



The impact of dermolipectomy in improving the quality of life in patients with abdominal lipodystrophy

Impacto da dermolipectomia na melhoria da qualidade de vida em portadores de lipodistrofia abdominal

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■ ABSTRACT

Introduction: The valuation of appearance, combined with patterns and parameters imposed by the beauty and fashion industries, and disseminated by the media, generates questions about the real value of beauty. Distortions in these parameters lead patients, dissatisfied with their bodies, to medical clinics. Concomitantly, there are dysfunctional physical complaints and their consequences. Plastic Surgery, in this context, aims at improving the quality of life and acceptance of one's body. Abdominoplasty, or abdominal dermolipectomy, is a highly used surgical procedure. However, few evaluations regarding the personal image and the quality of life in the postoperative period exist. The objective is to evaluate the improvement of the quality of life and the body image in patients who underwent an abdominal dermolipectomy as an elective procedure, and to understand the physical-psychological implications related to body disorders. **Methods:** The *WHOQOL-BREF* instrument was administered to 15 patients with abdominal lipodystrophy who underwent an abdominal dermolipectomy at the Clinic of Plastic Surgery at the University Hospital of the Federal University of Juiz de Fora and Plastic Center Clinic. The instrument was administered thrice: once during the pre-operative period and then at two and six months postoperatively. **Results:** On comparing the pre and postoperative stages, we found a statistically significant improvement in the quality of life of patients with respect to the psychological domain ($p < 0.05$). In the physical domain, the relationship between the three stages was also statistically significant, considering a p value < 0.07 . **Conclusions:** The use of abdominoplasty in the treatment of abdominal lipodystrophy has an impact on the improvement of the quality of life of these patients, mainly in the physical and psychological domains; this is in agreement with previous studies.

Keywords: Lipodystrophy; Abdominoplasty; Reconstructive surgical procedures; Quality of life; Personal satisfaction; Surveys and questionnaires.

Institution: Ambulatório de Cirurgia Plástica
do Hospital Universitário da Universidade
Federal de Juiz de Fora - UFJF e na Clínica
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Article received: April 21, 2015.

Article accepted: April 1, 2016.

Conflicts of interest: none.

DOI: 10.5935/2177-1235.2016RBCP0028

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■ RESUMO

Introdução: A valorização da aparência, aliada a padrões e parâmetros impostos pelas indústrias de beleza e moda e difundidos pelas mídias geram questionamentos sobre o real valor da beleza. Distorções nesses parâmetros levam pacientes, insatisfeitos com seus corpos, aos consultórios médicos. Concomitantemente, existem queixas físicas disfuncionais e suas consequências. A Cirurgia Plástica, nesse contexto, tem como objetivo a melhora da qualidade de vida e maior aceitação do próprio corpo. A abdominoplastia ou dermolipectomia abdominal é um procedimento cirúrgico com grande ênfase, mas ainda com poucas avaliações a respeito da imagem pessoal e qualidade de vida no pós-operatório. O objetivo é avaliar a melhoria da qualidade de vida e da imagem corporal nos pacientes submetidos à dermolipectomia abdominal como procedimento eletivo e compreender implicações físico-psicológicas relacionadas aos distúrbios corporais. **Métodos:** Aplicação do instrumento *WHOQOL bref* em 15 pacientes do Ambulatório de Cirurgia Plástica do Hospital Universitário da Universidade Federal de Juiz de Fora e da Clínica Plastic Center; portadoras de lipodistrofia abdominal submetidas à dermolipectomia abdominal em três momentos: pré-operatório, dois e seis meses de pós-operatório. **Resultados:** Após análise dos dados, foi observada melhora na qualidade de vida dos pacientes comparando os resultados nos estágios de pré e pós-operatório, analisados no domínio psicológico com resultados estatisticamente significativos ($p < 0,05$). No domínio físico, a relação entre as três etapas também é estatisticamente significativa, considerando valor $p < 0,07$. **Conclusões:** A abdominoplastia no tratamento da lipodistrofia abdominal tem impacto na melhora da qualidade de vida destes pacientes, principalmente nos aspectos físico e psicológico, concordando com literatura pré-existente.

Descritores: Lipodistrofia; Abdominoplastia; Procedimentos cirúrgicos reconstrutivos; Qualidade de vida; Satisfação pessoal; Inquéritos e questionários.

INTRODUCTION

The appreciation of appearance today is a reality that has aroused constant assessments regarding the real value of beauty. Standards and parameters have been created and recreated from the beauty and fashion industries, being massively disseminated by the press and television media. Women and men with sculptured bodies are more than objects of desire for some, as these individuals represent examples of an ideal to be achieved.

According to the American Psychiatric Association (APA), many mental disorders arise from the incessant desire to be physically equal or similar to another person. One of these, body dysmorphic disorder^{1,2}, displays a direct relationship between self-demand and the development of this mental disease. Small distortions in relation to constantly broadcast

parameters have led countless patients to medical clinics with the complaint of being troubled or unhappy with their bodies.

