Clinical Imaging

A case of disabling lipedema

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55-year-old woman presented with a progressive increase in body weight restricting her movement and daily activities. She first started gaining weight at the age of 15 years. Initially, it was restricted to the thighs and legs, but gradually it affected her arms and forearms also. Over the years, her weight increased and for the past 10 years the weight gain, as well as, the huge girth of both upper and lower limbs incapacitated her to such an extent that it became difficult for her to perform her daily activities. She also complained of aches and pain in her limbs. The trunk was relatively spared. She tried to lose weight by lifestyle modification. Although she lost a few kilograms, the limb girth did not reduce appreciably. She developed hypertension at the age of 50 years and has no other comorbidities. She had normal menstrual cycles and attained menopause at 50 years. On examination, she had a weight of 102 kg and a body mass index of 44 kg/m². She had a disproportionate accumulation of fat forming multiple lobules in both thighs and arms extending to both legs and forearms with thickened and indurated overlying skin. The fat lobules were seen hanging from the arms when elevated. She also complained of frequent bruises, visible over the forearm at the time of presentation. There was visible telangiectasia over the thighs and legs. She did not have any pedal edema or facial puffiness. There were no acanthosis nigricans, buffalo hump, moon facies, or purple striae. Kaposi-Stemmer sign was negative. On investigation, hemoglobin was 10.4 g/deciliter, fasting plasma glucose was 103 mg per deciliter, glycated hemoglobin was 5.6%, thyroid stimulating hormone was 1.4 micro international unit per milliliter, liver function, and renal function tests were normal. Prothrombin time and activated plasma thromboplastin time were normal. Serum cortisol at 8 am after 1 mg dexamethasone the previous night was 1.6 mg/deciliter. After the exclusion of other causes, she was diagnosed as a case of stage 3 lipedema without evidence of lymphedema. She was advised healthy lifestyle, compression stockings, manual lymph drainage, and liposuction.

Lipedema is a chronic progressive loose connective tissue disorder characterized by the accumulation of fibrotic adipose tissue and extracellular fluid in limbs due to microvascular

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inflammation [1]. It is proposed that the prevalence of lipedema is 1 in 72000 [2]. It almost exclusively affects women, symmetrical in nature, with easy bruising, telangiectasias, and minimal pitting edema, affecting mainly extremities but sparing hands and feet [3]. According to severity, it is usually classified into 3 stages [4]. Stage 1 has smooth skin and small nodules, stage 2 has uneven skin, walnut-sized nodules, reversible or irreversible edema, and stage 3 has markedly thickened and indurated skin, disfiguring fat deposits, macronodular changes, and is often associated with lymphedema.

A similar case was reported in a 41-year-old woman who started increasing weight and leg size since puberty and underwent bariatric surgery due to a misdiagnosis of morbid obesity which reduced her truncal obesity with no improvement of leg size; rather she developed severe protein energy malnutrition [3]. Apart from compression stockings, liposuction is at present the most promising and useful treatment modality for lipedema [5]. A case series consisting of 5 cases at various stages of the evolution of lipedema was reported. All of them were treated non-surgically with healthy lifestyles including changes in attitude, manual lymphatic drainage, and various antioxidant phytotherapeutics. In none of them, liposuction was done [6]. Hesperidine and diosmin are the currently recommended antioxidant treatment [7].

Lipedema is often misdiagnosed as simple obesity. Correct identification of the disease is needed as they have different treatment modalities. Treatment objectives should be individualized for each patient. Pain and discomfort along with bruises and ulcers are often the main concerns which may improve with conservative management. Huge limb volume causing immobility may need liposuction.

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