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Letter to the Editor

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Hypotheses and Evolution in the Current Treatment of Lipedema Syndrome

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To the Editor

Lipedema syndrome is described as a clinical condition of greater redistribution of adipose tissue to the extremities, which leads to the enlargement of the limb and can have psychological consequences that affect quality of life. Regarding symptoms, pain is the major complaint. Therefore, the physical aspect and pain are the two main targets to address. They usually have a family history, and can be observed since childhood, but obesity is better defined. Obesity is another aggravating factor that can cause injury to the lymphatic system earlier than in obese individuals.

In physiopathological terms, the main alterations are related to adipose tissue and microcirculation, with a greater number of vessels detected in the dermis as well as a greater number of macrophages in the skin and fatty tissue. Several studies report lymphatic changes [1-3]. One of these studies found an increase in the area of the lymphatic vessels but not in the number of vessels, suggesting regional lymphostasis [1, 2].

The physiopathological mechanisms lead to a greater volume of fatty tissue and the formation of microcirculation lymphedema. Therefore, these are the two major problems to address. Authors report that individuals with lipedema and a body mass index (BMI) less than 30 kg/m^2 may develop subclinical and clinical systemic lymphedema initiating in the lower limbs bilaterally [4, 5]. However, unilateral onset may occur when associated with damage to the lymphatic or venous system.

A study shows that as a patient becomes obese, there is a significant increase in subclinical and clinical systemic lymphedema of the lower limbs, which can progress to the trunk, followed by the upper limbs [6]. Patients with a BMI less than 30 kg/m^2 have a lower frequency of subclinical systemic lymphedema. Pain symptoms may occur in the legs but may improve after one or two sessions of lymphatic drainage. The movements should be linear in direction of the corresponding lymph nodes, exclusively along the path of the great saphenous vein. Such treatment is sufficient to resolve the symptoms.

An important note is that obesity is a disease and lipedema is a medical condition that can be exacerbated by obesity. However, there are some obese people with wide legs and arms, but with abdominal fat. In classic lipedema we do not have abdominal fat. This is the biggest doubt that exists regarding the classification of these obese patients with a pattern of lipedema of the extremities. There are currently no data that can differentiate this obese patient. Preliminary assessments of these obese patients by multi-segment and multifrequency bioimpedance behave like obese patients and do not show a pattern of changes in the lymphatic system as occurs in lipedema. However, we are developing this research to have more concrete data.

Pain is usually due to edema and is present when manual compression is performed on the leg, but pain can be referred and depends on the intensity of the edema. A scientific method of lymphatic drainage alleviates or normalizes the pain in one to two sessions; thus, confirming the hypothesis that the pain is due to edema.

Approximately 10% of these women have idiopathic cyclic edema (study in publication phase) and about 80% develop cellulite [7-10], which are two important causes of edema and an increase in the volume of the limb. Therefore, it is fundamental to diagnose the association of these four causes of increased limb volume: lipedema, obesity, idiopathic cyclic edema and cellulite.

Idiopathic cyclic edema is aggravating of lipedema, therefore another aggravating factor for edema. We have patient with this characteristic, and with the treatment of idiopathic cyclic edema alone there was a reduction in lymphedema.

The aspect in common among these four clinical conditions is the impairment of the lymphatic system. In cases of lymphostasis of the lipedema and cellulite, adequate lymphatic drainage techniques can resolve the symptoms and reduce the circumference of the limb [8, 9]. In lymphedema caused by obesity, however, there is a change in capillary permeability and damage to the lymphatic vessels. Therefore, the only therapeutic option is to lose weight and avoid further injury to the lymphatic system, such as trauma and infection. However, if a patient has idiopathic cyclic edema, it is necessary to use drugs that control the problem and affect capillary permeability, such as calcium dobesilate, aminaphtone and *Ginkgo biloba*.

