

The incidence of female Self-Inflicted Burn in Missan A retrospective analysis and a light on the magnitude of the problem

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Summary:

Burn injuries among ladies in Missan province are of a striking incidence with its high morbidity and mortality. It is not related only to their engagement in household duties, but there is a strong clinical suspicion of their being of suicidal motives, unfortunately; they do not admit the true nature and causes behind their accidents, for a variety of reasons, mainly social ones. This study aims at analyzing the available data and tries to find and suggest a collaborative psychiatric, social, and medical work to deal with this tragedy.

مدى حدوث حالات الحروق الانتحارية في محافظة ميسان

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الخلاصة:

تشكل الحروق التي تصيب النساء (وما يرافقها من نسبة وفيات عالية ومضاعفات وعقاييل كثيرة) نسبة كبيرة من بين مرضى الحروق في محافظة ميسان. لا يعزى سبب هذه الحروق الى الاعمال المنزلية فقط، بل هناك نسبة كبيرة منها تشير الدلائل الطبية على ان دوافعها انتحارية وعلى الرغم من انكار الضحايا وذويهم ذلك لأسباب اجتماعية. هذه الدراسة هي محاولة لتشخيص هذه الحالات وتقصي مداها ومعرفة أسبابها الحقيقية، ولذلك هي نداء لوضع أساس لعلاجها بشكل مشترك بين الاطباء الجراحين واطباء الامراض النفسية وبقية الكوادر الطبية مع دور اكثر فاعلية للباحثين الاجتماعيين وبقية منظمات المجتمع المدني وذلك لاهمية الموضوع وخطورته.

Abstract:

Background:

Females burn injuries have a high share in overall incidence of burn trauma. Although there was no conclusive evidence of suicide motive, due to the denial of the true cause of the accidents by both the patients and their families, still there was a strong suspicion of their suicidal nature. Therefore, these injuries should be considered as such and not as accidental injuries in order to shed light on their personal, socioeconomic and psychological reasons.



Aim of this study:

This study is an endeavor to figure out the true extent of this problem, and to focus on its team management, rather than concentrating the efforts on surgical one only. So, it is a call for a conjoined work of surgeons, psychiatrist, social workers, and non- government organizations

Patients & Methods:

From January 2007 to 31st. of December 2011, all the burn victim females, who had been admitted to Burn Unit of Al-Sadder Teaching Hospital in Missan, were included into this retrospective study, focusing on those victims who had high clinical Suspicion of Self-Inflicted Burns (SIB).

Results:

The total number of burn victim females was 387, out of them, there were 111 victims have had high clinical Suspicion of Self-Inflicted Burns SSIB. Those who were 15-20 years of age accounted for 36.94% of the SSIB, while those of 20 to 30 years accounted for 39.42%, and over 31 years of age were 23.42%. Their mortality is 47.37% per total burned females' mortality. The incidence was higher among married victims 80.18% versus 19.81% for the unmarried females. The non-educated victims were 88.28% versus 11.71% for the educated ones; likewise it was higher in low-income families and neighborhoods 89.189%. Only 1.4% had clinical history of psychiatric illness and undergone treatment.

Conclusions:

These burn injuries may hide, and result from very serious personal, socioeconomic, and psychological reasons. This study suggests not taking them as accidental injuries. Therefore, it recommends a team work to avoid these tragic events and their miserable consequences.

Keywords: Female suicide, Female burn

Introduction:

Burn is a global public health problem, accounting for an estimated 195.000 deaths annually. ⁽¹⁾ Over 90% of these fatalities occur in the developing countries, with south-east Asia alone account for half of fire related deaths. The majority occurs in low- and mid-income countries. ⁽²⁾

In 2004 nearly 11 million people worldwide were burned severely enough to require medical attention. ⁽¹⁾ Besides, it accounts for 5% or more of the total hospital inpatients at any time ⁽³⁾, and it accounts , among other major injuries, for over 1% of global burden of the disease. ⁽⁴⁾

Not only can burn related injuries leave the patients with long-life physical disabilities, but burns can also result in severe psychological and emotional distress due to scarring, which often results in significant burdens for the patients and their families and caregivers. ⁽⁵⁾

