

## Comparative Thesis Study between Lipoabdominoplasty versus Traditional Abdominoplasty

Thesis

Submitted for Partial Fulfillment of Master Degree in General Surgery

Submitted By

### Laith Mokhtar Mohamed

M.B.B. Ch.

Faculty of Medicine, Ain Shams University

Supervised By

### **Prof. Dr. Hassan Sayed Tantawy**

Prof. of General Surgery
Faculty of Medicine, Ain Shams University

### Dr. Mohamed Ibrahim Hassan

Assistant Prof. of General Surgery Faculty of Medicine, Ain Shams University

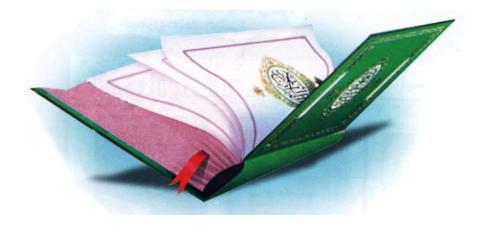
### Dr. Riham Zakaria Ahmed Lashin

Lecturer of Plastic Surgery Faculty of Medicine, Ain Shams University

Faculty of Medicine, Ain Shams University
2019

# بسم الله الرحمن الرحيم

# وقُل اعْمَلُوا فَسَيْرَكَى اللهُ عَمَلُوا فَسَيْرَكَى اللهُ عَمَلُوا فَسَيْرَكَى اللهُ عَمَلُوكُ وَالمُؤْمِنُونَ عَمَلُكُ مُ وَمَرَسُولُهُ وَالمُؤْمِنُونَ عَمَلُكُ مُ وَمَرَسُولُهُ وَالمُؤْمِنُونَ



صدق الله العظيم [سورة: التوبة - الآية: ١٠٥]

# Acknowledgments

First and foremost, I feel always indebted to **Allah** the Most Beneficent and Merciful.

I would like to express my sincere gratitude and grateful thanks to **Prof. Dr. Hassan Tantawy,**Professor of general surgery faculty of medicine. Ain shams university, for his kind and generous supervision throughout this work.

Also, I wish to express my gratitude to **Prof.**Mohamed Ibrahim Ibassan, Professor of general surgery, faculty of medicine, Ain Shams University for his continuous support.

And Finally, I would like to express warmest thanks to **Dr. Riham Zakaria Ahmed Wassan Lashin**, Lecturer of plastic and reconstructive surgery, faculty of medicine, Ain Shams University. Who did not save any effort helping me with this study, And without her comments and supervision it would be hard to complete this work.

Jaith Mokhtar Mohamed

# Dedication

I dedicate this work to my family for their help and support. I could not have reached this point in my life without their help, support and prayers.

This study would not have been possible without the support and encouragement of my friends and colleagues and I find myself overwhelmed in offering them all my thanks.

At last but not least my special thanks to my patients for their cooperation without which this work would have never been accomplished. I am asking Allah to help them and give them good quality of life.

# Tist of Contents

Title	Page No.
List of Tables	6
List of Figures	7
Introduction	1 -
Aim of the Work	6
Review of Literature	
Anatomy	7
■ Indications of Abdominoplasty	32
Abdominoplasty Techniques	38
Liposuction Techniques	53
Patients and Methods	66
Results	93
Discussion	104
Summary	111
Conclusion	
References	
Arabic Summary	

# List of Tables

Table No.	Title	Page No.
Table (1):	Pittsburgh rating scale	37
<b>Table (2):</b>	Comparison between two groups reg Demographic data	•
<b>Table (3):</b>	Comparison between two groups reg time of edema subsidence and pa satisfaction according to scale (1-10).	atients
<b>Table (4):</b>	Comparison between two groups reg complications	•

