## MOIST EXPOSED BURN TREATMENT CHINESE METHOD

Thesis

Submitted in partial fulfillment for Master Degree (M.S) in General Surgery

by Nazih Suliman Zayzafoun M.B.; B.Ch

Supervised by

# Mustafa Mohamed Hemeda

Professor & Head of Plastic and Reconstructive Surgery

Department

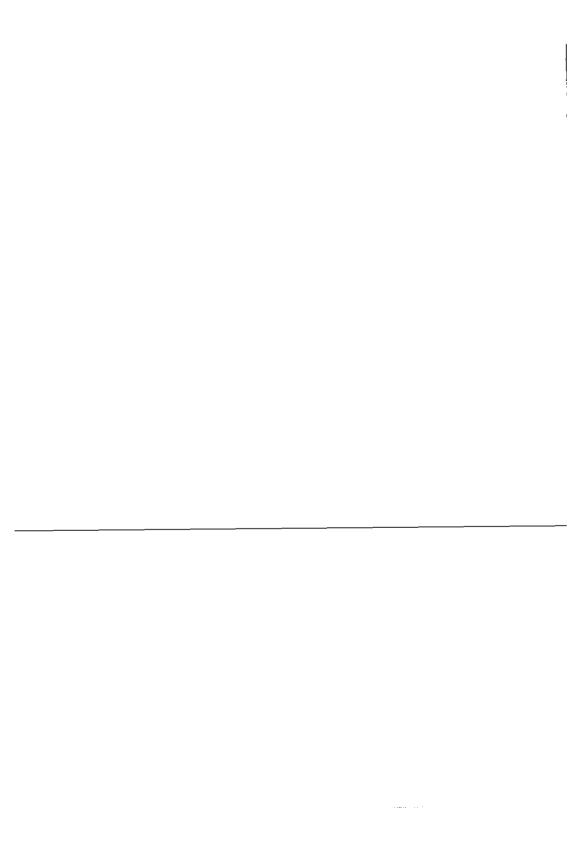
Faculty of Medicine - Ain Shams University

# Ahmed Salah El-Din El-Badawy

Lecturer of Plastic and Reconstructive Surgery Faculty of Medicine - Ain Shams University

> Faculty of Medicine Ain Shams University

> > 1998

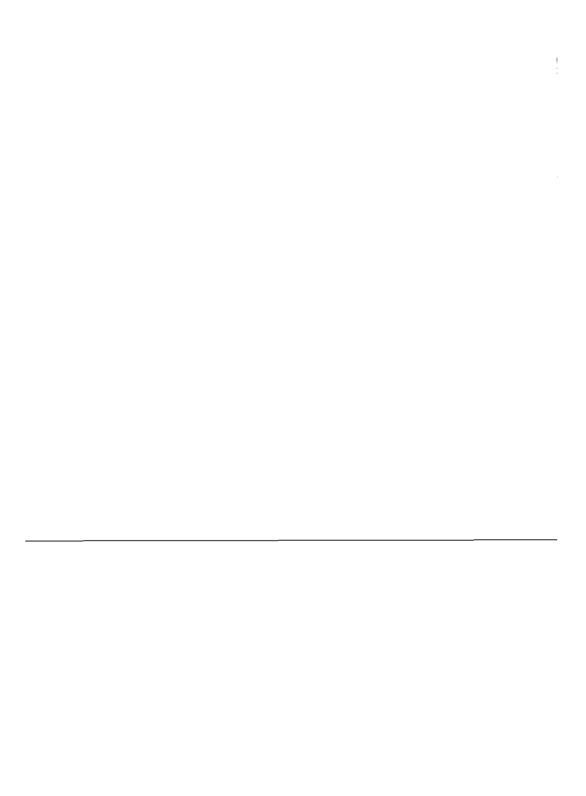




# بتمانيا الخفرا الخفين

قالوا سبحانك لا علم لنا إلا ما علمتنا إنك أنت العليم الحكيم

صدق الله الغظيم صورة البقرة الأية (٣٢)



# Acknowledgement

First and forever, thanks and gratitude to ALLAH for his gifts.

In addition, the words can not express my deepest appreciation and thanks to Prof. Dr. Mustafa Ahmed Hemeda, Professor and Head of Plastic and Reconstructive Surgery department, Faculty of Medicine, Ain Shams University, who gave all support and through his meticulous supervision since reguidance and valuable advice and continuous encouragement, this work was fulfilled.

