Assessment of Physical and Psychological Problems among Patients with Second Degree Burn

Thesis

Submitted for Partial Fulfillment of Master Degree in
Psychiatric Mental Health Nursing

By

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بسم الله الرحمن الرحيم

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم الحكيم

صدق الله العظيم

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List of Contents

Title	Page No.

List of Tables i

List of Figures iii

Abstract iv

Introduction 1

Aim of the Study 8

Review of Literature 9

Subjects and Methods 51

Results 59

Discussion 81

Conclusion 96

Recommendations 97

Summary 99

References 105

Appendices 122

Arabic Summary

List of Tables

Table No.	Title	Page No.

Table (1): Socio demographic characteristics of the studied patients with second degree burn (N=100) ... 64

Table (2): Distribution of the clinical data of studied patients with second degree burn (N=100) ... 65

Table (3): Distribution of studied patients with second degree burn as regards their self - esteem (N=100) ... 66

Table (4): Distribution of studied patients with second degree burn as regards their depression (N=100) ... 67

Table (5): Distribution of studied patients with second degree burn as regards their body image and appearance (N=100) ... 68

Table (6): Distribution of studied patients with second degree burn as regards their physical problems ... 69

Table (7): Distribution of studied patients with second degree burn as regards their psychological and physical problems level (N=100) ... 71

Table (8): Presentation of total mean score among studied patients with second degree burn as regards their psychological and physical problems (N=100) ... 72

Table (9): Correlation between psychological and physical problems among studied patients with second degree burn (N=100) ... 73

List of Tables (Cont...)

Table No.	Title	Page No.
Table (10):	Correlation between total psychological and physical problems among studied patients with second degree burn (N=100)	74
Table (11):	Relation between studied patients` ages as regards their physical and psychological problems (N=100)	75
Table (12):	Relation between studied patients` genders as regards their physical and psychological problems (N=100)	76
Table (13):	Relation between studied patients` residence as regards their physical and psychological problems (N=100)	78
Table (14):	Relation between studied patients` working as regards their physical and psychological problems (N=100)	79
Table (15):	Relation between studied patients` percentage of burn as regards their physical and psychological problems	80
Table (16):	Relation between studied patients` marital status as regards their physical and psychological problems	81
Table (17):	Relation between studied patients` education as regards their physical and psychological problems	82
Table (18):	Relation between studied patients` causes of burn as regards their physical and psychological problems	84

List of Figures

Fig. No.	Title	Page No.

Figure (1): Distribution of cases in subscales and total scales 71

Figure (2): Mean values of total scales and subscales........ 72

Figure (3): Mean scales and subscales for males and females........ 77

Figure (4): Relation between studied patients` education as regards their physical and psychological problems. 83

Abstract

Second degree burn injuries may affected the victim both physically and psychologically. **Aim**: This study was aimed to assess the physical and psychological problems among patients with second degree burn .**Setting**: This study was carried out at the Burn Department at El-Demerdash Hospital, affiliated to Ain Shams University Hospitals. **Sample size:** It was conducted on 100 patients with second degree burn. **Tools of data collection:** (1.Socio demographic data. (2.Depression scale. (3.Body image and appearance scale (4. Fourth degree burn specific health scale.(5. Self esteem scale. **Results**: The main findings of this study revealed that no a statistical relationship between physical and psychological problems among patients with second degree burn. Moreover, relation between socio demographic data and all scale. **Conclusion**: Burn injuries associated with physical and psychological problems clarified that relation of psychological problems total scale with physical total scale regarding to Person coefficient is low. **Recommendations:** Communication program and counseling unit should be applied for health care. Patient and the family need for information about: second degree burn care, expected course of treatment, ongoing burn rehabilitation for physical, occupational and psychological therapy for patients `return to normal activity.

Key words: physical and psychological problems -Second degree burn

Introduction

Burn injury is considered one of the most serious and devastating injuries among people of all ages. It result in tissue loss or damage which occurs when energy from heat source is transferred to tissues of the body as a result of direct contact or exposure to any thermal object. It caused by heat, chemicals, electricity, radiation and friction ***(Kemp, Johnes & Lawson, 2014).***

Burn represent an extremely stressful experience not only to the burn victims but also to their families and an extensive burn profoundly affects the patients` physical, psychological, economic and family well being ***(Kemp et al, 2014).*** Burn severity depends on its depth and the body surface affected. Burn are classified according to depth of tissue destruction and identified as superficial, partial and full thickness injuries ***(Wasiak & Cleland, 2013)***.

