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INTERVENTION OF PHYSIOTHERAPY IN TREATMENT OF FIBROSIS CICATRICIAL NO POSTOPERATIVE OF SURGERY AESTHETICS

INTERVENTION OF PHYSIOTHERAPY IN THE TREATMENT OF CICATRIC FIBROSIS IN THE POST-SURGERY OF AESTHETIC SURGERY

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SUMMARY

Fibrosis is a change that occurs post-operatively, it is the excessive formation or development of fibrous tissue that occurs after trauma, presenting itself as a reparative process. Among the main resources used for treatment are: Manual Lymphatic Drainage (MLD) and manual massage, kinesiotherapy, US, therapeutic laser, radiofrequency**Goal:**Search references literature to highlight the benefits of physiotherapeutic care in the treatment of Cicatricial Fibrosis in the postoperative period of plastic surgery. **Methodology**: This is a literature review. Articles (published between 2008 and 2019) were used, searched in the Google Scholar, Lilacs and Scielo virtual libraries.**Results:**Eight articles published between 2008 and 2019 were found, all of which demonstrated the effectiveness of physiotherapy in modulating the inflammatory and scar response, acting in the treatment of scar fibrosis.**Conclusion:** It was felt to be extremely important for a thorough assessment of the tissue by the physiotherapist to choose the method most appropriate to the case, ensuring a quick and efficient surgical recovery.
Key words: Cicatricial Fibrosis. Physiotherapy. Postoperative.

ABSTRACT

Fibrosis is a change that occurs in the postoperative period, it is the formation or excessive development of fibrous tissue that occurs after a trauma, presenting itself as a reparative process. Among the main resources used for treatment, there are: Manual Lymphatic Drainage (DLM) and manual massage, kinesiotherapy, US, therapeutic laser, radiofrequency Objective: To search bibliographic references to show benefits of physical therapy in the treatment of Cicatricial Fibrosis in the postoperative period period of plastic surgery. Methodology: This is a literature review. Articles

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(published between 2008 to 2019) researched in the Google Academic, Lilacs and Scielo virtual libraries were used. Results: Eight articles published between 2008 and 2019 were found where all demonstrated the effectiveness of physiotherapy in modulating the inflammatory and scar response, acting in the treatment of cicatricial fibrosis. Conclusion: A thorough evaluation of the tissue by the physiotherapist was perceived to be extremely important in order to choose the most appropriate method for the case, guaranteeing a quick and efficient surgical recovery.
keywords: Scarring Fibrosis. Physiotherapy. Postoperative.

1. INTRODUCTION

Currently, the search for men and women to achieve a standard of beauty established by the media, referring to a thin and beautiful body, has become constant. Women, especially, undergo exhaustive sacrifices seeking this body considered perfect. With this, dermato-functional physiotherapy has been playing an important role, helping in the search for the desired body, increasing its applicability every day (GUIMARÃES, 2015).

Among the most common post-surgical complications are hematomas, infections in the surgical scar, seromas, scar changes, dehiscence, skin and fat necrosis, keloids, asymmetries, retractions, scarring, numbness or tingling, bleeding, among others (MACEDO , 201).

The performance of dermato-functional physiotherapy post-surgery allows the reduction of possible complications and recovery of regions with hypoesthesia, reducing edema and tissue adhesions, resulting in improvements in skin texture, preventing the formation of subcutaneous fibrosis. The formation of fibrosis occurs due to the increase in interstitial fibrous tissue, with low elasticity being its main characteristic, which ends up generating other complications (SANTOS, 2013).

Fibrosis is one of the main complications that occurs postoperatively, this formation or excessive development of fibrous tissue occurs as a reparative or reactive process after possible tissue trauma. There is a tissue reaction with inflammation, remodeling and proliferation that occurs as a response to aggression and as the healing process evolves, the granulation tissue is transformed into a less vascular and more fibrous tissue until it becomes a fibrous tissue. dense and subsequent fibrosis (MACEDO, 2014). Fibrosis and adhesions are very common characteristics present

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in the postoperative period of various surgeries. They are considered “normal” during a certain period of repair because they are part of the healing process, however, they should in no way be considered part of the final result of the surgery. The physiotherapeutic treatment planned after the surgical process is widely variable and is applied after a rigorous assessment. Among the resources used according to the protocols, manual lymphatic drainage (MLD) and manual massage, kinesiotherapy, US, therapeutic LASER, transcutaneous electrical nerve stimulation (TENS), radiofrequency, evacuotherapy, cryotherapy, phototherapy and thermotherapy stand out. Active exercises are also fundamental in the recovery process, etc. (OLIVEIRA, 2011).

