Liposuction in Thigh Recontouring

Thesis

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To my Family

Abstract

Liposuction is one of the most common surgical procedure world wide. It provides effective contouring in torso and extremities in properly selected patients. The aim of this work is to review thigh deformities and the role of liposuction in recontouring in 15 patients. Liposuction is one of the most best methods for treatment of thigh deformities with appropriate patient selection.

Key Words

Suction assisted -Liposuction-Thigh-Recontouring

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ABBREVIATION	
ANP	Atrial natriuretic peptide
ATP	Adenosine triphosphate
BAT	Brown adipose tissue
BMI	Body mass index
COA	Acetyl coenzyme A
EGF	Epidermal growth factor
FA	Fatty acids
GLUT-4	Glucose transporter 4
GPDH	Glycerol-3-phosphate dehydrogenase
LAL	Laser assisted liposuction
PAL	Power assisted liposuction
PAR	Peroxisome proliferator-activated receptor
Pref-1	Preadipose factor 1
RFAL	Radiofrequency assisted liposuction
SAL	Suction assisted liposuction
SVF	Stromal-vascular fraction
TG	Triacylglycerol
TNF-α	Tumor necrosis alpha
UAL	Ultrasound assisted liposuction
UCP-1	Uncoupling protein-1
VEGF	Vascular endothelial growth factor
WAL	Water assisted liposuction
WAT	White adipose tissue

Introduction

Liposuction is routinely employed by plastic surgeons concerned with removing subcutaneous adipose deposits in various areas in the body to improve figure flaws and create a more balanced physique. It is one of the most commonly performed surgical procedures in aesthetic plastic surgery. In 2012, suction lipectomy was the second most frequently performed cosmetic surgical procedure**(Shirdharani SM,2014**)

Liposuction removes fat through very small skin incisions, with atraumatic, blunt-tipped cannulas. Simplicity, quality of results and relatively rare complications are but a few benefits that explain its success. Its main limitation is the minimal skin retraction achieved after the procedure ***(Mordon & Plot ,2009).***

The evolution of liposuction has seen refinements in technique and improvement of patient safety-related standards of care.Advances in technology have enabled surgeons to improve the safety and efficacy of the procedure. ***(Goldman & Gotkin ,2009)***

Although suction-assisted liposuction under tumescent anesthesia remains the traditional method for body sculpting, newer technologies promise to increase efficiency, decrease surgeon fatigue, and minimize complication ***(Mann et al. , 2008).***

Liposuction was initially used for spot reduction of localized fat deposits in patients at or near ideal body weight. More recently however, liposuction has been used for circumferential treatment of multiple anatomic areas, resulting in more comprehensive reshaping and reduction of the body **(Pitman GH &Giese SY 2006).**

Women are frequently dissatisfied with the contour of their thighs and buttocks; therefore; these areas are among the most commonly requested areas for liposuction surgery **((Mary , Greenberg ,2006).**

The thigh recontouring options range from liposuction to body lift combined with abdominoplasty. Decision making in thigh recontouring depends on many factors from which the most important and is considered the key to decision-making in body contouring is the skin **(Nahai F, 2011).**

Aim of the work:

To review evaluations of thigh deformities and the role of liposuction in recontouring.

Material and method:

Fifteen cases of upper thigh liposuction alone as part of recontouring of the thigh.

Contents

History Of Beautiness

Debate over time what constitutes beauty, particularly beauty of the human body, has raged since philosophy began. Interested scholars have debated the meaning of beauty for centuries. Historically, the aethetic concept of beauty is not a fixed one. It changes often, and beauty standards also are modified according to many dimensions. These are influenced by social, material, and ethnic factors, in addition to religious beliefs and customs. The many faces of beauty through the centuries differ from one civilization to another. The roles, parameters, and dimensions of beauty also differ**(Rhee & Koo 2007)**.

Body measurements were used by the old Egyptians to execute their famous sculptures and paintings. Facial measurements were first performed by the Greeks as part of total body measurements for the same purpose. Rules defining the relationships between various face and body features were more clearly formulated by scholars and artists of the Renaissance based on classical Greek canons**(Vegter & Hage ,2000)**.

In modern medicine, the use of neoclassical formulas of human harmonious proportions was propagated by the artist-anatomists of the 17th to the 19th centuries**(Farkas, et al .,1985)**.

Canons of Beauty

Old Egyptians(pharoes):

Despite the claim that the Egyptian artists did not use a line system to measure parts of the human body in relation to others, the principles for the canons of the human body may have been defined by them . Some studies have demonstrated that Egyptian artists divided the available space for representation of human body figures from top to bottom into 22.25 like parts **(Vegter & Hage ,2000)**.

It is suggested also that the Egyptians took the middle finger to be 1/19 of the adult man's length. However, well-defined landmarks such as the nipples, umbilicus, and knees were not localized along these divisions**(Vegter & Hage ,2000)**.

Greeks :

The Greeks and Romans were heavily influenced by the Egyptians. Aristotle (384–322 B.C.) emphasized the proportions of aesthetics and described the science of reading one's character from one's bodily feature. Polycleitus (450–420 BC), a Greek sculptor obsessed with the beauty of male athletic bodies, seems to have been the first to define canons, probably based on Egyptian principles . He reported the height of the face to be 1/10 the length of the body and the whole head to be 1/8 of it. The head and neck together were to be 1/6 of the athlete's length . These proportions were expressed in his famous statue of Doryphorous **(Bashour ,2006).**

Only a few centuries ago, human features and canons were not realistically acknowledged . It was during the Renaissance period that the classical, originally Greek canons of proportion were formulated and documented by scholars and artists such as Durer, Alberti, Cousin, Audran, Francesca, Pacioli, Cennini, Savonarla, and da Vinci, among others , leading to the development of neoclassical canons defining primarily the interrelationships of facial structures **(Atiyeh & Hayek , 2008**) .

Because of propagation by the artistanatomists of the 17th to 19th centuries, these neoclassical canons later continued their popularity in the field of medicine. Leonardo Da Vinci (1452–1519) probably was the first to report extensively on the proportions according to which bodies and faces should ideally be shaped, and he applied these canons in his art. Albrecht Durer (1471–1528) also felt that a system of canons could be devised that would define the ideal proportions for human figures and head, face **(Jeffries, et al., 1995)**.

Although Da Vinci dictated strict canons for facial and bodily proportions, he could not deny the natural variations of nature . The neoclassical canons, although a reliable rough working guide to facial proportions for artists and surgeons, are clearly not a valid system for analyzing the real human face **(Jeffries, et al., 1995)**.

Even in art, the influence of these canons had diminished by the late 19th century . Compared with the wide range of natural proportions, the neoclassical canons represent rigid, simplistic rules. They cannot be accepted as the sole representatives of aesthetic features **(Farkas, .et al .,1985)**.