# List of Figures

Fig. No.	Title Page N	Vo.
Fig. (1):	The dehiscence of the linea Alba	9
Fig. (2):	(A) Linea alba (B) Linea semilunaris,(c)	
8' (-/'	Arcuate line	
Fig. (3):	Surgical layers of abdominal wall	
Fig. (4):	Camper's fascia	
Fig. (5):	Muscles of anterior abdominal wall	
Fig. (6):	Rectus sheath above and below umbilicus	
Fig. (7):	Blood supply of the anterior abdominal wall	21
Fig. (8):	Huger zones of the abdominal blood supply	
Fig. (9):	Lymphatic System of the Abdomen	
Fig. (10):		
Fig. (11):		
Fig. (12):		
Fig. (13):	Degrees of redundancy of abdominal wall	
	according to songs classification	34
Fig. (14):	Development of abdominoplasty techniques	40
Fig. (15):	Preoperative markings for short scar	
	abdominoplasty	42
Fig. (16):	A 42-year-old women with standard	
	abdominoplasty	44
Fig. (17):	Extended abdominoplasty	48
<b>Fig.</b> (18):	Fleur-de-lis abdominoplasty	49
Fig. (19):	Reverse abdominoplasty	$\dots 52$
Fig. (20):	Patient in position for suction of back rolls	65
Fig. (21):		
	abdominoplasty incision	68
Fig. (22):		
	abdominoplasty incision	72
Fig. (23):		
	flexible ruler	73
Fig. (24):		
	catheter	
Fig. (25):	Dissection is done to the level of umbilicus	75

# Tist of Figures cont...

Fig. No.	Title Page	e No.
Fig. (26): Fig. (27):	Umbilicus is circumferentially incised	
Fig. (28):	the symphysis pubis.  Dissection to the costal margins, using electro cautery to seal all perforating vessels undermining over the abdominal	
Fig. (29):	sheath till xiphisternum	
Fig. (20).	between two resected sides	
Fig. (30): Fig. (31):	UmbilicoplastyAbdominoplasty before and after skin	
rig. (31):	= · · ·	
Fig. (20).	resectionPreoperative markings estimated skin	
Fig. (32):	<del>-</del>	
Fig. (33):	resection area and the liposuction areas Skin markings showing the liposuction areas marked in blue (abdomen, flanks and inner thighs), the resection area in the	
E: - (94).	lower abdomen.	
Fig. (34):	Abdomen after preparation of patient infiltration of tumescent fluids	
Fig. (35):	Epigastric area, upper abdomen and flanks	
r 1g. (55).	before (A) and after, (B) liposuction	
Fig. (36):	Liposuction is performed through the entry	
1 1g. (50).	sites utilized for tumescent infiltration	
Fig. (37):	Follow up after the operation	
Fig. (38):	Comparison between two groups regarding	
r.1g. (90):	age	
Fig. (39):	Comparison between two groups regarding	
1.1g. (99):	body mass index	

# Tist of Figures cont...

Fig. No.	Title Po	ige No.
Fig. (40):	Comparison between two groups regardi hospital stay.	_
Fig. (41):	Comparison between two groups regardi operative time	•
Fig. (42):	Comparison between two groups regarditime of edema subsidence	•
Fig. (43):	Comparison between two groups regardi patients satisfaction according to scale (10)	•
Fig. (44):	Comparison between two groups regardi complications.	ng
Fig. (45):	Comparison between two groups regarditype of complications	•
Fig. (46):	Case 1: Case of lipoabdominoplasty	100
Fig. (47):	Case 2: Case of lipoabdominoplasty	
Fig. (48):	Case 1: Case of abdominoplasty	102
Fig. (49):	Case 2: Case of abdominoplasty	103
Fig. (50):	Case of minor defect of wound healing	
Fig. (51):	Case of edge delayed healing	109

### INTRODUCTION

bdominoplasty is one of the most commonly performed aesthetic procedures which has undergone a significant development over the past several years and decades (Wallach, 2004).

According to the American Society for Aesthetic Plastic Surgery's 2004, Cosmetic Surgery National Data Bank, during the previous seven years the number of abdominoplasty procedures performed increased by 344 % (American Society for Aesthetic Plastic Surgery, 2004).

