

Case Report

Localized Lipedema on the Medial Aspects of Knee: A Case Report

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Introduction

Lipedema is a chronic metabolic disorder of the adipose tissue, of unknown aetiology, and is marked by a bilateral and symmetrical swelling of the lower extremities, caused by extensive deposits of subcutaneous fatty tissue (local lipohypertrophy). Proliferative subcutaneous fatty tissue compresses the lymph collectors of the superficial lymphatic system. Lymphedema is characterized swelling of soft tissues by accumulation of lymphatic fluid [1]. If lipolymphedema remains untreated, it will progress through the same stages as pure lymphedema [1,2].

A helpful diagnostic tool to distinguish lipedema from lymphedema is Stemmers sign. Limb circumference or volume measurements are commonly used for diagnosis and for following lymphedema progression [3]. Developing technology also brings new approaches for lymphedema diagnosis: bioimpedance, 99mTc lymphoscintigraphy, magnetic resonance lymphangiography etc. Ultrasound is recently developing imaging technique for both lymphedema diagnosis and follow up [4].

In this case report localized lipedema which diagnosed with ultrasonography, in a patient with osteoarthritis in the knee joint was discussed.

Case Report

46 year old woman patient presented to us with complaints of localized pain and swelling in the medial knee (Figure 1). There was no significant systemic disease in her past medical history. Physical examination revealed there was no limitation of joint motion range. There was no evidence of inflammation in the joint. Only minimal crepitation was obtained. A painful swelling was detected in the medial joint with palpation. Signs of inflammation on the skin (redness, temperature increase, colour change, etc.) were not detected. Grade 2 lipedema; "orange peel" which skin surfaces become more uneven large fatty lobules begin to form especially on the medial knee, proximal thigh and ankles above the malleoli was detected. Stemmer sign was negative in the fingers of the foot. There was no obesity in our case.

All routine laboratory tests (complete blood count, liver and renal function tests and blood lipid levels) were in normal ranges. Grade 2 osteoarthritis was detected in the knee X-Ray (Figure 2). These findings were evaluated as osteoarthritis. Ultrasonography evaluation revealed an increase in subcutaneous fat tissue thickness, hyper echogenic appearance in fat lobules (Figure 3). These findings were evaluated as localized lipedema in the medial knee.

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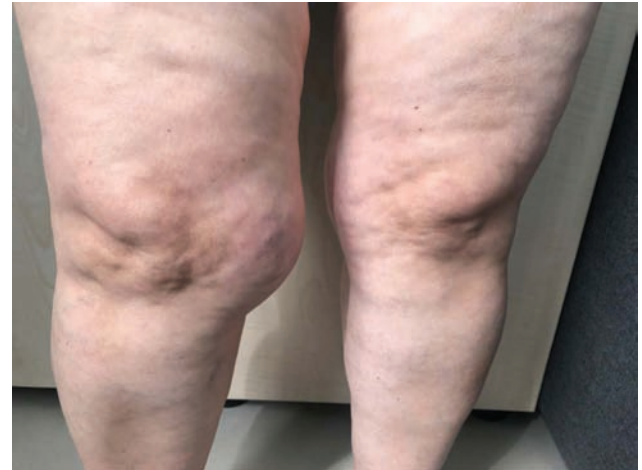


Figure 1: Patient's knees.

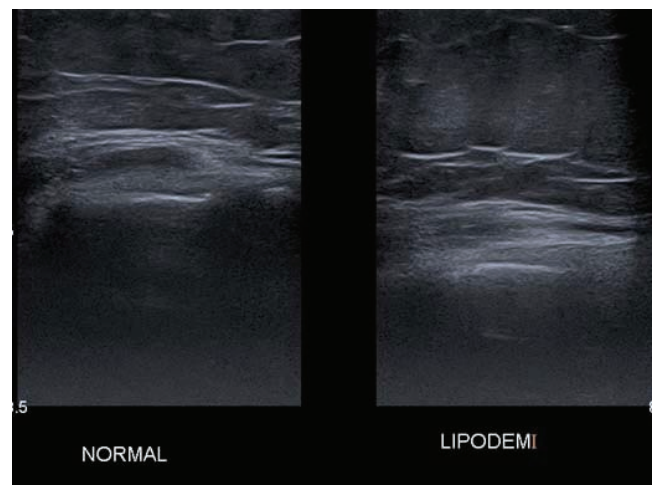


Figure 2: Local lipedema on the medial aspects of knee.

Discussion

As is known, in knee osteoarthritis, the source of pain is the soft tissues around the knee. Although the lipedema is well described, it is relatively rare and often misdiagnosed. This situation is often overlooked in daily routines. In this case, medial localized lipedema in the knee pain is striking. Typical ultrasound findings of lipedema are increased skin and subcutaneous tissue thickness, loss of clarity in the dermo-hypodermal component and subcutaneous fibrosclerosis, seen as an increase in echogenicity in fat tissue [5]. Lipedema ultrasonographic findings characterized by increase in subcutaneous tissue thickness and increased echogenicity in fat lobules [2]. We showed lipedema without lymphedema in our case by ultrasonography.

Lipedema should be considered in differential diagnosis of lymphedema especially in obese patients. Lymphedema occurs diffusely in the extremities. Lipedema is adipose tissue disorder and characterized bilateral enlargement of lower extremities, from hip to ankle. Patients may complain pain and tenderness over extremities [6]. Lipedema can be found in alone or it will progress through the same stages as pure lymphedema.

There was limited knowledge about the especially localized lipedema and condition defined a rare or misdiagnosed disease in literature [6,7]. Dercum disease is a rare adipose tissue disorder which should be kept in mind in respect to differential diagnosis. Main symptoms of the Dercum disease are obesity and painful adipose tissue. Juxtaarticular palpable lipomas exist symmetrically and painful with palpation, patient can describe paraesthesia [8]. There was none of the finding suggesting Dercum disease in our case.

In osteoarthritis, there are changes in the connective tissue around the knee and even cellulitis can be seen. All this soft tissue abnormalities can be source of pain in patients with osteoarthritis of the knee. We thought that localized lipedema and knee osteoarthritis is an association, beyond a complication of osteoarthritis in our case.

Conclusion

Lipedema also should be kept in mind as a cause of soft tissue-induced pain in obese patients with knee osteoarthritis. Localized lipedema is a not well known condition and can be a source of pain in patients without obesity. Ultrasonography is a useful tool to distinguish lipedema from lymphedema, and other soft tissue disorders which could be associated with osteoarthritis.

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