

## Umbilicus-Repair in Abdominoplasty

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### ABSTRACT

Over the last 15 years, 27 cases of double weighted individuals had been subjected to dermolipectomy. The umbilicus was repositioned and repaired by a v-en v superiorly based abdominal flap in 18 cases. The technique is described and the results are discussed.

### INTRODUCTION

It is not uncommon that abdominoplasty in obese (about double weighted) individuals carries many precautions and it has many complications.

To obtain good aesthetic results, the procedures must be competent, safe, and easy to provide a rapid surgical intervention.

The main problems in the surgical procedure are fat thickness, large dissected surface area, blood loss, and long suture line as well as distal flap haemodynamic disturbance [1,2].

The problems superimposed this major surgical procedure are embolic manifestations, respiratory distress, and anaemia.

Many authors recommended an elliptical excision of the redundant skin and fat without excessive dissection to the abdominal flap [3,5]. Still it is not satisfactory to the patients who asked for more cosmetic results.

Umbilicus repositioning and repair required operative time from 30-40 minutes in some techniques described. Except that of circular repair to the abdominal wall or inverted distally based abdominal V-flap.

In our work, we used a v-en v abdomino umbilical superiorly based flap not only for rapid reposition and repair of the umbilical stump, but also to minimize the peri-umbilical scar.

### MATERIAL AND METHODS

Twenty-seven cases of obese (double weighted) patients were subjected to classical dermolipectomy. 18 of them had V-en V umbilical repair. In the former 9 cases the umbilicus was circularly sutured to the abdominal skin. 21 were females and 6 were males. Their age incidence ranged from 29: 52 years. with an average of 40.5 years.

Their weights ranged from 112kg: 163kg with an average of 137.5kg, their heights ranged from 154: 187cm with an average of 170.5cm. All of them had a redundant abdomen overlapping the upper 1/4 of the thigh as well the genitalia, with the umbilicus shifted down to the pubic region. 17 female patients suffered also divercation of recti due to repeated pregnancies.

Two men had (grade II) hypertension and were on antihypertensive drugs.

18 women gave a history of child birth and 3 were unmarried. 10 females were housewives and the remaining patients males and females were workers. 25 patients were college graduated.

#### *Technique:*

Patients were adequately investigated and prepared. A prophylactic dose of heparin was given in the night before surgery.

Excision of the subumbilical abdominal redundancy was carried out and dissection of the abdominal flap with adequate haemostasis was performed. Plication of recti was done in 3 females who complained of recti divercation. The new umbilicus position was marked 8-10cm above the suprapubic crease. A superiorly based. V-abdominal flap 2-3cm (width) was created. The umbilical stump was cut back in its cephalic border from the edge 1.5-

2cm lower down according to its length but not reached the rectus sheath (Figs. 1&2).

Two versions had been created in this technique.

*A short version:* Performed in patients with very thick fatty layer. The cut-back was 1.5cm from the umbilical edge.

*A long version:* Done (specially in females) in those with moderate fatty layer thickness (2-2.5cm). With wide base, this provided more normal skin in the umbilical border, as the base of the V- is more wide and its limbs are more longer.

The Apex of the V- abdominal flap was then sutured to the apex of the V- of the umbilical stump, then suturing were completed from inside-outward (Fig. 3).

The operative time in this procedure consumed 10-15 minutes. The overall operative time did not exceed 3hrs in all cases.

Other procedures of abdominoplasty were completed and all precautions and medical steps were done. Patients were medicated by antibiotic, fluid resuscitation, and prophylactic doses of Heparin.

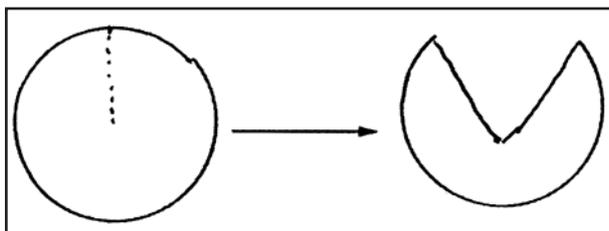


Fig. (1): Cut back in the cephalic border of the umbilical stump.

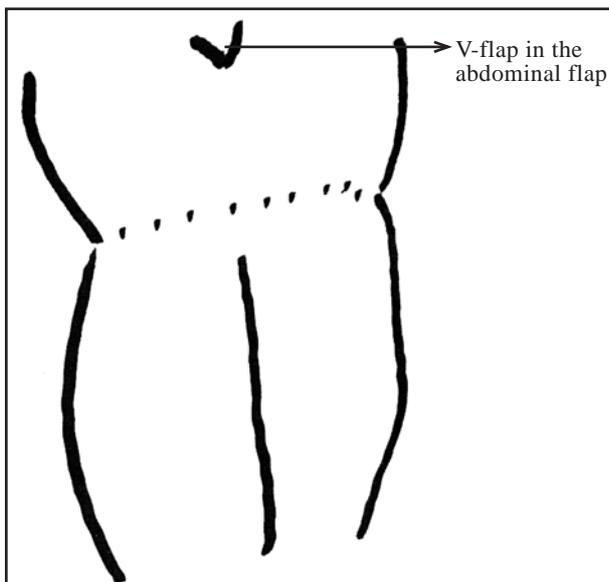


Fig. (2): V flap superiorly based.

