table 3.

Table 3: Distribution of psychological disorders in the study population. PTSD predominated (60%), followed by depressive disorders (27%) and anxiety disorders (13%)

Psychological Disorder	Percentage
PTSD	60%
Depressive disorders	27%
Anxiety disorders	13%

The time to onset of disorders differed significantly according to medical history: early onset in patients with substance use history (mean 4 days) versus delayed onset in non-users (mean 15 days) [2]. This temporal difference is illustrated in Table 4.

Table 4: Time to onset of psychological disorders according to substance use history. Patients with substance use history: mean 4 days. Non-users: mean 15 days

Group	Mean time to onset (days)
With substance use history	4
Without substance use history	15

3.4 Management and Outcomes

Three management modalities were employed: simple psychological follow-up combined with aromatherapy (60%), structured psychotherapy (7%), and specialized psychiatric management with pharmacological treatment (33%) [2]. The distribution of management modalities is shown in Table 5.

Table 5: Distribution of psychological management modalities. Simple psychological follow-up + aromatherapy: 60%. Structured psychotherapy: 7%. Specialized psychiatric management: 33%

Management modality	Percentage
Simple psychological follow-up + aromatherapy	60%
Structured psychotherapy	7%
Specialized psychiatric management	33%

Favorable outcome was achieved in 60% of cases following simple psychological support. Specialized psychiatric consultation with pharmacological prescription was required in 40% of cases, with formalized medication treatment in 33% [2].

4. DISCUSSION

4.1 Epidemiological Profile

The female predominance observed (64.3%) is consistent with Moroccan epidemiological data on accidental burns, where women are more frequently exposed to domestic flame accidents [2, 9]. The young mean age (19 years) amplifies the psychological impact, as adolescents and young adults are particularly vulnerable to burn-related disruptions of body image and identity [3].

4.2 Psychological Disorders and Literature

The predominance of PTSD (60%) in our series is consistent with published literature, which reports prevalence rates ranging from 8% to 58% depending on the series and diagnostic tools used [4]. PTSD is characterized by traumatic event re-experiencing, avoidance behaviors, and neurovegetative hyperarousal [10]. The burn experience confronts patients with intense psychological distress, combining fear of death, chronic procedural pain, and grief over bodily integrity [3, 11].

The earlier onset of disorders in patients with substance use history (4 days vs. 15 days) underscores the importance of systematic screening for psychiatric and addiction history at admission: pre-existing disorders represent a vulnerability factor increasing the probability and severity of post-burn psychological manifestations [12]. A scoping review (2024) identified patient history and pre-existing psychosocial factors as key predictors of long-term psychological distress in burn survivors, emphasizing the need for early screening and intervention [4].

4.3 Management Modalities

Simple psychological follow-up combined with aromatherapy achieved favorable outcomes in 60% of cases. The use of aromatherapy as an adjunct to psychological support fits within a holistic, sensorially-

grounded approach. A randomized placebo-controlled trial conducted in an intensive care unit (n=150) demonstrated that inhalation of lavender (*Lavandula angustifolia*) and *Citrus aurantium* essential oils (5 drops, 30 minutes per session) significantly reduced anxiety in conscious ICU patients compared to placebo ($p < 0.05$) [13]. These findings are corroborated by a recent meta-analysis confirming a significant anxiolytic effect of lavender oil (Silexan®) via presynaptic calcium channel modulation [14]. It should be noted, however, that the aromatherapy literature remains heterogeneous, and its use in our series is presented as a promising non-pharmacological adjunct pending controlled trials specifically in burn populations [15].

Trauma-focused cognitive behavioral therapy (CBT) remains the gold-standard psychotherapeutic treatment for PTSD [10]. It was employed in 7% of cases in our series, while specialized psychiatric management with pharmacological treatment was required in 33% [2]. These results are consistent with published data indicating that a minority of acute burn patients require psychiatric consultation, but that those with pre-existing psychiatric conditions or severe burns warrant early specialist involvement [16].

4.4 Non-Accidental Burns

Although all burns in our series were accidental, self-inflicted burns in a suicidal context and burns caused by violence represent a distinct clinical entity requiring immediate specialized psychiatric management [17]. A systematic suicide risk assessment must be conducted by a psychiatrist within 24 hours of admission, supplemented by a social evaluation and a formalized safety plan at discharge [18, 19]. A designated clinical lead should ensure continuity of post-hospital care [18].

4.5 Study Limitations

This study has several limitations inherent to its retrospective design: absence of standardized assessment tools, small sample size (n=14), lack of post-discharge longitudinal follow-up, and absence of a control group. A prospective study with systematic use of IES-R, HAD, and PCL-5 scales, on a larger cohort with explicit inclusion and exclusion criteria, would allow consolidation of these findings and comparative evaluation of different management modalities [4, 20].

5. CONCLUSION

Severe burn injury profoundly disrupts the patient's psychosomatic equilibrium, making psychological management as essential as medico-surgical care [2]. In our series, PTSD was the predominant disorder, with favorable outcomes achieved in 60% of cases through appropriate psychological support, sometimes complemented by aromatherapy. A positive therapeutic relationship, grounded in an authentic intersubjective encounter between caregiver and patient, provides auxiliary psychic containment capable of profoundly influencing the patient's overall outcome [2]. Systematic screening for psychiatric disorders at admission, investigation of substance use history, and vigilance regarding non-accidental burns are non-negotiable clinical imperatives [12, 18].

Conflicts of Interest: The authors declare no conflicts of interest.

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