



Original Article ●●●

Secondary omphaloplasty: description of a new proposal

Onfaloplastia secundária: descrição de uma nova proposição

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■ ABSTRACT

Introduction: The navel is an essential component of abdominal aesthetics. Omphaloplasty sequelae can compromise the result of an abdominal abdominoplasty. The purpose of this article was to propose an alternative procedure that is simple to perform and well accepted by patients, with favorable cosmetic results.

Methods: We surveyed cases of abdominal dermolipectomy in teaching hospitals and in private practice in the last 5 years (433 cases). **Results:** We found 30 cases (6.9%) of sequelae distributed as follows: 14 cases (3.2%) in the hypogastric scar and 16 cases in the umbilicus (3.8%). They are characterized as follows: 7 cases (1.6%) of constriction of the navel and 9 cases (2.07%) of scar hypertrophy.

Conclusion: We analyzed the results of the proposed technique of secondary omphaloplasty in the immediate (up to 30 days) and late (1-year) postoperative periods.

Keywords: navel; reconstruction; scar; surgery; treatment; omphaloplasty.

■ RESUMO

Introdução: O umbigo é um componente essencial à estética do abdome. Sequelas de onfaloplastia podem comprometer o resultado final de uma dermolipectomia abdominal. Objetivo do trabalho é propor um procedimento alternativo, de fácil execução, com resultado estético favorável e bem aceito pelas pacientes.

Métodos: Fizemos o levantamento dos casos de dermolipectomia abdominal operados no serviço de ensino e na clínica privada nos últimos cinco anos (433 casos). **Resultados:** Encontramos 30 casos (6,9%) com sequelas, assim distribuídos: 14 casos (3,2%) na cicatriz hipogástrica, e 16 casos de sequelas de umbigo (3,8%), assim caracterizados: sete casos (1,6%) constrição de umbigo e nove casos (2,07%) hipertrofia cicatricial. **Conclusão:** Analisamos os resultados da técnica de onfaloplastia secundária proposta quanto ao pós-operatório imediato (até 30 dias) e tardio (um ano).

Descritores: umbigo; reconstrução; cicatriz; cirurgia; tratamento; onfaloplastia.

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Article received: November 11, 2011.
 Article accepted: December 8, 2011.

DOI: 10.5935/2177-1235.2014RBCP0014

INTRODUCTION

In our study of cases of abdominal dermolipectomy surgery in the last 5 years (in teaching hospitals and private clinics), we found 433 surgery cases distributed as follows: classic technique, 228 cases (52.6%); lipoabdominoplasty (Saldanha

technique), 94 cases (21.7%); anchor technique (post-bariatric), 56 cases (12.9%); secondary technique, 16 cases (3.8%); and mini-lipoabdominoplasty (lip shape technique), 39 cases (9.0%); total, 100%; Figure 1).

Within the secondary surgeries, from our own statistics and those of other services, we found cases of vicious

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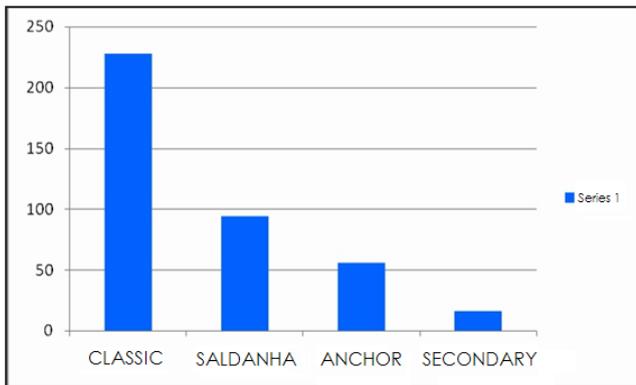


Figure 1. Distribution chart of the techniques used in the 433 cases

periumbilical scars and navel constriction. As the navel is an essential component of the abdomen, such sequelae affect the result of proper abdominal surgery¹.

A number of different techniques have been used for cosmetic reconstruction to improve the appearance of a cicatrix of the navel^{2,6}. The subject is still under discussion, as an ideal solution is yet to be found. This paper proposed a new procedure that is simple to perform and offers acceptable cosmetic results.

