

Quality of life and self-esteem outcomes following augmentation mammoplasty

Qualidade de vida e autoestima em pacientes submetidas à mastoplastia de aumento

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Keywords

Mammoplasty
Quality of life
Self concept
Breast implants

Descritores

Mamoplastia
Qualidade de vida
Autoimagem
Implantes de mama

ABSTRACT

Objective: To evaluate improvement in patient's quality of life and self-esteem as a result of subpectoral and submammary augmentation mammoplasty. **Methods:** forty female patients with mammary hypoplasia, aged from 18 to 43, were consecutively selected from a waiting list, underwent augmentation mammoplasty and randomly distributed in two groups. The widely used health evaluation tool Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36), and the Rosenberg Self-esteem Scale, a specific tool for self-esteem assessment, were used. Evaluations were carried out in the preoperative period and in the second and fourth postoperative months. **Results:** Significant improvements were observed in five out of eight aspects evaluated through SF-36, as well as in self-esteem two and four months after surgery, but there were no differences between the groups. **Conclusion:** The augmentation mammoplasty promoted significant improvement in quality of life and self-esteem of patients, with no difference regarding the positioning of the breast implants.

RESUMO

Objetivo: avaliar a melhoria da qualidade de vida e autoestima do paciente como resultado da mastoplastia de aumento retropectoral e subglandular. **Métodos:** quarenta mulheres com hipomastia com idade entre 18 e 43 anos foram selecionadas consecutivamente a partir de uma lista de espera e distribuídas aleatoriamente em dois grupos. Para a avaliação de saúde, empregou-se o instrumento amplamente utilizado "The Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36)", e "Rosenberg Self-esteem Scale", uma ferramenta específica para a avaliação de autoestima. As avaliações foram realizadas no pré-operatório e no segundo e quarto meses pós-operatórios. **Resultados:** Foram observadas melhorias significativas em cinco de oito aspectos avaliados pelo SF-36 e na autoestima após dois e quatro meses da cirurgia, mas não houve diferença entre os grupos retropectoral e subglandular. **Conclusão:** A mastoplastia de aumento promoveu importante incremento na qualidade de vida e autoestima das pacientes, não havendo diferença em relação ao posicionamento das próteses.

Introduction

Efficiency of a medical procedure may be evaluated through clinical examination, considering opinions of the physician and team involved, or through imaging and laboratory methods. Nevertheless, it is known that such parameters are not sufficient to assess the benefits of medical acts, and patient's opinions must be also considered¹.

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Evaluating health perception from the patient's point of view could enhance assessment of surgical outcomes and help plastic surgeons to improve their technical procedures². In addition, positive changes in patient's quality of life may help to assure the importance of esthetic surgical procedures and their relevance².

Some instruments to assess individual health status have been developed, appraising health in its various domains. Physical and psychological improvement following esthetic and reconstructive surgery has been researched, and the literature shows positive results for most of the surgical procedures studied²⁻⁴.

The benefits resulting from subpectoral and submammary augmentation mammoplasty have not been measured yet in an objective and standardized way. The aim of this study was to evaluate the quality of life and self-esteem of patients who were submitted to subpectoral and submammary augmentation mammoplasty, providing data about the health needs of esthetic surgery and the benefits and differences obtained from each treatment.

Methods

This study was conducted at the Plastic and Reconstructive Division, Department of Surgery of Universidade Federal de São Paulo (UNIFESP), São Paulo, Brazil, from January 2002 to March 2003.

Forty patients with hypomastia were consecutively selected from a waiting list at São Paulo Hospital (UNIFESP). Patients underwent clinical examination and were invited to take part as volunteers in this prospective study.

The patients included were female, Caucasian, aged 18 to 50 years, and presenting hypomastia. All patients suffering from acute or chronic diseases, taking daily medication,

smokers, those who are sensitive to lidocaine or bupivacaine, and those who had already undergone mammary surgery were excluded.

Social and demographic data were also collected in the preoperative phase.

To assess the quality of life of these patients, the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36) was applied. This is the most widely used method for measuring changes in quality of life following medical treatment.⁵ SF-36 is made up of 11 questions divided into 36 items that assess quality of life in 8 subscales, as shown in Table 1.

To evaluate self-esteem, the Rosenberg Self-Esteem Scale (RSS) was applied. The RSS questionnaire comprises ten questions, and scoring ranges from zero to 30, with zero representing the best state of self-esteem and 30, the worst.