Self-inflicted burns remain a regular cause of admission to burn units. Moreover, the extent of their burn is often large, because a majority of victims use an accelerant, and this leads the high mortality in this group. ⁽⁶⁾ The victims of self-inflicted burns are divided into two group; those who have a suicide attempt and



those who mutilate themselves as self-immolators.⁽⁷⁾ Frequently, suicidal behaviors in young people appear to be a consequence of adverse life sequences in which multiple risk factors combine to increase risk of suicidal behavior.⁽⁸⁾ According to many studies, the preferred methods of suicide vary between countries, in United States of America, for instance, firearms are the choice, while the pesticide is the one in Asian Countries.⁽⁹⁾

Many choose to immolate inside (at home), and consequently, inhalation injury is a relatively common co-morbid factor, and to be an additional cause of the high mortality. Moreover, the large Total Body Surface Area (TBSA), and the deep resulted burns, both add to the higher mortality.⁽¹⁰⁾

In most low-and middle-income countries, young and adolescent women are over represented among self-immolation cases, while in high-income countries self-immolation occurs most often among older men.⁽¹¹⁾

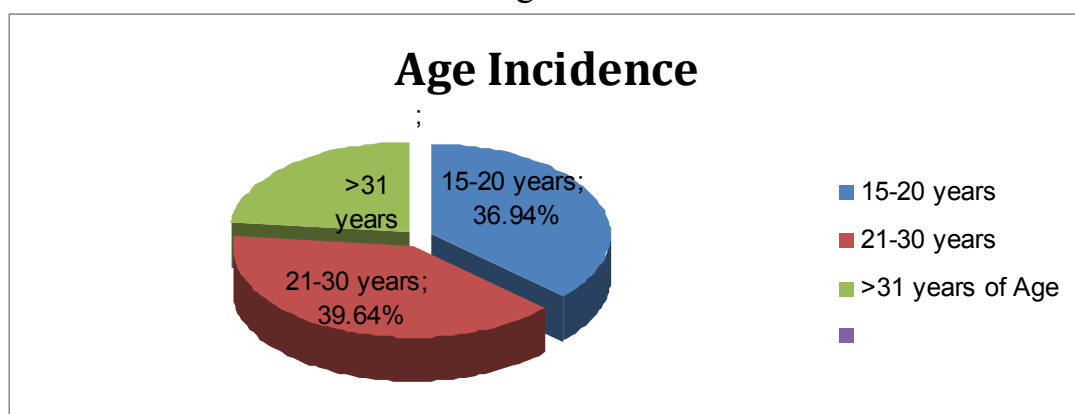
The psychiatric illness is the cause in as many as 60-75% of patients; 67% adjustment disorder(all females), 3% major depression, 7% depressive personality disorders (all females).^(12, 13) Adjustment disorder is the failure of accommodation to cope with the adverse life circumstances that normally happens within few months.⁽¹⁴⁾

Patients & Methods

From January 2007 to the end of December 2011; 387 burn victim females were admitted to the Burn Unit in Al-Sadder Teaching Hospital in Missan. Out of them, 111 victims who had clinical suspicion of SIB were included, retrospectively, in this study. The suspicion came up from clinical findings of their burns distribution, degree, smell of kerosene, in addition to their police records.

Only the patient who had past history of psychiatric consultation and treatment, were considered as having psychological motives of their suspected suicide.

Figure-1



The incidence is higher 76.58% in age group 15-30 years, while the age groups >31 years victims were 23.42%. [Figure-1]

Table-1

Mortality in SIB victims vs. the accidental burn victims

SSIBVs=Suspected Self-inflicted Burn Victims



SSIB victims accounted for the half of the total admitted burned females (47.34%).

And their mortality is higher; 88.34%, in other words, about two folds the accidental burn mortality. [Table-1]

Table-2
Incidence of SSIB in relation with marital, educational, and socio-economic states of the victims

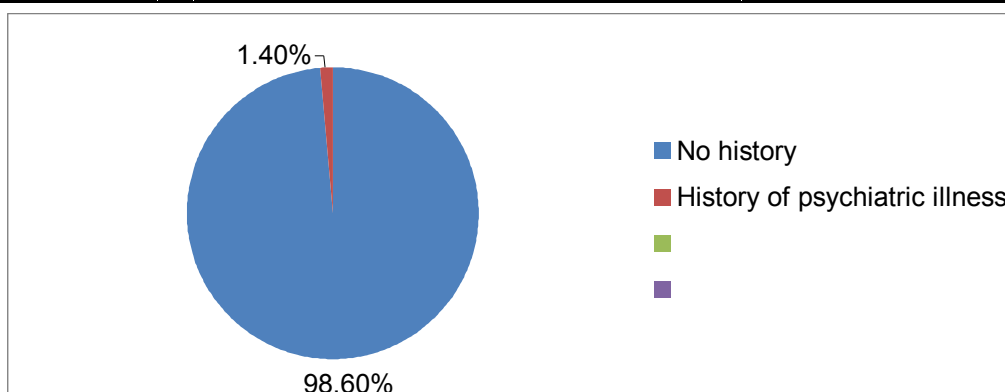
Marital Status	Unmarried	۲۲	19.819%
	married	89	80.180%
Educational Status	Educated	13	11.711%
	Non-educated	98	88.288%
Socioeconomic Status	Low	99	89.189%
	Middle	12	10.810%