Among the 433 cases studied, we found 30 cases (6.9%) with sequelae distributed as follows: 14 cases (3.2%) in hypogastric cicatrix and 16 cases of sequelae in the navel (3.8%) characterized by 7 cases (1.6%) of constriction of the navel and 9 cases (2.07%) of navel scar hypertrophy (Figure 2).

The immediate postoperative results (up to 30 days) were the following:

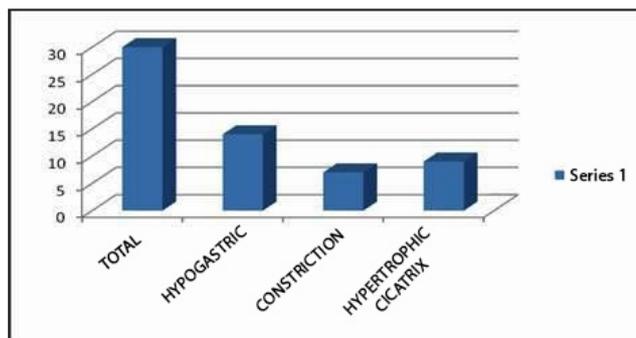


Figure 2. Chart of the sequelae found

Constriction of the navel: improvement of 90% compared with that in the preoperative period.

Navel scar hypertrophy: improvement of 80% compared with that in the preoperative period.

Late postoperative results (1 year) showed the following: Constriction of the navel: persistence of 70% of the immediate result compared with that in the preoperative period.

Navel scar hypertrophy: greater than 50% improvement compared with that in the preoperative period (Figure 3).

For these reasons, this paper aims to propose an al-

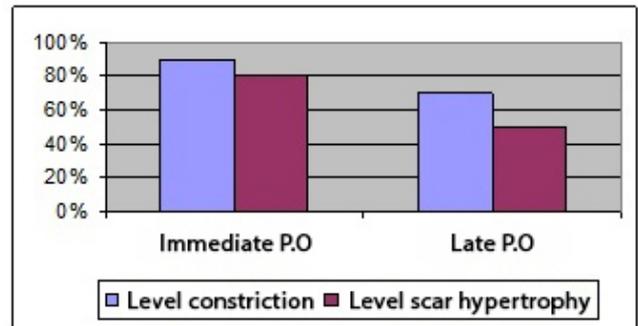


Figure 3. Evolution of results in 1 year

ternative procedure, easily performed and well accepted by patients, with favorable cosmetic results.

METHODS

Surgical Technique

In the classic abdominoplasty or lipo-abdominoplasty, scars result in the upper pubic and periumbilical regions⁵. If an unfavorable evolution of the navel scarring occurs (stenosis, keloids, and hypertrophic scars), the intention is to improve its appearance for better abdominal harmony^{3,4,5}.

With the goal of minimizing the problem of circular scars, we sought to distribute the centrifugal force of the scar, widening the area of contact of the skin on the abdomen with the umbilical stump, delimiting two semicircles (variant 1) or making a triangle with a larger base (variant 2 as shown in Figure 4A and B).

Based on variant 2, the delimited area is decorticated with the isolation of the navel and slimming of the periumbi-



Figure 4 (A): Variant 1



Figure 4 (B): Variant 2

lical fat to achieve the cosmetic sinking of that region (Figure 5A and B).



Figure 5(A): Decortication of the abdominal skin



Figure 5(B): Retro-umbilical defatting

With retro-umbilical defatting, postoperative aesthetic sinking of that region can be achieved, which enhances the result.

In variants 1 and 2, fixation of the decorticated area follows. The internal part of the semicircle is attached in the abdominal aponeurosis, with simple cardinal stitches by using a mononylon 3.0 suture. The umbilical stump skin is then enmeshed with the skin of the abdominal wall, with Perseu Lemos stitches by using a mononylon 4.0 suture (Figure 6A and B).



Figure 6(A): Deep fixation of the internal edge. Overlapping of the proximal pole.



Figure 6(B): Deep fixation of the internal edge. Overlapping of the distal pole.