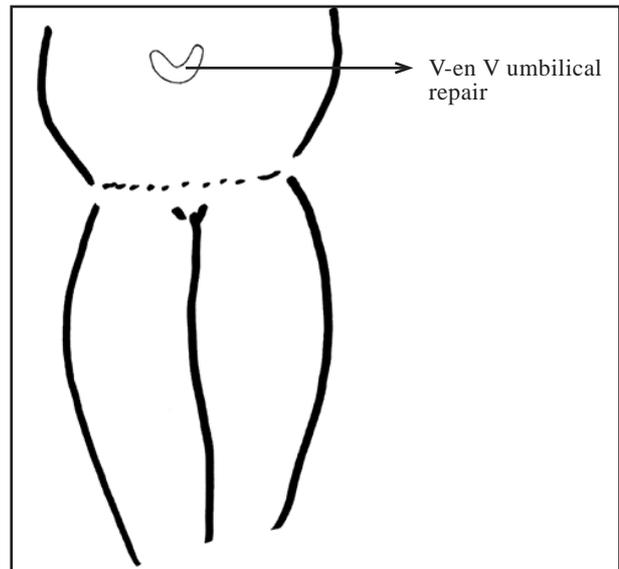


Fig. (3): Abdominoplasty with V-en V umbilical repair.

**RESULTS**

In the first 9 cases, where the umbilicus was sutured in a circular way to the abdominal skin, the results were accepted except in two females who asked for a better shape to the umbilical scar (Figs. 4-A,B,C & 5-A,B).

In the last 18 cases, the resulted semicircular scar in the infra umbilical margin, as well as the normal skin in the upper half was satisfactory to them. The long version of V-en V technique resulted in better look to the umbilical view in females, as they said that two pieces swimming suit could be used (Fig. 6).

The scar was hypertrophied in two cases which responded to silicon gel sheet application.

Inflammation and crust formation were occurred in two cases with long version technique. They responded to local boric lotion and antibiotic therapy. Two cases developed mild pulmonary embolism which were discovered immediately and the therapeutic Heparin doses were applied without further complications, except increased blood loss through the suction drain which was also compensated by blood units replacement.

Three cases suffered distal flap necrosis, which was managed conservatively and healed completely within few months.

One case suffered excess skin in the lateral angles of the suprapubic incision which was corrected later by excision under local anesthesia.

The hospitalization period ranged from 3-8 days with an average of 5 days.

Patients accepted the semicircular infra umbilical scar in all cases (Fig. 6). Reduction of operative time during umbilicus repair provided another satisfactory result to the surgeon, although it was not noticeable by the patients.



Fig. (4-A): Side view of a pre-operative abdominal redundancy.



Fig. (4-B): Pre-operative view redundant abdomen with umbilical shift.



Fig. (4-C): Post-operative view of the umbilicus with circular repair and dermo lipectomy scar.



Fig. (5-A): Pre operative view.

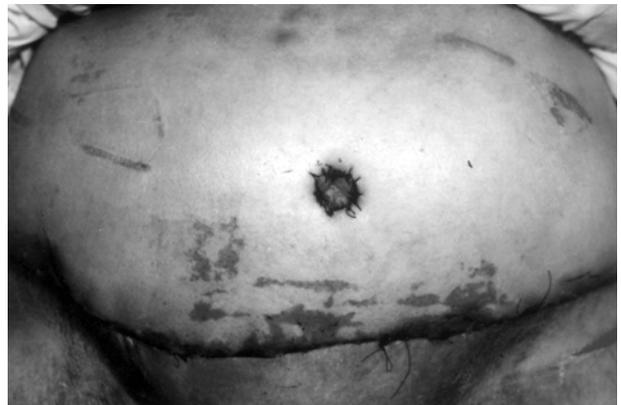


Fig. (5-B): Immediate post operative view of the circular repositioning and repair.



Fig. (6): Postoperative view of V-en V umbilical repair in two cases.

## DISCUSSION

Umbilical repair has been reported by many authors [1-4].

Suturing of the umbilicus edge to the skin of the anterior abdominal wall is considered the simplest procedure in the abdominoplasty techniques.

Its disadvantage is the circular scar surrounding the umbilicus. The eversion of the umbilical skin is another factor, which may make patients unhappy with his umbilicus specially in females.

Other procedures were reported as the inferiorly based V-flap with suturing of its base to the rectus sheath provided accepted result to the umbilicus shape. Still it made the umbilicus looking downward and the scar is more obvious as it is in the supra-umbilical edge. Some considered this procedure with plication of the umbilical stalk to the rectus sheath is a time consuming process, a disadvantage in major surgery in obese patients [1,3].

In our work we tried to overcome the circular scar, the downward looking of the umbilicus, the scar shape, its location, the eversion of the umbilical skin, and the time consumed during repair, fixation, and reshaping.

The validity and versatility of the superiorly based V-abdominal flap provided another advantage to this technique.

The shape of the umbilical scar in the infra-umbilical edge provided satisfactory result to patients (Fig. 6). The reduction of the operative time that ranged between 10-15 minutes, reduced also the over all operative time that did not exceed 3 hours in obese patients.

### Conclusion:

The superiorly based abdominal umbilical V-en V repair is a simple, easy, valid technique that gives good cosmetic results and reduced the operative time of abdominoplasty in obese.

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