The non-educated victims were 88.28%, whilst the educated ones were 11.71%.

The married outnumbered the unmarried victims 80.18% vs. 19.81. Victims of low-income, overcrowded neighborhoods accounted for 89.18% , in contrast with 10.81% for the mid-income families. [Table-2]

Figure-2
Incidence of SSIB in Psychiatric Patients

Number of SSIBVs	Mortality	Percentage per SSIBVs	Percentage per total burn admissions
111	98	88.28%	47.34%



Those who have clinical history of psychiatric illness were only 1.4% of total suspected self-inflicted burn inpatients. (Figure-2)

Discussion:



A variety of reasons have led all of our studied burn victims, mainly the social ones, to deny the suicide cause of their burn accidents. But, involvement of the head, upper limbs, chest, and abdomen down to thighs with sparing of the lower limbs, in addition to the presence of kerosene smell and the nostrils soot, (15, 16) led to the suspicion of suicide. Besides, the presence of flammable substances on clothes or some other substances at the site, indicate a planned suicide.⁽¹⁷⁾

In our study, the overall percentage of those patients is 28.682% of the total burned female patients (111 out of 387 patients), while the prevalence of self-inflicted burn in the developing countries is reported to be as high as 40.3%⁽¹⁸⁾, in contrast to 1.95% in USA, and 4.1% in Australia⁽¹⁹⁾. This is consistent with findings of Forster et al, where only 9% of all burn victims in western countries are reported to have been caused by suicide⁽²⁰⁾, and the 37% in an Iranian study⁽²⁴⁾. As well as, it was 46% according to Saadat and Panjeshin^(22, 23).

All our patients were females, and this is consistent with higher incidence among females in low-income countries, while is higher among males in high-income countries.⁽²⁵⁾

The most affected age group is 15-30 years which accounted for 76.58% of (SSIB), and this finding is similar to many other studies^(26,27,28,29). This is attributed to the fact that, women are victims of social and cultural hostile and oppressive attitudes, for instance, arranged marriage, and the unequal rights⁽³⁰⁾, moreover they are subjected to family quarrels and marital disharmony (7). Additional reasons as the unemployment of the husbands coupled with wives' economic dependence, and overcrowded houses where many families live together⁽³¹⁾. The females' non-educated states escalate the suicide desire⁽³²⁾, this explains the fact that 88.189% of our patients are non-educated, and 89.189% are of low-income poor neighborhoods (31). The married females greatly outnumbered the unmarried ones, this goes with many other studies (7, 33).

In contrast with the high percentage elsewhere, only 1% of our patients had history of psychiatric illness. The most likely explanation of our low percentage might be due to the fact that we depended on the history of patients' psychiatric consultation and treatment receiving rather than actual patients' psychiatric status. While in developed countries, they consult psychiatrists even if they have minor changes in their moods, while in our society, the patients' families usually do not do so until one of their members develops a frank psychotic crisis and, in most of the cases, they feel ashamed to do so or even to tell about.

The psychiatric illness, leads to another attempt of suicide in 5% of victims within the next 9 years, according to Skegg K.⁽³⁴⁾

Although adjustment disorder is a risk factor for self-inflicted burns, it has been suggested that increasing education about problem solving approaches, and coping skills for females and the at-risk groups are appropriate prevention programs and strategies. (12)

Conclusions:

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Although our studied victims denied the suicide drives that stood behind their accidents, this should not be an excuse to take them lightly. The tragic results of losing lives of young ladies with orphan kids they leave behind, in addition to economic losses, the misery and deep sorrow of their families, must be \strong drives for a conjoined team work of social workers, non-government organizations, along with psychiatric and surgical medics.

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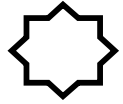
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