Therefore, functional dermal physiotherapy has currently been essential in the segment of care for patients undergoing plastic surgery, not only due to the manual lymphatic drainage technique, but also due to its numerous therapeutic resources, such as: ultrasound, vacuum therapy, among others. resources, which aim to prepare the tissues for the surgical procedure, as well as being able to accelerate the postoperative recovery process, preventing and controlling some complications considered more common (HECKER,2011).

Due to the fact that dermato-functional physiotherapy plays an extremely important role in post-surgical treatment, the objective of the present study is to describe the role and resources of the dermato-functional physiotherapist in the treatment of scarring fibrosis in the post-operative period of aesthetic surgery.

2 THEORETICAL FOUNDATION

Physiotherapy procedures after aesthetic plastic surgery will vary according to the specific characteristics of each surgical procedure, therefore, knowledge of the techniques applied to plan procedures according to the specificities of each patient is extremely important (GUIMARÃES, 2015).

Dermato-functional physiotherapy plays an extremely important role in preventing and treating responses arising from surgical processes, reducing post-operative time (PO), restoring functionality, improving the outcome of the procedure and reintegrating the individual into their activities. Postoperatively after surgery

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plastic surgery, physiotherapy is essential to provide means of rapid and adequate recovery, with the recognition of the functional changes presented by the patient being the first step to be investigated (MACEDO, 2014).

PO physiotherapy may aim to prevent the formation of adhesions, the main aggravating factor in PO, such adhesions hinder the normal flow of blood and lymph, increasing the edematous condition, hindering and delaying the patient's recovery. Furthermore, post-surgery, physiotherapeutic treatment allows for significant improvements in skin texture, reduction of edema, and eliminates fibrotic nodules in the subcutaneous tissue, aiding in the healing process (GUIMARÃES, 2015).

There are several physiotherapeutic resources that can be used to treat scar fibrosis in the postoperative period of aesthetic surgery. Among the most used methods are: manual resources (DLM and manual massage), kinesiotherapy, therapeutic ultrasound, radiofrequency, endermotherapy, cryotherapy, phototherapy and thermotherapy (MACEDO, 2014).

It is recommended that the manual lymphatic drainage technique should be started on the first postoperative day with the use of capture and evacuation maneuvers in the ganglionic networks and lymphatic pathways, and should only be performed in areas further away from the edematous zone, stimulating the lymphatic anastomoses. Such maneuvers must be smooth, slow and coordinated, at a speed that follows the lymphangions and direction of lymphatic circulation. Lymphatic drainage is a resource that addresses the consequences caused by vascular changes characteristic of the initial phase (edema) (OLIVEIRA, 2011).

Manual lymphatic drainage has the function of acting directly on the displacement of extravasated proteins in favor of their absorption. This way you can balance hydrostatic and tissue pressures, reducing edema. This procedure can be started 48 hours after surgery. Thus, with the reduction in cortisol secretion released during the inflammatory process, edema will definitely be reduced as well. Manual lymphatic drainage is a non-slip technique that must be performed in the direction of lymphatic flow, applying rhythmic and short strokes, with minimal or gentle pressure, this action will deform the subcutaneous tissue so that it does not involve the muscle (SANTOS, 2013). The use of 3MHz ultrasound in the immediate postoperative period is directly related to the healing process. The main objective of early use of this method is to promote improvements in blood and lymphatic circulation, in order to achieve a

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better cellular nutrition. At this stage, pain reduction is also required. Post-plastic surgery ultrasound has the ability to accelerate healing, achieve normal tensile strength and even prevent hypertrophic scars and keloids. In this way, ultrasound provides a significant increase in the number of fibroblasts, providing an ideal arrangement for wound contraction (PRAVATTO, 2007).

