REVISTA MEXICANA DE ENDOCRINOLOGÍA, METABOLISMO & NUTRICIÓN IMAGES IN ENDOCRINOLOGY

Obesity-induced lymphedema in a patient with super-super obesity

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PRESENTATION

A 50-year-old woman was evaluated in the obesity clinic. She complained of bilateral leg pain, edema, and decreased sensibility in the soles. At first evaluation, her weight was 210 kg and height 1.60 m with a body mass index (BMI) of 82 kg/m^2. She was diagnosed with insulin resistance and hypertension and prescribed metformin 850 mg twice a day and losartan 50 mg twice a day. Due to the increased volume of both the legs, she was evaluated by the dermatology service that ruled out primary and secondary causes of lymphedema and during physical examination detected a positive Stemmer sign, in conclusion, she had obesity-induced lymphedema. Initial indicated treatment was compressive garments. She started with a reduction diet and achieved a weight loss of 34 kg (176 kg) with improvement of edema and pain. Nowadays, she is in expectation of bariatric surgery.

Obesity-induced lymphedema is common in patients with a BMI > 50 kg/m^2 [1]. Its diagnosis requires exclusion of primary (genetic) and secondary causes as inguinal irradiation, lymphadenectomy, or infectious causes[2]. Usually, it appears in declined zones

Figure 1. Obesity-induced lymphedema in a patient with super-super obesity. At first evaluation, the patient had a body mass index of 82 kg/m^2 and important swelling in both legs and soles (**A**), with hardening and thickening of the skin. Under the elastic bandages, she had ulcers due to venous insufficiency (**B**).

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and it improves or even disappears at the morning after horizontal leg positioning during the sleep. It is located at foot dorsum, ankle, and interior of the legs and patients have a positive Stemmer sign (skin of the dorsum of the foot cannot be pinched with the fingers)[2]. The definite diagnosis requires lymphoscintigraphy that has a 92% of sensibility and 100% of specificity, but this technique is not fully available[3]. Its physiopathology is characterized by the accumulation of interstitial fluid due to lymphatics are unable to transport the volume of the lymph that is being produced (due increase of BMI) in association with the decreased muscle contraction to transport this fluid[2]. Other theory is that lymphatic vasculature is damaged due to mechanical compression and a chronic inflammatory process[3]. Its treatment includes compressive measures (garments or pneumatic compression) and treating the underlying cause (reduce BMI to 50 kg/m^2)[2].

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