

**PHYSIOTHERAPEUTIC
PERFORMANCE IN
THE POST-OPERATIVE
ABDOMINOPLASTY**

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Abstract: The concept of a healthy or beautiful body has undergone changes over time, and plastic surgery aims to improve appearance and self-esteem and, consequently, the quality of life. The role of the physical therapist in the postoperative period allows a reduction of the likely complications, as well as the patient returns more quickly to the exercise of their activities of daily living. **Objectives:** To analyze the role of the Physiotherapist in the post-surgical treatment of abdominoplasty and to expand the knowledge in the area of Dermatofunctional Physiotherapy. **Methods:** For the preparation of this literature review, articles were selected from the Scielo, Lilacs, Medline/Pubmed databases, from 2000 to 2011, in Portuguese and English. **Conclusion:** It is evident the need for a physical therapist in the postoperative period, both early and late, in order to minimize possible complications as well as to return the patient more quickly to the exercise of their activities of daily living.

Keywords: Plastic Surgery, Physiotherapy, Postoperative, Abdominoplasty.

INTRODUCTION

The concept of a healthy or beautiful body has undergone transformations over time. Until the beginning of the 20th century, women were desired when they had a plump body, due to the deposition of fat in the hips, thighs, belly and breasts. In pre-industrial times, periods of food shortages were frequent and the overweight woman symbolized a strong woman, with enough energy to face these troubled periods and protect her family^{1,2}.

Over the course of the 20th century and, above all, from the 1960s onwards, this ideology has been changing: the search for a lean, athletic body and defined shapes that become the same object of consumption begins, in view of the of products and services in a market that grows every day^{1,3,4}.

In contemporary Western societies, prejudice against obesity is undoubtedly very strong. The cult of thinness is directly associated with the image of power, beauty and social mobility, generating a contradictory, "schizophrenic" picture, considering that, through the written and television media, the food industry sells fat, with the appeal to food. hypercaloric, while society demands thinness¹.

The ideal of a perfect body advocated by our society and conveyed by the media leads women, especially in the adolescent range, to a chronic dissatisfaction with their bodies, sometimes hating themselves for a few extra pounds, sometimes adopting highly restrictive diets and strenuous physical exercises as a way to to compensate for the extra calories ingested, in an attempt to correspond to the current cultural model. This way, the pressure of the equation increases: promise of Happiness and Beauty = Consumption¹.

External pressure, through the media and beauty standards, ends up mobilizing the individual in his perception of himself and, at the same time, in his self-esteem, so plastic surgery can be understood as a way out of dissatisfaction and the imbalance of the connection. body and mind⁵.

Plastic surgery is divided into two main branches: reconstructive or reconstructive plastic surgery and aesthetic plastic surgery. Aesthetic plastic surgery proposes to bring the variations of the normality of the body as close as possible to what is conceived as a standard of beauty for a culture, at a given moment, and also to correct the evolutionary changes of time⁶.

Furthermore, the objective of improving the appearance and self-esteem and, consequently, the quality of life is added to this purpose^{6,7,8}.

One of the surgical interventions commonly performed is abdominoplasty or

dermolipectomy, which consists of removing excess subcutaneous tissue in the abdomen region, through a suprapubic incision with transposition of the umbilicus and plication of the rectus abdominis muscles. This, in turn, has often been associated with liposuction, with the intention of providing the removal of excess fat through thin cannulas, enabling a global redefinition of the trunk^{9,10,11}.

Among the most common local post-surgical complications we have: hematomas, seromas, infections in the surgical scar, dehiscence, skin-fat necrosis, scar changes, asymmetries, retractions, lateral deviations of the navel, elevation of pubic hair, abdominal wall irregularities¹².

Dermatofunctional physiotherapy has been widely recommended by plastic surgeons as a treatment procedure for plastic surgery, especially in cases of abdominoplasties associated with liposuction. Post-surgical physiotherapeutic treatment allows: significant improvement in skin texture, absence/reduction of fibrotic nodules in the subcutaneous tissue, reduction of edema, minimization of possible tissue adhesions, as well as faster recovery of areas with hypoesthesia, that is, not only allows a reduction of likely complications, but also returns the patient more quickly to the exercise of their activities of daily living^{12,13}.