Functional and aesthetic deformities of the abdominal wall due to skin flaccidity, lipodystrophy and diastasis of the abdominal wall muscles cause many negative psychological, physiological and aesthetic effects. Abdominoplasty and liposuction attempt to correct those problems. For many years abdominoplasty considered to be a relatively easy procedure to perform, but its results were not always satisfactory from a cosmetic point of view (Saldanha et al., 2010).

Currently many surgical procedures are available for body and abdominal contouring, based on the individual characteristic of the patient's anatomy and their goals, these abdominal contouring procedures include liposuction, mini abdominoplasty, full abdominoplasty and abdominoplasty

which are combined with liposuction which is called lipoabdominoplasty (Friedland and Maffi, 2008).

The main goals in abdominoplasty procedures are to excise the redundant abdominal skin and subcutaneous tissue in a favorable manner. In addition, the abdominal musculoaponeurotic layer should be restored to prevent abdominal hernias and diastasis, while at the same time, improving the abdominal wall contour (Shiffman and Mirrafati, 2008).

Due to the number of variations and modifications of abdominoplasties, it is a key to select the appropriate technique in every individual case, determining the best procedure by minimizing morbidity and postoperative disability for desirable and favorable results (*Hunstad and Repta*, 2009).

The adding of liposuction totally altered the concepts of traditional Abdominoplasty operation and surely improved the ability to contour the abdomen in a very good manner (Shiffman and Mirrafati, 2008).

The introduction in the 1980s of suction assisted lipectomy (SAL) added a new dimension to abdominal contour surgery. Liposuction procedures alone or in combination with abdominoplasty allowed more patients with a wider variety of abdominal contour deformities to be successfully treated (Matarasso, 1989).

Also, due to the development and popularity of liposuction, which surely is less invasive and offers a more recovery? Combination of rapid Liposuction and Abdominoplasty technique created new called Lipoabdominoplasty (Matarasso, 1989).

There has been much debate about performing liposuction on an undermined abdominoplasty flap, the use of wetting solutions, and the safety of combining abdominoplasty procedures with abdominal liposuction. The procedure of 'lipoabdominoplasty' consists of liposuction of the abdominal area and flanks, reduced lateral undermining, complete midline aponeurotic plication, and traditional abdominal excess skin flap resection (Saldanha et al., 2003).

This modified approach offers more advantages and may reduce the most common complications which are ischemia and seroma that seen with classic abdominoplasty. The wide of abdominal undermining the flap in traditional abdominoplasty is believed by some to be a cause of complications (Parrett et al., 2008; Newman, 2013; Hunstad, *2008*).

From these concepts the procedure of lipoabdominoplasty evolved as a logical method to define and treat abdominal contour deformities (Matarasso, 1993).

Lipoabdominoplasty has been a controversial topic because of reported risks of liposuction-induced effects on the vascular supply of the resulting abdominal skin flap and the possibility of thrombotic or fat embolic complications (Manassa et al., 2003).

Surgeons focused increased attention on reducing complications such as affected vascularity, hematoma, seroma, wound dehiscence, and skin infection. Greater effort has been set forward to determine the abdominal skin flap compromised vascularity to limit these complications (Matarasso et al., *2006*).

Lipoabdominoplasty is a surgical procedure to improve abdominal contour by dealing with the areas not accessible to resection during classical abdominoplasty, especially flanks and upper epigastric region (Madar et al., 2015).

Lipoabdominoplasty is nearly daily aesthetic a procedure. Adding liposuction to the abdominoplasty technique has not been clearly evaluated. More studies are needed to evaluate the effectiveness and safety of liposuction which is added to traditional abdominoplasty (Aboelatta, 2014).

Lipoabdominoplasty is very effective surgical procedure to maintain a youthful physique for aging people, improve body contouring, and remove excess skin caused by massive weight loss. For two decades combination of abdominoplasty and



liposuction was a questionable procedure because of the potential for vascular damage of the abdominal flap and increased complications (Xia, 2018).

Due to all these controversies and reported risks, this study is done to give more evidence of the benefit of adding liposuction to abdominoplasty and its potential effect on increasing the risk of compromising flap vascularity.

# **AIM OF THE WORK**

The purpose of this study is to evaluate the safety of abdominoplasty with concurrent abdominal liposuction