بسم الله الرحمن الرحيم

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تم رفع هذه الرسالة بواسطة /صفاء محمود عبد الشافى

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى مسئولية عن محتوى هذه الرسالة.

ملاحظات: لايوجد

Abdominoplasty Combined With the Anterior Component Separation Technique for Reconstruction of Midline Large Ventral Hernias: Functional and Aesthetic Outcome Clinical Study

A Thesis

Submitted for Partial Fulfillment of master degree in **Plastic Surgery, Burns and Maxillofacial Surgery**

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2021

سورة البقرة الآية: ٣٢

Acknowledgment

First and foremost, I feel always indebted to ALLAH, the Most Kind and Most Merciful.

I'd like to express my respectful thanks and profound gratitude to ***Prof. Dr. Salah Nasser M. Afify,*** *Professor of Plastic Surgery, Burns and Maxillofacial Surgery, Faculty of Medicine, Ain Shams University for his keen guidance, kind supervision, valuable advice and continuous encouragement, which made possible the completion of this work.*

I am also delighted to express my deepest gratitude and thanks to ***Dr. Adel Hussein Amr,*** *Assistant Professor of Plastic Surgery, Burns and Maxillofacial Surgery, Faculty of Medicine, Ain Shams University, for his kind care, continuous supervision, valuable instructions, constant help and great assistance throughout this work.*

I am deeply thankful to ***Dr. Sameh Adel Desawy Bakry,*** *Lecturer of Plastic Surgery, Burns and Maxillofacial Surgery, Faculty of Medicine, Ain Shams University, for his great help, active participation and guidance.*

I would like to express my hearty thanks to all my family for their support till this work was completed.

Last but not least my sincere thanks and appreciation to all patients participated in this study.

Abdulaziz Ahmed Akila

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List of Abbreviations

Abb.	Full term
ACS	*Anterior Component separation*
ARD	*Anterorectus dissection*
ASIS	*Anterior Superior Iliac Spine*
CRD	*Congenital rectus diastasis*
CSQ-8	*Client Satisfaction Questionnaire*
DAT	*Deep adipose layer*
E	*Epigastric Hernia*
EOM	*External Oblique Muscle*
I	*Incisional Hernia*
IQR	*Interquartile range*
MCL	*Midclavicular lines*
PDS	*Polydioxanone suture*
PS	*Posterior recti sheaths*
PUH	*Para Umbilical Hernia*
RM	*Rectus muscles*
SAT	*Superficial adipose layer*
SD	*Standard deviation*
SQF	*Lipocutaneous flap*
U	*Umbilical Hernia*
UV	*Umbilic to vagina*
XU	*Xiphisternum –umbilicus*

INTRODUCTION

Large midline ventral hernias, diastasis of recti and the associated laxity and abdominal shape deformity, represent aesthetic and functional problems for the patients. So, the surgical treatment of both pathologies at the same time is highly recommended if the patient's general condition permits. This can be achieved by a comprehensive technique incorporating abdominoplasty performed by a transverse lower abdominal incision into any of the hernia repair techniques. ***(Moreno-Egea and Morales-Cuenca, 2016)***

The component separation technique was first described by Ramirez et al in 1990 as a new technique for abdominal wall reconstruction in ventral hernia repair. It was proved to be very effective for reconstructing large or complex midline abdominal wall defects, as it has the advantage of restoring the innervated dynamic abdominal wall integrity without producing undue tension on the repair ***(Koolen et al., 2014).***

The recurrence rate after the use of component separation technique was found to be ranged from 0%- 30%. This technique shortly after being introduced into the field of hernia repair had been considered as a basic procedure for midline hernia repair. In this method, the external oblique muscle aponeurosis is dissected 1.5-2.0 cm lateral to its attachment to the rectus abdominis muscle and parallel to it along its entire length. Further, the tissue under the aponeurosis are dissected

laterally till lumbar veins appear. Being, bilateral, it enables to mobilize the rectus muscles medially (5-10 cm in the upper abdomen, 10-15 cm in the umbilical area, and 3-8 cm in the lower abdomen) ***(Shell et al., 2008).***

According to some others, once the rectus muscles are relocated in situ it will start functioning well postoperatively preventing recurrences and improving the chronic back pain ***(Parshikov and Loginov, 2016).***

Kim and Kim (2011), considered this technique as a method of choice and a real alternative to prosthetic repair. Anterior component separation technique has a number of advantages over inlay technique, and is consistent with a concept of an adequate abdominal wall repair in large midline hernias, therefore, it can be recommended for people of workable age, which is the ideal age for abdominoplasty as well.

To our knowledge, there are few published articles in the literature in which abdominoplasty was combined with hernia repair techniques. In these, the abdominoplasty was performed through the vertical midline incision. This approach succeeded in combining a strong hernia repair with very low recurrence rate, a well- shaped tucked abdomen, yet the patients weren't fully satisfied with the residual midline scar ***(Espinosa et al., 2016).***

Therefore, adding the abdominoplasty (low horizontal incision technique) to the equation with the component separation technique as the technique of choice for midline hernia repair, in selected patients with laxity of the abdominal wall, will achieve both a safe procedure and improved aesthetic outcome. In addition, it will raise the awareness of this technique among various specialties and to advocate the plastic surgeons to get more involved in the management of these complex cases.

Aim of the Work

The aim of this study is to evaluate the functional and aesthetic outcome of the combined abdominoplasty and anterior component separation technique in the management of midline ventral abdominal hernias