Dermatofunctional Physiotherapy emerged to, together with the area of dermatology, seek greater results in the treatment of aesthetic dysfunctions. For a good result, there is a need for full knowledge of anatomy, physiology and pathology, in addition to evaluating the problem to choose the treatment that best suits the patient. There are several existing resources for the correction of an aesthetic dysfunction, among them there are manuals, thermotherapy and electrotherapy¹³.

For all that has been explained, this research aimed to analyze the role of

the Physiotherapist in the post-surgical treatment of abdominoplasty and to expand knowledge in the area of Dermatofunctional Physiotherapy.

METHOD

In this study, a bibliographic review was carried out on the role of the Physical Therapist in the postoperative period of abdominoplasty, gathering the most relevant information on the subject, within the scope of Plastic Surgery - Abdominoplasty and Dermatofunctional Physiotherapy.

For the elaboration of this bibliographic review, articles were selected from the Scielo, Lilacs, Medline/Pubmed databases, searching for the period 2000 – 2011, in Portuguese and English. Having as keywords: Plastic Surgery / Plastic Surgery, Physiotherapy / Physical therapy, Post-operative / Post-operative and Abdominoplasty / Abdominoplasty.

Articles that addressed the physiotherapeutic treatments in patients in the postoperative period of abdominoplasty were included. Studies of articles that were poorly written according to criteria established by the authors were excluded.

The criteria established by the authors to classify the articles as poorly written were studies with a non-detailed methodology, making it difficult to understand the procedures performed and the reproduction of the study.

Studies were pre-selected through titles and reading abstracts. Subsequently, the authors read the article in its entirety and defined its inclusion or not in this study according to the criteria defined above.

RESULTS

501 articles were found in Scielo, Lilacs, Medline/Pubmed. After the initial reading of the titles and abstracts of these articles, 475 articles were excluded, as they were

not consistent with the subject addressed. Subsequently, with the full reading of the articles, only 5 articles remained.

In the first study, Soares et al⁹ (2005) sought to compare, through a study with 14 women, the effectiveness of MLD and mechanics (DLME). Among the volunteers, 7 received MLD treatment for 3 weeks and the other 7 treatment with DLME. It is concluded that MLD was more effective than DLME in reducing edema, especially in abdominal perimetry ($p=0.01$) as well as there was a better satisfaction rate for the DLM than for the DLME with 87.71% and 57.14% of good concepts respectively⁹.

Another study, Coutinho et al¹² (2006) used a care program of twenty one-hour sessions and twenty three sessions per week, composed of the following therapeutic resources: MLD, Cryotherapy, Ultrasound, Endermologie and Classical Manual Massage in 12 women, half (six) with early onset (between the 7th and 9th PO day) and the other half with late onset (between the 42nd and 69th PO day). It was observed that the performance of Dermatofunctional Physiotherapy constitutes a potentiating therapy for the reduction not only of post-surgical edema, but also reduces the chances of complications, considering that the reduction of edema was evidenced by the decrease in the perimeter of the abdominal region. Even patients referred late responded with a reduction in their measurements¹².

In the study by Nogueira et al¹⁵ (2007) analyzed 4 medical records of female patients, with the symptom of altered healing after abdominoplasty. Treatments (ultrasound (3 MHz) and laser (As-Ga) were performed, initially 5 sessions daily and later, on alternate days - 3 times a week. It was observed that the scar formed was repaired with scar tissue and with better alignment of collagen fibers and less formation of fibrous tissue. As well as the

proliferation and acceleration of tissue repair and the reduction of tissue tension, leading to total closure of the lesion. Finally, laser and ultrasound are efficient in treatment of healing changes¹⁵.

