The Effect of Perioperative Normothermic Maintenance on Wound Healing.

A Thesis

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Of

Doctor of Nursing

In

Adult Nursing

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TABLE OF CONTENTS

CHAP	PTER	PAGE
	ACKNOWLEDGMENT	i
	TABLE OF CONTENTS	ii
	LIST OF TABLES	iii
	LIST OF FIGURES	V
I.	INTRODUCTION	1
II.	REVIEW OF LITERATURE	3
III.	MATERIAL AND METHODS	27
IV.	RESULTS	36
V.	DISCUSSION	89
VI.	CONCLUSION AND RECOMMENDATIONS	93
VII.	SUMMARY	95
VIII.	REFERENCES	98
	APPENDICES	
	PROTOCOL	
IX	ARABIC SUMMARY	111

ASSESSMENT SHEET

<u>Tool 1: Perioperative assessment sheet for patients with major abdominal surgery :</u>

Part (1):Biosociodemogaphic and clinical data:

* Patient's name:	* Serial No	of pa	atient:
* Age:			
* Sex:	- Male - Female	()
* Marital status	MarriedSingle	()
* Level of education:	Illiterate.Read and write.Basic education.Secondary education.Diplom.University education.	(((((((((((((((((((())))
* Occupation:	- Free work- Employee- Retirement.	(())
* Cause of admission:			
* Medical history:			
* Smoking:	- Yes - No	()
* Diagnosis:			
* Type of surgery:			
* Type of anesthesia:	GeneralCombined	()
* Duration of surgery (hours):		

* Amount of intravenous fluids:

Period	Type	Amount (L)
Intraoperative		
Postoperative		

Part (*): Anthropometric measurements:

	Preoperative	Postoperative		
		3 rd day	7 th day	
Weight (Kg)				
Height (Cm)				
Mid arm				
circumference (Cm)				
Triceps skin fold				
(Cm)				
Body mass index				
Kg/m ²				

Part (3): Laboratory investigations:

	Pre	Postoperative						
	operative	1 st day	2 nd day	3 rd day	4 th day	5 th day	6 th day	7 th day
I-blood analysis								
W.B.Cs /mm ³								
Hemoglobin								
(gm/dl)								
Serum albumin (gm)								
Blood urea (mg/dl)								
Serum creatinine								
(mg/dl)								
II- Amino acid								
analysis:								
Hydroxyproline								
(mg/dl)								
Proline (mg/dl)								
Glycine (mg/dl)						·	·	

Part (4) Vital signs:

	Time	Core body temperature ⁰ C	Pulse rate b/m	Respiratory rate c/m	Blood pressure mm/hg
Preoperative	Baseline				
Intraoperative					
Postoperative					
Dera					
stor					
Po					

- Time to return to baseline temperature (minutes):

Degree of pain using (Visual Analogue pain Scale):

0

No pain Worst pain

Degree of pain - 30 minutes

- 60 minutes
- 90 minutes
- 120 minutes
- * 0 No pain.
- * 1-3 Mild pain.
- * 4-6 → Moderate pain.
- * 7-9 Severe pain.
- * 10 Worst pain.

Part 5: Shivering Scale:

- Shivering
- 1) Present
- 2) Absent

If shivering present:

- Shivering severity:
 - 1= Mild fasciculation of face or neck in absence of voluntary activity of the arms.
 - 2= Visible tremors involving more than one muscle group.
 - 3= Gross muscular activity involving the entire body, bed shaking.

Onset	Duration	Severity	Frequency

Tool 2: Wound healing clinical assessment sheet:

	1 st day	2 nd day	3 rd day	4 th day	5 th day	6 th day	7 th day
Wound description							
Edges:							
- Coapted (attached)							
- Gaped (not attached)							
- Edematous							
Color:							
- Pink							
- Red							
- Black							
Surrounding area:							
- Red							
- Tender							
- Hot							
- Swelling							
- All							
- None							
Wound discharge							
Type:							
- Serum							
- Blood							
- Serosangnous							
- Purulent							
Color:							
- Clear							
- Pink							
- Red							
- Yellowish							
- Brown							
- Greenish							
Amount:							
- None							
- Scant							
- Small							
- Moderate							
- Large							
Odor:							
- yes							
- No							

Protocol of nursing interventions for patients undergoing major abdominal surgery to evaluate the effect of perioperative normothermic maintenance on wound healing

In the assessment phase:

The following parameters were measured in the assessment phase:

1-Anthropometric measurements:

A- Measurement of the height:

Equipment: a centimeter tape

Steps:

- 1- Each patient was asked to stand erect, barefoot with his feet together, head held up looking straight a head, heels and back against the wall.
- 2- The height was measured using a centimeter tape. The reading was recorded to the nearest half centimeter starting from the top of the head to the foot of the patient.
- 3- Recording was done.