I wish to express my deep thanks and sense of gratitude to Dr. Ahmed Salah El-Din Elbadawy, Lecturer of Plastic and Reconstructive Surgery, Faculty of Medicine, Ain Shams University, to whom I am indebted for this kind help, careful guidance remarkable thoughts and notable orientation in every step to this work



### **CONTENTS**

		Page
1-	Introduction and aim of work	1
2-	Pathophysiological changes after cutaneous burns	
	Anatomy and function of the skin	4
	Thickness of epidermis and dermis	5
	Depth of burn injury	6
	• Severity of injury	11
3-	Wound burn infection	
	• Endogenous sources of microbes	12
	• Exogenous sources of microbes	12
	Risk factors burn wound sepsis	13
	· Variety of bacteria involved in burn wound colo-	
	nization	15
4-	Wound healing	
	General principles of wound healing	18
	Hemostasis and inflammation	19
	• Proliferation phase	22
	Maturation phase	25
	Moist wound healing	26
5-	Local treatment of the burn wound	
	• Initial local treatment	29
	• Closed method	31
	• Dry exposure method	32
	• Wet exposure method	33
	Topical antimicrobial therapy	38

		Page
6-	Moist Exposed Burn treatment (MEBT)	
	• Technical material for the international regis-	
	tration of the MEBO	48
	Technique standards of MEBT	50
	Micromechanism of the action of MEBO	51
	Mechanism of MEBO	52
	Clinical pharmacology	55
	Therapeutic effects	56
	• Treatment method	58
	Nursing with MEBO in treating burns	61
7-	Patients and methods	64
8-	Results	68
9-	Discussion	76
10-	English summary	85
11-	Conclusion	89
12-	References	91
13-	Arabic Summary	104

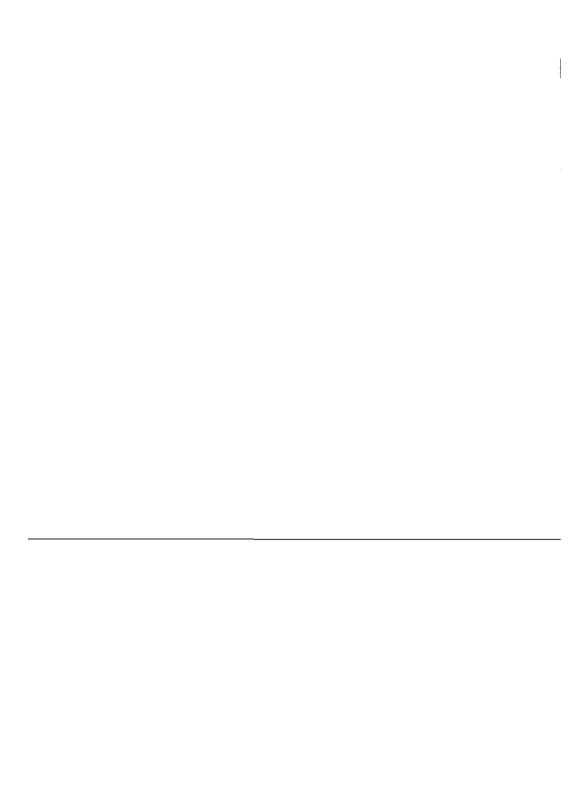
### LIST OF TABLES

	1.uges
Table (1) Classification and chinical appearance of thermal injury of different depth	
Table(2) Hemostatic and platelet-derived factors associated with wound healing	20
Table(3) The time of analgesic effect on he surface of fresh wound	57
Table(4) The time of analgesic effect ont he surface of non-fresh wound	57
Table(5) Shows the healing time and curative ratio	<b>5</b> 9
Table(6) Show the cause of burn with sex distribution	64
Table(7)Show mean TBSA to depth of burn	65
Table (8) Show ages of injuried patients	65
Table (10) Show mean healing time and curative ratio	<b>6</b> 8
Table (11) Show analgesic effect onthe surface of wound	70
Table (12) Show cost of MEBO for each 1% TBSA to burn degree	70

### LIST OF FIGURES

	Page
Fig. (1) Section showing normal skin histology and the categorization of burn injury	9
Fig. (2) The three different zones of tissue damage due to difference in heat tansfer	10
Fig. (3) The time course of the different cells appearing in the wound durin the healing process	21
Fig. (4) Comparison of shallow skin wound healing with and without occlusive cover	27
Fig. (5) Bi-laminal phase	52
Fig. (6) Penetration phase	53
Fig. (7) Denturation & Emigration phase	54
Fig. (8) Healing phase	54
Fig. (9) The white liquefactive substance which indica-	
tes that MEBO has fully reacted on t he wound	
surface	67
Fig. (10)A 24 year-old male with flame injury, 2nd	
deep degree after 3 days of injury	71
Fig. (11) The same patient after 7 days of treatment by	
MEBO	71

		Page
Fig	(12) The same patient after 13 days of treatment of MEBO	72
Fig.	(13) The same patient, a comparison between left foot burn (untreated) and left upper limb treated with MEBO after 13 days of treatment	72
Fig.	(14) A 17 years-old female with scald injury, super- ficial 2n degree after 24 hours from injury	73
Fig	(15) The same patient after 7 days of treatment	73
Fig.	(16) A 1.5 year old with scald injury mixed super- ficial, deep 2nd degree after 24 hours of injury	74
Fig.	(17) The same patient after 10 days of treatment by MEBO	74
Fig.	(18)3 years-old with scald injury, deep 2nd degree after 4 days treatment	75
Fig	(19) The same nationt after 13 day of treatment	75



# Introduction and Aim of Work