Along with this disorder, there are dysfunctional physical complaints that lead to various other consequences. Cutaneous deformities, lipodystrophies, and changes in the myoaponeurotic layer, can generate alterations in the function of the abdominal wall, and requires reparative surgical intervention to restore the aesthetic, function, and balance of the abdominal muscles.

These individuals tended to develop abdominal hypotonia, after pregnancy (in women), abdominal hernias, increased intrabdominal volume³, excessive weight loss in a short time⁴, or through a combination of these elements.

Plastic surgery, in these cases, is intended to improve the quality of life⁵, generating a positive impact⁶ on improving satisfaction with the body.

Abdominoplasty or abdominal dermolipectomy, initially described in 1961⁷, is a surgical procedure that has gained prominence today, but which has undergone few evaluations that have examined patient evaluations of personal image and quality of life in the postoperative period.

In the perspective of mental health, abdominoplasty is understood as a way to modify the actual image of the individual through the restoration of the body-structure, generating as a consequence, an improvement in psychosocial function. Likewise, it allows the confluence of images that the individual presents both to others and to oneself, producing a synergistic effect in the improvement of personal symptoms regarding their physical body.

There are few published cases, which depict the improvement of the personal image and satisfaction in the postoperative period of this type of aesthetic-repair procedure⁸. Given this, it is essential to qualify and quantify the subjective evaluation of patients in relation to mental, physical, emotional, social, and sexual functions, understanding their complaints and intimate perceptions about their problem.

OBJECTIVE

The proposed objective is the evaluation of the improvement in the quality of life and of body image in patients who underwent abdominal dermolipectomy as an elective procedure, involving the physical and psychological well-being related to body disorder.

METHODS

This was a longitudinal and prospective study, which applied the *WHOQOL-BREF* tool to compare the assessments of patients who underwent an abdominal dermolipectomy. The evaluations were performed on 15 patients of the Outpatient Clinic of Plastic Surgery at the University Hospital of the Federal University of Juiz de Fora and the Plastic Center Clinic, both in Juiz de Fora, MG, at three time points: during the pre-operative period, as well as two and six months postoperatively.

The questionnaire, standardized by the Mental Health Program of the World Health Organization (WHO) and validated in Brazil in 1998 by Dr. Marcelo Pio de Almeida Fleck⁹, contains 26 questions distributed in four areas: social, psychological, physical, and environment relations. The scores of each domain in the *WHOQOL-BREF* are rated on a scale of 20, with scores closer to 20 representing a better quality of life in the interviewee.

Ambulatory patients of the Clinic of Plastic Surgery at the University Hospital of the Federal University of Juiz de Fora or Plastic Center, Plastic

Surgery Clinic in the city of Juiz de Fora, who had undergone a conventional abdominal dermolipectomy without liposuction or other complementary procedures between June and December 2011 were included.

The patients were selected by convenience, being the first 15 candidates for abdominoplasty, those classified as V in the classification system proposed by Bozola¹⁰, and those in which a conventional abdominoplasty was performed (Figure 1). Patients with prior dermolipectomy, or even individuals unable to respond to the questionnaire were excluded from the study. This study was approved by the Ethics and Research Committee of the University Hospital of the Federal University of Juiz de Fora (HU/UFJF); under opinion number 130/11, May 23, 2011.



Figure 1. Image in patients who underwent abdominal dermolipectomy.

Statistical Analysis

After data collection, the obtained data were digitized and analyzed by means of a tool specific for the assessment of the *WHOQOL-BREF* instrument, developed in Microsoft Excel software by the Program of Graduate Studies in Production Engineering (PPGEP)/Laboratory of Quality of Life (LaQVida), both from the Federal Technological University of Paraná/UTFPR.

This program performs the calculations of the scores and descriptive statistics of *WHOQOL-BREF* automatically, with the researcher only needing to insert the data collected through the *WHOQOL-BREF* questionnaire. This program can be downloaded at the URL: <http://www.brunopedroso.com.br/whoqolbref.html>¹¹.

In sequence, a statistical analysis was performed upon the data within their specific domains to check for normality by Levine's test. The results of these tests found that the data was approximately normal. In view of this finding, the means of responses were subjected to analysis of variance (ANOVA) in order to compare the means between the pre-operated data with data of two and six months following the referred surgery.

RESULTS

After the application of the questionnaire, digitalization, and data analysis, as described above, the following results were obtained: (Tables 1, 2 and 3). As we can observe in the presented tables, there was an improvement in the quality of life in our patients submitted to a dermolipectomy, when the results are compared between the pre-operative and post-operative stages, especially in the psychological domain, which presented statistically significant results ($p < 0.05$).

Regarding the physical domain, the relationship between the three steps is also statistically significant if we consider a p value < 0.07 . In contrast, relationships in the social and environmental domains showed no statistical significance.

The total score, which scales the quality of life in the five domains, was, in the pre-operative stage, 61.81 on a scale from 0 to 100. After 2 months postoperatively, this score was 68.81, representing an increase of 7 points in this scale. When the first score is compared with the one obtained after 6 months postoperatively, which had a value of 69.37, an increase of 7.56 was observed on the same scale.