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This is the clinical basis that when performed properly, it can reduce the volume of the limb to within physiological standards and improve symptoms. After this therapy, however, some women may have disproportional parts of the body, which can lead to psychological problems. In select cases, such patients may opt for liposuction, but it is important to discard the possibility of subclinical systemic lymphedema and idiopathic cyclic edema, which greatly aggravate the postoperative period.

In one study, the authors detected no significant changes in the expression of genes associated with inflammation in adipose-derived stem cells (ASCs) in lipedema or differentiated adipocytes. However, the results suggest that ASCs isolated from the stromal vascular fraction in lipedema have a greater potential for adipogenic differentiation than healthy ASCs [11]. Other studies show that there are several abnormalities in lipedema. However, the therapeutic approach only addresses the lymphatic system.

This proposal offers novel concepts in the treatment of lipedema with a therapeutic basis to alleviate the discomfort caused by lipedema. However, the major problem of lipedema is obesity.

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Conflict of Interest

None to declare.

Inform Consent

Not applicable.

Author Contributions

Study design: Godoy JMP. Both authors contributed to the analysis and interpretation of data, data collection, article writing, critical review of the text, and statistical analysis; and took overall responsibility for the study. Both authors read and approved the final submitted version.

Data Availability

Data supporting the findings of this study are available from the corresponding author upon reasonable request.

References

1. Gould DJ, El-Sabawi B, Goel P, Badash I, Colletti P, Patel KM. Uncovering lymphatic transport abnormalities in patients with primary lipedema. J Reconstr Microsurg. 2020;36(2):136-141.
2. Redondo Galan C, Garcia Bascones M, Marquina Valero MA. [Lipoedema: Symptoms, diagnosis and treatment. A literature review]. Rehabilitacion (Madr). 2019;53(2):104-110.
3. Al-Ghadban S, Cromer W, Allen M, Ussery C, Badowski M, Harris D, Herbst KL. Dilated blood and lymphatic microvessels, angiogenesis, increased macrophages, and adipocyte hypertrophy in lipedema thigh skin and fat tissue. J Obes. 2019;2019:8747461.
4. Pereira de Godoy JM. Systemic subclinical lymphedema due to obesity as the cause of clinical lymphedema: A new concept. Medical Hypotheses 2019;131:109312.
5. de Godoy JMP, Godoy MFG. Diagnostic Criteria and Clinical Evolution of Systemic Lymphedema Caused by Obesity: Bioimpedance Analysis. Ann Med Health Sci Res. 2019;9:420-442.
6. Pereira de Godoy LM, Pereira de Godoy HJ, Pereira de Godoy Capeletto P, Guerreiro Godoy MF, Pereira de Godoy JM. Lipedema and the evolution to lymphedema with the progression of obesity. Cureus. 2020;12(12):e11854.
7. Pereira de Godoy JM, Pereira de Godoy HJ, Pereira de Godoy LM, Guerreiro Godoy MF. Prevalence of idiopathic cyclic edema in women with lower limb lymphedema. J Clin Med. 2017;7(1):2.
8. Pereira de Godoy JM, Pereira de Godoy HJ, de Sene Souza AA, Budtinger Filho R, de Fatima Guerreiro Godoy M. Lipolymphedema associated with idiopathic cyclic edema: a therapeutic approach. Case Rep Vasc Med. 2017;2017:5470909.
9. de Godoy JM, Barufi S, Godoy Mde F. Lipedema: is aesthetic cellulite an aggravating factor for limb perimeter? J Cutan Aesthet Surg. 2013;6(3):167-168.
10. de Godoy JM, de Godoy Mde F. Evaluation of the prevalence of concomitant idiopathic cyclic edema and cellulite. Int J Med Sci. 2011;8(6):453-455.
11. Al-Ghadban S, Diaz ZT, Singer HJ, Mert KB, Bunnell BA. Increase in leptin and PPAR-gamma gene expression in lipedema adipocytes differentiated in vitro from adipose-derived stem cells. Cells. 2020;9(2):430.