

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَأَنْزَلَ اللَّهُ عَلَيْكَ
الْكِتَابَ وَالْحِكْمَةَ
وَعَلَّمَكَ مَا لَمْ
تَكُنْ تَعْلَمُ وَكَانَ
فَضْلُ اللَّهِ عَلَيْكَ
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LIST OF ABBREVIATIONS

Abbrev.	Meaning
Aeo	Aponeurosis of external oblique muscle
ANOVA	One way analysis of variance
ASIS	Anterior superior iliac spine
BMI	Body mass index
CBC	Complete blood count
CRD	Congenital rectus diastasis
CT	Computed tomography
CV	Concomitant vein
DAT	Deep adipose tissue
DCIA	Deep circumflex iliac artery
DF	Deep fatty layer
DIEA	Deep inferior epigastric artery
DIEP	Deep inferior epigastric artery perforator flap
DIEV	Deep inferior epigastric vein
DSEA	Deep superior epigastric artery
DVT	Deep venous thrombosis
DFSP	dermatofibrosarcomaprotuberans
Eo	External oblique muscle
Io	Internal oblique muscle
M	Muscle
MEV	Medial eipigastric vein
ML	Membranous layer
MUL	Medial umbilical ligaments
N.F.	NECRITIZING FASCIITIS
NSAIDs	Non steroidal anti-inflammatory drugs
PC	Personal computer

LIST OF ABBREVIATIONS (Cont...)

Abbrev.	Meaning
PE	Pulmonary embolism
PRS	Plication of the anterior rectus sheath
PS	Posterior recti sheaths
RBS	Random blood sugar
RD	Rectus diastasis
RL	The round ligament
Rm	Rectus muscle
RM	Rectus muscle
S	Skin surface
SAL	Suction assisted lipectomy
SAT	Superficial adipose tissue
SCIA	Superficial circumflex iliac artery
SEPA	Superficial external pudendal artery
SF	Superficial fatty layer
SFS	Superficial fascial system
SIEA	Superficial inferior epigastric artery
SIEAV	Superficial inferior epigastric artery vein
SSEA	Superficial superior epigastric artery
STS	soft tissue sarcomas
TRAM	Transverse Rectus Abdominis Musculocutaneous flap
U	the urachus
UR	umbilical ring
US	Ultra-sonography

Recent trends of the umbilical reconstruction

Essay

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رسالة

توطئة للحصول على درجة الماجستير

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INTRODUCTION

To understand today's patient who seeks body change, we must understand the history of humans, the attitudes they had towards their bodies and the way in which they tried to change them.

The economic status of the environment is often reflected in the dress as well as in the body form of people. Clothes became one of the most important factors in modifying body image to current standards until plastic surgery offered a more permanent remedy for body reshaping (*Grazer, 1990*).

Abdominoplasty has been one of the most popular plastic surgery procedures performed since it deals with one of the areas of the body liable to change, stretch and store fat, as well as being the one area to affect most the entire appearance of the body and trunk. It has no longer become a mere amputation of the flesh but a whole reshaping of the trunk. In such operation, many surgeons specially general surgeons may remove the umbilicus. In other cases, it may be lost due to post operative complications (*Matarasso, 1989*).

But being at the center of the abdominopelvic area, the umbilicus became an important anatomical component and landmark in the abdominal wall. It also has a key effect on the esthetic appearance of the abdomen. Its position in the abdominal wall, its shape and depth are important influential factors of beauty and psychological well being, which must be preserved or considered when doing an abdominal reconstructive or esthetic procedure (*Massiha, 1997 & Baack, 1997*).

The umbilicus is a fibrous cicatrix covered by adherent puckered skin lies a little below the midpoint of linea alba, below it the linea alba is narrow corresponding to the linear interval, while in the supra umbilical portion of linea alba it is broader as the 2 recti diverge from each other (*Rohish RJ et al, 2003*).






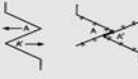




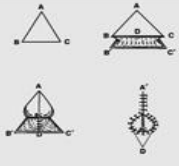


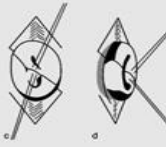

When abdominal wall plastic procedures began to evolve, the excision involved entailed alterations in the umbilical position in the abdomen up to its complete removal, especially by general surgeons even today which causes psychological impacts on patients (*Matarasso, 1989*).

So plastic surgeons started trials to restore destroyed umbilicus. Reconstruction of a destroyed umbilicus after umbilical herniorrhaphy was first reported by (*Mc Millan in 1955*).

Nowadays it can be advocated in cases of congenital absence (bladder exstrophy, gastroschisis, omphalocele, cloacal exstrophy), or after loss due to inflammatory destruction (periumbilical necrotising fasciitis, umbilical sepsis), surgical procedures (umbilical herniorrhaphy, abdominoplasty, laparotomy) or excision for skin cancer (*M. Pfulg et al, 2005*).

The surgical technique to reconstruct a totally absent umbilicus can follow two different principles. A number of techniques use a small piece of skin or a pedicled flap of variable size that remains attached to the abdominal fascia to create the basis of the umbilicus for a small tubular structure. Sometimes this can be combined with a skin or cartilaginous graft. Other techniques do not rely on the unpredictable vascularisation from the deeper abdominal wall and use the neighboring skin from the abdominal wall to create the depression and/or the tubular structure of the umbilicus. In addition, secondary healing can be used to create the umbilical bottom (*M. Pfulg et al, 2005*).

(*De la Cruz, 2009*) shows classification of flaps used in reconstruction of the umbilicus according to complexity from the simplest to the most complicated flaps as shown in (*Fig. 1*).

PEDICLED ABDOMINAL FLAPS			
Single Flap - Unilobe		Single Flap – Bilobe/Trilobe	
Pfulg M 2005		Sevin A 2006	
Sugawara Y 1995		Onishi K 1995	
		Shinohara H 2000	
Two Flaps		Three & Four Flaps	
Jamra FA 1978		Kirianoff G 1978	
Franco D 2006		De La Cruz EA 2009	
		Barbosa MVJ 2009	
ISLANDED ABDOMINAL FLAPS			
Itoh Y 1992		Yotsuyanagi T 1998	
			
UMBILICAL FLAPS			
Kajikawa A 2004		Tamir G 2004	

(Figure 1): Different methods for umbiliconeoplasty (De La Cruz et al., 2009).