Patients were asked to answer both questionnaires in the preoperative period and in the second and fourth postoperative months during consultation with the attending plastic surgeon.

Statistical methods

SF-36 and RSS scores were analyzed through descriptive statistics (mean and standard deviation). Analysis of variance for block design⁶ was performed to investigate significant statistical differences among the three evaluation periods for each of the SF-36 subscales and for RSS. Post hoc comparison by Bonferroni method was used. The *p*-values equal to or below 0.05 were considered the required level for statistical significance.

Results

The evaluation period started with the preoperative assessment in January 2002, ending on March 2003, after all patients had completed the four-month follow-up. Forty patients were con-

Table 1. SF-36 Subscales and Respective Aspects Assessed

SF-36 Subscales	
Pain	How much pain did the patient experience during the studied period, and what limitations did it cause in patient's daily activities (at work and home)
Physical function	Daily activities such as dressing, bathing, walking, climbing stairs, lifting objects, and sports practice, among others
Role limitations due to physical problems	How does physical health interfere in working activities?
Health perception	Individual perception of own state of health (individually and compared to other people) and about own health in the future
Energy	Questions about tranquility, energy, and temper for daily tasks
Social function	How long has the patient been away from normal social relationships (in general and home circles) due to emotional and physical state?
Role limitations due to emotional problems	How do emotional problems (anxiety and depression) interfere in daily working and domestic activities?
Mental health	How much time does the patient feel anxious and depressed or happy and peaceful?

Each subscale is evaluated independently. Scoring is out of 100, zero being the worst state of health and 100, the best. This questionnaire evaluates a period of 4 weeks before the application.

Table 2. SF-36 and RSS scores compared at preoperative period, 60th and 120th postoperative days

Variables	Preoperative Mean (SD)	60 d Postoperative Mean (SD)	120 d Postoperative Mean (SD)	p-values
Pain	89.53 (13.89)	84.13 (20.83)	88.55 (13.09)	0.336+
Physical function	95.5 (7.99)	93.13 (8.37)	95.88 (6.39)	0.063 (a) ö >0.999 (b) ö 0.020 * (c) ö
Role limitations due to physical problems	94.38 (13.26)	86.25 (29.93)	98.13 (8.75)	0.059+
Health perception	85.15 (14.30)	91.35 (9.14)	93.00 (8.93)	0.038 * (a) ö 0.002 * (b) ö 0.138 (c) ö
Energy	73.38 (14.87)	78.63 (16.91)	85.90 (10.42)	0.009 * (a) ö <0.001 * (b) ö 0.001 * (c) ö
Social function	84.38 (16.44)	84.06 (22.47)	94.38 (9.37)	>0.999 (a) ö 0.002 * (b) ö 0.002 * (c) ö
Role limitations due to emotional problems	82.48 (31.13)	81.64 (28.22)	95.83 (15.46)	>0.999 (a) ö >0.019 * (b) ö 0.002 * (c) ö
Mental health	73.90 (14.72)	80.00 (16.63)	85.40 (10.78)	0.052 (a) ö <0.001 * (b) ö 0.011 * (c) ö
Self-esteem	7.65 (4.20)	5.73 (4.07)	3.90 (3.71)	<0.001 * (a) ö <0.001 * (b) ö <0.001 * (c) ö

* $p < 0.05$; ö Bonferroni's method for multiple comparisons; + Analysis of variance for block design.

(a) Comparison between preoperative and 60th postoperative day; (b) comparison between preoperative and 120th postoperative day; (c) comparison between 60th and 120th postoperative days.

secutively selected (aged 18 to 43 years, mean 29.1 years) and underwent augmentation mammoplasty with the same technique. All patients accepted to participate in the study, and there were no follow-up losses during the study.

After surgery, patients had significant score improvement in five out of eight subscales of SF-36. Social function, mental health and role limitations due to emotional problems did not show significant improvement at 60 postoperative days, but did so in the fourth postoperative month.

For pain, role limitations due to physical problems and physical function did not show significant modifications in the postoperative period.

RSS scores showed significant improvement at the 2nd and 4th postoperative months.

Statistical analysis of the results is shown in Table 2.

Discussion

Despite the somative number of technical innovations in augmentation mammoplasty since 1964,^{7,8} there have been few prospective studies relating quality of life to this kind of procedure⁹⁻¹¹.

