REVIEW ARTICLE

Procedures for Obesity by Plastic Surgeons. *Memon G.A, ** Muhammad M.S

Abstract:

Treatment of Obesity is always indirect because there is a generalized fat collection. Many surgeons have devised different methods which are either direct or indirect.

Indirect methods: Are abdominal procedures where the size of stomach is reduced by different surgical methods and hence the size of stomach, so the absorption of food becomes limited.

Direct Methods: Are insufficient to control the obesity; an attempt is made to show some of the procedures which can be used for not the generalized obesity but for localized collection of fat volumes.

Plastic surgeon has devised many such procedures one of these and most common is liposuction. Liposuction has undergone lot of variations, it has started in 1983 and there are five conventional methods of liposuction. The commonest technique now a days is vibro liposuction with tumescent technique:

Procedures for obesity by Plastic Surgeons:

- Simple Wedge Excision for Lymph dystrophic Tissues of Limbs.
- Reduction Mammoplasty.
- Abdominoplasty.
- Mastopexy.
- Dermolipectomy after Massive Weight Loss.
- Surgical Lipectomy (Belt Lipectomy).
- Ultrasonic Liposuction (early 1990).
- Vibro liposuction (1997).

Reduction Mammoplasty.



Abdominoplasty.

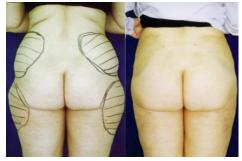


Mastopexy.





Liposuction.



Liposuction what's special: One of the most commonly performed cosmetic surgery operation. Relatively easy to perform however extremely difficult to get perfect result. Therefore, revision rate is approximately 20 - 30% (Grazer F.M.) and 10-15% with modern techniques

Liposuction

Causes of fat deposition

Genetic – saddle bags

- Environmental diet/exercise
- Age related fat: muscle

Liposuction: Not a treatment of obesity. Indications for Liposuction

- Spot fat removal
- Contouring
- Finessey sculpturing
- Debulking

Evolution of liposuction

- 1983 Conventional liposuction (SAL)
- 1985 Syringe liposculpture
- 1987 Tumescent technique
- 1990 Ultrasonic Liposuction (UAL)
- 1997 Vibroliposuction (VAL)

Tumescent Infiltration (Klein – 1987) Most significant development

- Decreased blood loss
- Less bruising
- Fluid plenishment
- Enlarged subcutaneous space

Tumescent Formula

- Normal Saline/Ringer Lactate =1 Litre
- Lignocaine 2% = 25 mls
- Adrenaline 1:1000 = 1 ml
- NaHCO₃ 8.4% = 2.5mls
- (to neutralise acidity of Lignocaine)
- Lignocaine 0.05%
- Adrenaline 1: million
- Use warm fluid never chilled

Tumescent Volumes: To achieve levels of 1.5 to 2 ug/ml

- 50 kg 3.5 L
- 60 kg 4 L
- 70 Kg 5 L
- 80 kg5.5
- 90 Kg 6 L
- 100 kg 7 L

Infiltration Technique: 2 – 3 mm cannula or spinal needle

- Roller pumps (5 6 L can be infiltrated in 15 20 minutes)
- Pressurised infusion bags
- Syringe

End point of infiltration

• Look – swollen & indurated

- Feel firm to hard
- Fountain sign 'fully tumescent'
- Fat: Fluid
- Fat = 80%
- Fluid = 20%

Ultrasonic Liposuction early 90's *Advantages*

- Gentler procedure
- Good skin retraction
- Smoother skin
- Less operator fatigues

Disadvantages

- Very expensive
- High maintenance cost
- Very slow
- Risk of thermal injuries

Power Liposuction 1997: VIBROLIPOSUCTION benefits of ultrasonic liposuction + speed of conventional liposuction

- Uses Compressed air
- Vibration of cannula
- Lysis of adipose tissue
- Aspiration of emulsified fat

Advantages

- Less swelling
- Less bruising
- Quicker recovery
- Smoother skin
- Less postoperative pain
- No heat liberation
- Inbuilt security system
- Less operator fatigues
- Complications of Liposculpture
 - Anaesthetic/drug related
 - Scars
 - Infection
 - Excessive swelling & bruising
 - Excessive pain and tenderness
 - Surface irregularities
 - Induration
 - Residual skin excess
 - Asymmetry
 - Under correction/ over correction

Conclusion:

At present, Vibroliposuction combined with Tumescent infiltration and deep i/v sedation appears to be the best option available for liposculpture.

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