B-Measurement of the body weight:

Equipment: a weighing scale.

Steps:

- 1- Each patient was asked to stand barefoot on the center of a weighing scale.
- 2- Weight was measured and recorded to the nearest half kilogram.

C- Calculation of the body mass index (BM1):

BMI= Weight/Heights
2
 = Kg / m^2

This calculation was done to determine the grade of obesity, ranged from 0 to 3 ⁽⁶¹⁾.

- Grade 0 BMI =
$$20 - 24.9$$
 Kg / m²
- Grade 1 BMI = $25 - 29.9$ Kg / m²
- Grade 2 BMI = $30 - 39.9$ Kg / m²
- Grade 3 BMI = 40 and over Kg /m²

Patients had grade zero to one was included in the study.

D- Measurement of triceps skin folds thickness:

Equipment: skin fold caliper.

Steps:

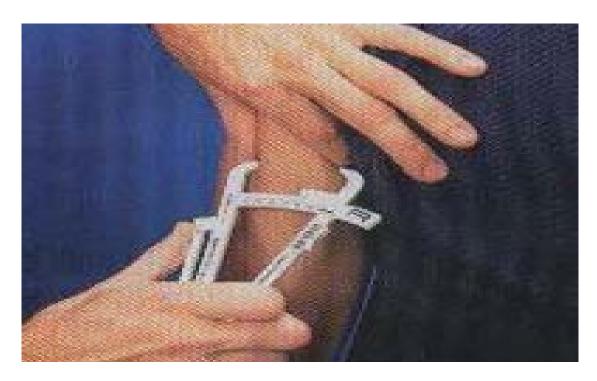
- 1- With a grease pencil, mark the point on the back of the arm midway between the tip of the elbow and the shoulder.
- 2- Pick up skin fold with thumb and forefinger of left hand.
- 3- Apply jaws of the caliper to the skin fold so that the grease mark is midway between the jaws.
- 4- Release your thumb from the caliper handle, so that tips of the caliper have full exertion on skin fold. Take reading immediately after the first rapid fall.
- 5- Repeat steps 2 through 4 three times. Average of the three readings is skin fold measurement of this site.

E- Measurement of mid arm circumference (MAC):

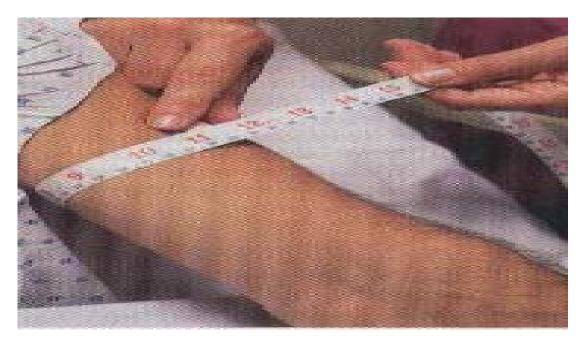
Equipment: Flexible, non-stretchable tape.

Steps:

- 1- Specify the midpoint of the acromion and olecranon process. (Flexed at 90°), and position the forearm horizontally.
- 2- Place the measurement tape at the midpoint of the upper arm (midway between the acromion process and olecranon process) gently and firmly without compressing
- 3- Recording was done.



Measurement of triceps skin folds thickness



Measurement of Mid Arm Circumference

2- Vital signs:

- Core body temperature using tympanic thermometer was taken.
- Pulse, respiration and blood pressure was taken.

In the implementation phase:

1- In the intraoperative period:

A- Environment:

Maintain the ambient temperature of the operating room within 21-24°C using air conditioner throughout the operation.

B- Intravenous fluides (I.V):

Equipment: intravenous fluid container, IV line, water bath and IV warmer device **Steps:**

- 1- Warm the intravenous solution by IV warmer device.
- 2- Close the clamp of IV line.
- 3- Connect sterile IV line to intravenous solution.
- 4- Open the clamp of the line to remove the air from it by allowing the solution to flow through the entire length of the tube.
- 5- Close the clamp after all the air is removed from the line.
- 6- Connect IV line to cannula.
- 7- Open the clamp and allow the flow in according to doctor order.
- 8- Change the intravenous fluid container, when it becomes empty.
- 9- Maintain warmth of the intravenous fluid to be within 37-38 °C throughout the procedure using I.V warmer.

C- Patient:

- 1- Position patient in supine position.
- 2- After the induction of anesthesia (general or combined); Cover the upper trunk of patient with forced air warmer device, and set it at medium setting (36-40°C).
- 3- Drape the patient with sterile drapes.