Voloszin¹⁶ (2007) performed a case study, with a female patient - 40 years old, with microcurrent treatment in the healing of a necrosis occurred in abdominoplasty. The doctor determined five months for necrosis healing to occur, but after 18 sessions performed 3 times a week there was a significant improvement in the clinical picture, where the injured tissue evolved positively in the healing phases¹⁶.

In the last study, Antunes and Domingues¹⁷ (2008) included 3 women who underwent mammoplasty and abdominoplasty in which they underwent MLD, cyriax massage and ultrasound sessions and, after postural assessment, were referred for postural treatment, RPG and Pilates. It was observed that the physiotherapeutic care contributed to the repair of the scar and the acceleration of its healing process, reduced and prevented adhesions, reduced the edema caused by the surgery, in addition to having acted in a rehabilitative and preventive way when performing evaluation of postures of the patients. patients and referred them to specific treatments¹⁷.

DISCUSSION

Abdominoplasty aims to reconstruct muscle, skin and umbilical positioning through muscle-aponeurotic plication of the rectus abdominis and resection of adipose skin tissue 12,18. Indicated for individuals who have localized abdominal fat, sagging due to weight loss or pregnancy, aponeurotic flaccidity, abdominal diastasis, bulges and hernias^{11,13}.

Among the most common local post-surgical complications we have: hematomas,

seromas, infections in the surgical scar, dehiscence, skin-fat necrosis, scar changes, asymmetries, retractions, lateral deviations of the navel, elevation of pubic hair, abdominal wall irregularities, hyperchromias and fibrosis^{13,22,23,24}.

These complications may vary depending on the patient and the pre- and postoperative management adopted, and it is in these stages that Dermatofunctional Physiotherapy has been widely indicated by plastic surgeons as a form of treatment for plastic surgeries. Post-surgical physiotherapeutic treatment allows: significant improvement in skin texture, absence of fibrotic nodulations in the subcutaneous tissue, reduction of edema, minimization of possible tissue adhesions, as well as faster recovery of areas with hypoesthesia^{12,13,21}.

Among the resources indicated to improve the recovery of the surgical procedure, we have cryotherapy, which promotes cooling of the applied site, causing vasoconstriction; laser in the function of delaying collagen synthesis^{12,13}; endermotherapy, used to break down fibrosis, promoting a more uniform tissue^{13,21}, through hypervascularization, restructuring of connective tissue, improvement of lymphatic and tissue fluid transit and tissue toning²⁵.

As for the low-intensity argon laser, it accelerates cell division; there is an increase in leukocytes that participate in phagocytosis and a greater synthesis of collagen by fibroblasts, promoting better scar quality^{13,25}.

Ultrasound, at a frequency of 3 MHz, is widely used in the inflammatory phase for the resorption of hematomas, improves cell nutrition, reducing edema and pain^{12,15}. Manual lymphatic drainage acts on the displacement of extravasated proteins to be reabsorbed, balancing hydrostatic and tissue pressures, decreasing edema and can be started after 48 hours after surgery^{12,22,23}.

There is also the classic massage that can be used to mobilize various structures, seeking to relieve pain and reduce edema, since it produces an increase in blood flow, improving cellular nutrition, and can be performed after the thirtieth day of post-surgical²⁴.

The complete success of plastic surgery still depends on the patient's participation, with the association of diets, physical activity and changes in their way of life²⁶.

The role of the dermatofunctional physical therapist has been essential in the postoperative period of abdominoplasty due to their vast knowledge in pathophysiology as well as their range of therapeutic resources that accelerate postoperative recovery, preventing and controlling some common complications^{16,25}.

FINAL CONSIDERATIONS

It is concluded that it is important for the physiotherapist to act in the postoperative period, both early and late, in order to minimize possible complications as well as return the patient more quickly to the exercise of their activities of daily living.

Through the analyzed articles, it was observed that there was pain relief and edema reduction, through physiotherapeutic resources, reducing post-surgical complications as well as a higher level of satisfaction with the final result of the scar, considering that it prevented the formation of fibrosis.

However, further studies are needed with a greater number of patients treated in the postoperative period of abdominoplasty with physiotherapeutic resources, with a good methodological basis.

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