

Advanced diagnostics and management in patients with lipoedema

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Introduction: Lipoedema is a chronic condition of subcutaneous fat and connective tissue which builds up in lower extremities, belly, hips, buttocks and sometimes arms, bilaterally. The lower body is larger than upper body and feet and hands are not affected. Spider veins or varicose veins and easy bruising on the legs are common. The exact cause of lipoedema isn't known but it may be caused by changes in female hormones and genetic predisposition. The differential diagnosis from lymphedema, venous insufficiency and obesity is crucial despite overlapping conditions. Imaging may be helpful in these cases.

Aim: We aimed to evaluate patients with lipoedema in order to analyse as muscle atrophy on magnetic resonance imaging (MRI) and venous insufficiency on doppler ultrasonography (US) in addition to clinical examination and blood tests.

Method: Fifty-four patients with lipoedema [mean age: 46,48 (SD 12,93) (min 17 – max 74)] were included in the study. Body mass index (kg/m²), circumferential measurement of lower body, pitting test and Stemmer sign were recorded. Complete blood count (CBC), blood biochemistry, CRP, and vitamin D values were evaluated. Bilateral MRI of both thigh and venous doppler US of both legs were examined by two experienced radiologists. The ratio of subcutaneous fat and muscle thickness in the levels of proximal, middle and distal femur were calculated on MR images. The flow rates of lower extremity veins were also examined in doppler US.

Results: Mean BMI was 31,38 (SD 7,81) (min 18,29 - max 57,38). Stemmer' sign and pitting were negative in all patients. Prominent muscle atrophy was seen thigh muscles in obese and morbid obese patients with lipoedema. Regular daily aerobic exercise using Capri Sigvaris compression garment was recommended. Liraglutide prescription and dietician referral were performed in these patients. Chronic venous insufficiency (CVI) were also common in these obese patients. Diosmin/hesperidin prescription and cardiovascular surgery referral were provided. Mean level of vitamin D was 31,64 ng/ml (SD 16,19) (min 16 – max 72). The blood tests of CBC, blood biochemistry, and CRP were in normal limits.

Conclusions: The patients with lipoedema should be evaluated and treated by multi-disciplinary team. Regular physician visits are essential because of life-long feature of lipoedema. Muscle atrophy may be related with increased thickness of subcutaneous fat as shown in MR images. Weight management is crucial since obesity lead to muscle atrophy in lipoedema. Patients should also be encouraged to regular individual exercise program. Interestingly, metabolic tests were in normal limits in these patients despite obesity and morbid obesity profiles of BMI.