Prior studies evaluating candidates for augmentation mammoplasty show that the patients' mean age in the study is in accordance with the literature (29.1 years)¹⁰. Concerning ethnic aspects, all patients included were Caucasian, which resulted in a uniform group and avoided the influence of different predispositions to keloid and hypertrophic scars¹³. The studied sample (40 patients) follows the literature standards, being large enough to demonstrate statistically significant changes after surgery.

Associating generic (SF-36) and specific (RSS) instruments aims at greater precision in the assessment of health status alterations after the surgical procedure. SF-36 is the most widely used tool for measuring quality of life, and because it is generic, allows a comparison between different treatments, age and diseases. RSS has psychometric properties for measuring only self-esteem³. These tools provide with means to assess health status modifications as a reflection of patients' views, totally independent on clinical opinion¹⁴.

Many countries have normative data for SF-36, with large sample studies, used by authors as standard for comparison to obtained results^{2,3}. In Brazil, there are still no normative data for this questionnaire, which makes this type of comparison impossible in this study.

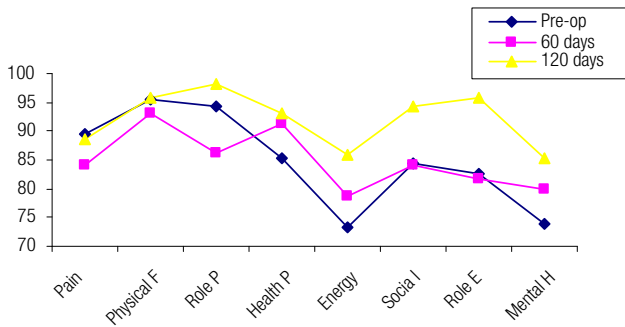


Figure 1. Domains percentages according to preoperative, two and four months of postoperative

Evaluation of quality of life and self-esteem was made at two different postoperative moments: second and fourth month. In the second month, ecchymosis is not evident, and there is not residual edema. The second postoperative evaluation was performed four months after surgery, when esthetic benefits are already optimal. The literature presents studies evaluating patients with questionnaires after one¹¹, two and four months^{9,10}, and after two to seven years¹².

SF-36 subscales physical function, role limitations due to physical problems and pain showed no statistically significant changes when preoperative and postoperative periods were compared. These subscales evaluate aspects of patients' everyday lives, such as physical difficulty in accomplishing daily activities, self-perception of physical health, complaints about pain before and after surgery. Augmentation mammoplasty seems not to affect these aspects, and pain is no longer present at two or four months after surgery.

The subscale of health perception presented significant improvement at two and four months of the postoperative period. Health perception relates more to physical health than to mental health¹⁵. This aspect evaluates patients' perspectives of future health; emotional alterations occurring in the postoperative period may be responsible for differences between preoperative and postoperative and, second and fourth postoperative months.

Energy subscale scores improved after two months (statistically significant when compared to preoperative) and four months (statistically significant when compared to preoperative and two months of postoperative). The energy domain may be directly influenced by emotional health. These findings are in line with the literature¹¹⁻¹⁵. Since there was a decrease in anxiety after surgery, patients felt more willing and motivated in their working activities when esthetic results were optimal.

The subscale of social function showed significant improvement only four months after the procedure, despite the scores' increase noted in the second postoperative month. Four months after surgery, with notable surgical benefits added to mental health improvement, patients experienced more active social life and better personal relationships¹¹.

The mental health subscale presented a significant improvement in scores on the second and fourth postoperative months. It is related to the patient's perception of anxiety and depression, ignoring its influence in daily professional or home tasks. This shows that patients perceive their anxiety, but it does not necessarily cause serious problems in their lives. After augmentation mammoplasty, anxiety lessens and mental health scores improve.

SF-36 mean scores in the three evaluated periods are shown in Figure 1.

The RSS scores showed progressive statistically significant decrease in the second and fourth postoperative months (lesser scores indicate better self-esteem). Changes in this domain were intense, showing that surgery had a direct influence on these patients' self-esteem, which suffered significant positive impact after augmentation mammoplasty.

The findings of this study indicate that augmentation mammoplasty appears to exert a positive effect on the patients' well-being throughout several aspects of their general health status. These findings are in strong accordance with prior studies, which also showed substantial benefits to patients' physical and psychological health and well-being after surgical procedures. This paper supports the idea that plastic surgery procedures should not be seen as "entirely cosmetic" procedures that do not provide benefit to general health status, for the improvements are clear.

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