Endermotherapy is an aspiration technique capable of acting at a hypodermic level. In this technique, a traumatic massage using negative pressure is performed. Preoperatively, before the surgical procedure, the application of this helps to soften the fibrous layer of the hypodermis, this will facilitate the passage of the cannula in techniques such as the liposuction and liposculpture phase. In studies carried out in which endermotherapy was applied in the remodeling stage for patients who presented fibrosis, the probability of reducing fibrosis through this practice is quite evident in more recent scars, and can be observed in older lesions, making it possible to treat them. remodeling. In the initial phase of treatment, endermology should be avoided due to the risk of preventing the skin from adhering, which can lead to sagging, broken capillaries and possible bruising if not handled well (SANT'ANA, 2007).

Radiofrequency is a very recent method that is being used in post-operative protocols for plastic surgery. The conversion of electromagnetic energy into thermal effect is the main therapeutic basis of this modality. This type of heat can reach tissues several centimeters deep, having a greater intensity and action on the inner layers of the skin, providing contraction of existing collagen fibers, making them even more efficient in supporting the skin. Radiofrequency uses a very high frequency device that, with alternating current at more than 3,000 Hz, causes diathermy, that is, heating by deep heat. It is a non-invasive treatment that leads to improvements in the circulation of nutrients, increases oxygenation, hydrates tissues, lipolysis and also has the ability to reorganize collagen fibers. It is extremely important to highlight that patients with defibrillators, pacemakers or any type of metallic implant and neoplasms are contraindicated to undergo this treatment (MAYER, 2010). Functional Tissue Release (LTF) is the application of mechanical tension to tissue in the healing phase. This practice organizes collagen bundles more naturally, with more elasticity than when not applied.

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voltage. This is the most effective and quickest method of treatment for fibrosis and adhesions in plastic surgery. As collagen is deposited randomly, manipulation must be carried out in all directions, so that the collagen bundles are completely reorganized. It is evident that the intensity of the stretch will be relative to the resistance offered by the tissue, its ideal use, as a preventative form, is from the 3rd to the 5th post-operative day, applied 2 to 3 times a week, during the repair period (approximately 30 to 40 days), which may or may not be associated with other available physiotherapy resources (MACEDO, 2014).

Kinesiotherapy is also an effective treatment method for fibrosis, the correct execution and conscious use of kinesiotherapy after plastic surgery is very useful in preventing and treating adhesions and fibrosis. As soon as the patient is discharged from the hospital, they should start the exercise by observing and always being careful with the scars. After 30 days post-surgery, techniques for deep manipulation of the connective tissue and fascia detachment can be started, in order to avoid or minimize protrusions or depressions in the skin integument. Such changes can be triggered in the presence of fatty nodules, subcutaneous nodules, facial adhesions or fibrosis (HECKER, 2011).

2 METHODOLOGY

This is a literature review study that addresses the intervention of physiotherapy in the treatment of scarring fibrosis in the postoperative period of aesthetic surgery. Data collection was carried out in electronic databases: Bireme, Google Scholar, Lilacs and SciELO, using the following descriptors “Cicatricial Fibrosis, Physiotherapy, Post-operative” as keywords as search strategies. Eight articles related to plastic surgery were selected, published between 2008 and 2019 in Portuguese, of which, after analysis, 3 were excluded because they did not meet the inclusion criteria. The inclusion criteria covered articles that addressed the treatment for Cicatricial Fibrosis.

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FINAL CONSIDERATIONS

It can be concluded that dermato-functional physiotherapy plays an extremely important role in the post-operative period of plastic surgery, consisting of different techniques and treatment methods to obtain positive results before, during and after the surgical process. Therefore, different physiotherapy resources are effective in modulating the inflammatory and scar response, and can also act as prevention of scar fibrosis and treating them, reducing postoperative time, restoring functionality, resulting in considerable improvements in the results of the procedure and allowing the patient to reintegrate their activities.

However, it is extremely important that the physiotherapist carries out a prior and thorough assessment of the tissue in order to choose the most suitable method for each patient specifically, considering the case, so that they can guarantee an efficient, rapid and surgical recovery. functional. There is also a need for more studies on the topic, as the area of functional dermatology is still lacking in publications.

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