This increase, both after two months and after six months postoperatively, highlights an improvement in the overall quality of life of these patients, which is increased with the progression of the postoperative period. In addition, there was no statistical difference between patients from a private clinic and from the Single Health System (SUS), since the selected patients were similar.

Table 1. Results obtained during the pre-operative period.

Domain	Mean (Scale from 4 to 20)	Standard Deviation	Minimum Value	Maximum Value	Mean (Scale from 0 to 100)
Physical	13.52	2.76	8	18.29	59.5
Psychological	14.09	2.14	10.67	16.67	63.03
Social relations	14.49	3.14	9.33	20	65.56
Environment	13.33	2.37	9.5	17	58.31
Self-assessment of QOL	15.87	2.2	12	20	74.18
Total	13.89	1.95	10.77	17.08	61.81

QOL: Quality of life.

Table 2. Results obtained two months following the operation.

Domain	Mean (Scale from 4 to 20)	Standard Deviation	Minimum Value	Maximum Value	Mean (Scale from 0 to 100)
Physical	14.93	2.39	9.14	18.85	68.31
Psychological	15.96	2.02	12.67	16.67	74.75
Social relations	15.2	2.51	12	20	70
Environment	13.9	2.24	10.5	17	61.87
Self-assessment of QOL	16.93	1.77	14	20	78.31
Total	15.01	1.77	11.69	17.38	68.81

QOL: Quality of life.

Table 3. Results obtained six months following the operation.

Domain	Mean (Scale from 4 to 20)	Standard Deviation	Minimum Value	Maximum Value	Mean (Scale from 0 to 100)
Physical	15.31	2.41	10.29	18.56	70.58
Psychological	15.73	2.48	10	19.33	73.31
Social relations	15.73	4.1	8	20	73.31
Environment	13.83	2.55	9.5	17.5	61.43
Self-assessment of QOL	16.53	2.97	8	20	78.31
Total	15.1	2.31	10.31	18	69.37

QOL: Quality of life.

DISCUSSION

The use of abdominoplasty for the treatment of abdominal lipodystrophy has previously been demonstrated in other studies as an effective therapy in the improvement of quality of life. This has been shown through the utilization of other forms of assessment, such as the *Body Shape Questionnaire*, *Rosenberg Self-Esteem Scale* (validated by the Federal University of SP), *Short Form 36*, and *Multidimensional Body-Self Relations Questionnaire* (used by de Brito et al.¹² and by Bolton et al.⁸). These studies have already suggested that this surgical procedure has a positive effect on the improvement of self-image and the mental health of patients with abdominal lipodystrophy.

More recently, Papadopoulos et al.¹³ obtained similar results after measuring the emotional stability of patients who had undergone an abdominoplasty. Furthermore, Stuerz et al.¹⁴ found a beneficial impact of this surgery on patients with great weight loss. The assessment of the quality of life by means of the *WHOQOL-BREF* questionnaire, employed herein, goes beyond the classic measures of symptoms, limitations, and dysfunctions. The current methods for the evaluation of quality of life are derived primarily from three areas of research: happiness, social indicators, and health indicators¹⁵, which are in agreement with the *WHOQOL-BREF* questionnaire on quality of life assessment by the four already cited domains: social relations, psychological, physical, and environment.

The choice of the *WHOQOL-BREF* as an analysis tool in the current study was based on the capacity of the questionnaire to measure objectively the quality of life of patients who underwent the procedure, as well as its applicability to the patients of our service. This is a questionnaire qualified as an instrument of good psychometric performance and of convenient use¹⁶, besides having a transcultural character¹⁷. The original model, called the *WHOQOL 100*, consists of 100 questions and its simplification, which features 26 questions, may be more appropriately adjusted to the cultural level of our patients, the majority of whom are exclusive users of the SUS.

The evaluation of patients undergoing abdominoplasty by the *WHOQOL-BREF* questionnaire, apparently unprecedented when one searches previous publications, seems to us as an important alternative in the comparison of results among patients who underwent this procedure. In addition, as the results corroborate the previous studies that provide evidence of the benefits of abdominoplasty on quality of life of patients, it gives strength to this assertion and encourages the use of abdominoplasty to improve personal self-image, respecting, of course, the appropriate indications of the procedure.

Finally, it is known that the attempt to evaluate and compare the level of the quality of life by objective methods is hampered by human subjectivity. Even so, the creation of mechanisms that can demonstrate substantial gains, achieved by surgical procedures, is of vital importance for assessing ways to improve the condition of patients affected by diseases, which have an impact on their physical and mental health, as is the case with abdominal lipodystrophy.

CONCLUSION

The use of abdominoplasty in the treatment of abdominal lipodystrophy has an impact on the improvement in the quality of life of patients who underwent this procedure, mainly in the physical and psychological domains, which is in agreement with pre-existing literature.

COLLABORATIONS

MPDC	Final approval of the manuscript; conception; study design and completion of surgeries.
MTD	Analysis; data interpretation and completion of surgeries.
CESGC	Drafting of the manuscript.
ENC	Review of the content.
LDC	Bibliography search and data collection.
TPSG	Data collection.
FMLB	Statistical analysis.
GVD	Data collection.

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