Partial thickness burn (second degree) is extends into underlying skin layer and characterized by blister and painful healing which requires eight weeks. Second degree burn is classified into two types: Superficial second degree burn includes first layer and some of second layer. There is no damage in the deeper layers or in the sweat or oil glands. Deep second degree burn which cause damage in the middle layer, sweat and oil glands ***(Nguyen, Crouzet and Riola, 2013).***

Patients with second degree burn are vulnerable to organs with short complications and long term effects as physical scarring and emotional stress. Complications include: low energy, infection, blood clots, low blood volume, hypothermia, renal impairment, respiratory failure, scarring and impaired physical mobility. Psychological problems causes sadness, anxiety, irritability, helplessness, feeling alone and difficulty in sleeping ***(Muller, Michael and David, 2014).***

A nurse role in burn unit needs critical care experience and patients' care includes: cleanliness, wound dressing and prevention of skin breakdown. Nurses provide patients with psychological support especially therapeutic communication, trustfulness, problem solving and relaxation techniques ***(Shephered & Begum, 2014)***.

Nurses in burn units, as well as psychiatric nurses have important roles in dealing with patients in second degree burn not only during the acute event, but also after that. Many psychological and physical problems of burn develop weeks or months after the incident. Intervention can help patients to return the highest possible level of independent function ***(Shephered & Begum, 2014).*** Responsibilities of nurses are to support the patient and family members to be instructed in ways that they can support the patient as adaptation to burn trauma occurs. Referrals for social services or psychological counseling should be made as appropriate ***(Goncalves, Echevarria & De carvalho, 2012)***.

Psychiatric nursing interventions should begin during the acute treatment phase. Interventions can help patients to return the highest possible level of independent function ***(Goncalves et al., 2012 and Cowan & Stegink, 2013).***

Significance of the study:

Burn injury affects on patients physically as loss of certain physical abilities including loss of mobility, scarring, recurrent infection, abdominal problems and also affects on psychological condition by leaving patients with psychological scarring such as deformities in body image, lack of self esteem, depression, anxiety and helplessness ***(Goldman et al., 2015)***. A statistical study at the Department of Burn in El - Demerdash Hospital revealed approximately 20% mortality rate and 60% morbidity rate ***(Nek ultrasound, Sestamilis & Ezzat et al., 2012).*** The number of cases who had second degree burn injuries account for cases from total admission ***(Hospital records in El-Demrdash Hospital, 2017).*** This study aimed to assess the physical and psychological problems among patients with second degree burn.

AIM OF THE STUDY

This study aimed to assess the physical and psychological problems among patients with second degree burn

Research question:

What are physical and psychological problems among patients with second degree burn?

REVIEW OF LITERATURE

Burn is a type of injury to skin, or other tissues caused by heat, chemical, electricity, radiation or friction. Scalds from hot liquids and steam, building fires and flammable liquids and gases, which are the most common causes of burns and the injury occurs in all ages groups. Burn victims often face extreme physical and psychological problems ***(Kemp, Herndon &Lawson, 2014)***.

Pathophysiology of burn:

Temperatures greater than 44° c (111 F°) lead to proteins began losing their three- dimensional shape and start breaking down. This results in cell and tissue damage. Many of the direct health effects of a burn are secondary to disruption in the normal functioning of the skin. They include disruption of the skin's sensation, ability to prevent water loss through evaporation, and ability to control body temperature. Disruption of cell membranes causes cells to lose potassium to the spaces outside the cell and take up water and sodium ***(Gabbe, Layons & Fitzgerald, 2014).***

In large burns (over 30% of the total body surface area) there is a significant inflammatory response. This results increased leakage of fluid from the capillaries, and subsequent tissue edema. This causes overall blood volume loss, with the remaining blood suffering significant plasma loss, making the

blood flow to organs such as the kidneys and gastrointestinal tract may result in renal failure and somach ulcers. Increased levels of catecholamines and cortisol can cause a hypermetabolic state that can last for years. This is associated with cardiac output, metabolism, a fast heart rate, and poor immune function ***(Hannon & Ruth, 2012).***

Effect of burn on body systems:

Respiratory system include direct airway injury, inhalation injury, carbon monoxide poisoning, smoke inhalation(damage to epithelial cells in lower respiratory tract secondary to inhaling oxides, the products of combustion, alveolar damage, pulmonary edema, and decreased oxygen diffusion ***(Selcuk, Ozalp and Durgun, 2013); (Grisbrook, Wallman & Elliott, 2012).***

Cardiovascular system effect include fluid volume deficit, decreased means arterial pressure, decreased cardiac output, hypovolemic shock (secondary to extensive fluid shifts), decreased myocardial contractility ***(Shupp, Pavlovich& Jeng, 2011); (Drukala, Paczkowska & Kucia, 2012).***

Renal system effects are indirect, decreased cardiac output leads to decreased renal perfusion and oliguria that can culminate in acute kidney injury, after burn injury, damage red blood cells release hemoglobin and potassium, and skeletalmuscle cells release myoglobin ***(Wug, xiao, & Wong 2016).***