In this way, all the tension of the umbilical scar will be distributed between the aponeurosis fascia and the navel skin plane in the abdominal wall. This fixation is performed with simple, separated stitches of nylon 3.0. Through this procedure, the tension on the superior skin fascia is minimized to achieve a final aesthetic result in the late postoperative period (Figure 4A and B).

This type of overlapping in the dermis of the umbilical

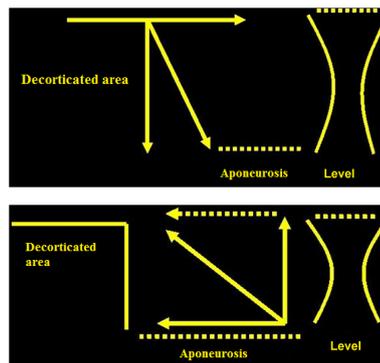


Figure 7(A) and (B): Distribution of tension in the resulting scar.

stump brings a wider area of cicatrix contact to minimize umbilical stenosis, which occurs in traditional omphaloplasty techniques with circular scars (Figure 8).

RESULTS

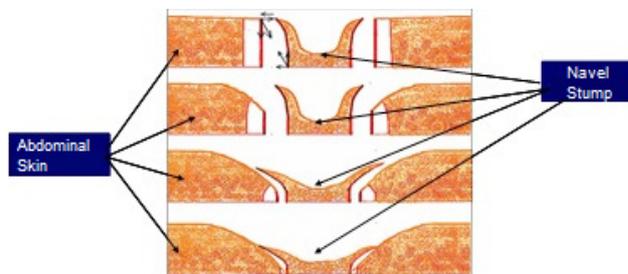


Figure 8. Distribution of forces of the umbilical stump in the surrounding skin.

The results were evaluated and compared between the immediate (up to 30 days) and late postoperative periods (after 1 year) in patients who had undergone classic techniques of dermolipectomy and lipoabdominoplasty. The evaluations considered the percentiles of improvement and relapses.

We illustrate the results of this study in Figure 1, comparing the preoperative aspects with the immediate and late results in two patients (scar hypertrophy and umbilical constriction).

Patient 1: Umbilical cicatrix hypertrophy Figure 9: A, B, and C



Figure 9(A): Preoperative picture of a patient with umbilical scar hypertrophy.



Figure 9(B): Postoperative appearance after 30 days.



Figure 9(C): Postoperative appearance after 1 year.

Patient 2: Umbilical constriction.

Figure 10: A, B, and C.



Figure 10(A): Preoperative picture of a patient with umbilical constriction.



Figure 10(B): Postoperative appearance after 2 weeks.



Figure 10(C): Postoperative appearance after 1 year.

DISCUSSION

Although abdominoplasty is a technique that aims to produce a great degree of acceptability, an unsightly umbilical scar can compromise the result of the surgery¹. The idea of broken incisions, which was proposed by Avelar (incision in the umbilical skin in the shape of a "Y"), reduced the incidence of stenosis that resulted from the circular incisions¹³

The application of other techniques that avoid that unpleasant aspect is still a challenge for most plastic surgeons. That assumption, far from offering a final solution to that problem, is based on the principle of the distribution of forces in two directions, one horizontal and one vertical, minimizing the risk of relapses and complications.

The distal result of the suture of the decorticated area in the abdominal aponeurosis will tend to unite the medial edge of the decorticated tissue to the abdominal aponeurosis, whereas the proximal result will tend to push the abdominal skin against the umbilical stump skin (Figure 8). Those resulting from the liberated umbilical stump will also undergo the action of this distribution, where its vertical component pushes the same up, allowing for a looser stump, with no tension and with its horizontal component bringing even closer the abdominal skin, which is already almost completely overlapped (dotted arrow; Figure 7 A and B).

Thus, tension distribution of the scar to the aponeurosis fascia of the umbilical stump can be achieved, allowing a more favorable aesthetic result.

CONCLUSION

Our evaluation compared immediate (up to 30 days) and late postoperative results (after 1 year; Figure 3).

Even today, achieving excellent results in abdominal abdominoplasty continues to be a challenge for plastic surgeons. This led us to the current proposition based on the principle of force distribution. We selected 16 cases, among a universe of 433 surgery cases, for this comparative study.

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