CASE REPORT

Underdiagnosed Lipedema in Primary Care Settings: A Case Report and Clinical Insight from Pakistan

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Abstract

Lipedema, a chronic disorder characterized by symmetrical, exaggerated fat accumulation in the limbs, is sometimes confused with obesity. We have talked about an 80-year-old Pakistani woman with a history of long-standing bilateral lower-limb enlargement that was accompanied by pain, tenderness, easy bruising, and functional restrictions. Her hands and feet were undamaged, and there were no signs of lymphatic congestion. She had previously been misdiagnosed with obesity and venous insufficiency, leading to a delayed and inadequate course of treatment. We diagnosed her clinically, incorporating the standard diagnostic criteria. Conservative management strategies, such as compression therapy, tailored exercise, and dietary recommendations, improved her symptoms and mobility. This narrative emphasizes the importance of recognizing lipedema, particularly in places where knowledge is limited. Early diagnosis is essential to prevent mismanagement, reduce repercussions, and improve patients' quality of life. Clinician awareness needs to increase to provide timely and appropriate care.

Keywords: *Lipedema, obesity, anxiety, case report, quality of life.*

INTRODUCTION

Lipedema is distinguished from obesity and lymphedema by abnormal fat accumulation in the extremities, typically affecting the arms and legs but not the hands and feet. Despite this, it is often misdiagnosed [1]. Dietary modifications have minimal impact on fat accumulation [2]. As the illness worsens, patients may develop secondary lymphedema and may experience pain and easy bruising [3]. Psychological distress related to physical disparity is also frequently expressed [4].

Lipedema is relatively well known in North America and Europe, but still unknown in South Asia, and no cases have been documented from Pakistan. Wrong diagnosis often results in impaired management affecting the quality of life of the patients suffering from the disease [5]. Its pathophysiology is unknown; however, lymphatic dysfunction, microangiopathy, and altered adipogenesis have all been suggested as contributing factors. Since there are no particular biomarkers, the diagnosis is clinical [6].

An autosomal-dominant inheritance pattern has been reported in some families; however, most cases are considered idiopathic [7]. Lipedema occurs almost exclusively in women, affecting approximately 8–17% of adult females, suggesting a hormonal influence [1]. Management is stage-dependent, ranging from conservative measures to surgical options such as liposuction in advanced disease [8].

We present the case of a Pakistani woman with typical clinical features of lipedema to raise awareness regarding this underdiagnosed entity.

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CASE PRESENTATION

An 80-year-old female, known hypertensive and asthmatic, presented with long-standing symptoms of progressive enlargement of her lower limbs, hips and arms over many years, with relative sparing of the upper trunk. She experienced pain in the skin on palpation and skin bruising without trauma sometimes, but denied recurrent cellulitis. There was no family history of such disease.

Overall fat distribution was atypical, with major fat distribution in the lower limbs and arms compared with the upper trunk. Subcutaneous tissue was soft on palpation, but tender skin lumps were noted. BMI was 40.3 with a waist circumference of 90cm and leg circumference of 70cm taken from the mid-thigh. Regular medications included antihypertensives, statins, Selective Serotonin Reuptake Inhibitors (SSRI), and an inhaler for asthma.

The patient was initially diagnosed with obesity many years ago, but when she presented to the author, unusual distribution of fat raised a concern about the diagnosis. Therefore, she was finally diagnosed with lipedema clinically, based on her signs and symptoms [9]. Stemmer sign was also performed for this patient to differentiate it from lymphedema. In this test, there is an inability to pinch the dorsum of the second or third toe in lymphedema, and a negative test is found in lipedema. Cutt-off phenomenon was also present in the patient, which is a typical finding in lipedema [10] (**Figs. 1** and **2**). Stage III was assigned to the patient due to the presence of disfiguring fat deposits and macronodular changes [11]. The diagnosis was explained to the patient with the primary objective of alleviating her symptoms rather than enhancing the appearance of the extremities. Since there is currently no known causally targeted lipedema



Fig. (1): Lipedema stage III evident in the arm.



Fig. (2): Stage III lipedema in legs with cutoff sign and no edema in the feet.

treatment [11], she received counseling, compression therapy, limb massage, and referrals to a dietitian and a physiotherapist. Surgical options were avoided due to age and comorbidities. At follow-up after 3 months, she had partial symptom relief and a better understanding of her condition.

DISCUSSION

Lipedema has recently been included in the 11th edition of the International Classification of Diseases, highlighting increasing awareness of this disease [12]. Despite its name, it is a disorder of subcutaneous adipose tissue rather than true edema. In 1940, Allen EV and Hines EA first described lipedema [13] and defined it as aberrant adipose tissue deposition in the lower limbs and sometimes upper limbs, sparing the feet and hands [13]. The exact cause is yet unknown, but familial clustering points to a hereditary predisposition [7]. Lipedema is frequently misdiagnosed as obesity or lymphoedema, leading to delayed diagnosis and inadequate management.

Our patient had symmetrical lower limb expansion with pain and heaviness, which is consistent with earlier research on the disease [9]. She also had soft tender subcutaneous nodules, pain on palpation, easy bruising, and sparing of the feet. Delayed diagnosis was due to misinterpretation as obesity, lack of awareness among clinicians, and unavailability of pathognomonic laboratory or imaging findings, and her age, as most lipedema presents during and around puberty, which was contrary to our case [14].

This patient was already taking antidepressants for other reasons, but she agreed that her condition and decreased physical mobility also affected her mental health. Other studies have also shown that a delayed diagnosis often brings on mental suffering resulting from lipedema, and worry and sadness [15]. About 16% of patients suffer from eating problems. In comparison, between 31-59% of patients suffer from depression [15]. Furthermore, the presence of comorbidities and her age further hampered our patient's quality of life, highlighting the significance of early diagnosis. Other features present in our patient were endorsed by studies on the pathophysiology, showing that lipedema involves microangiopathy, which results in discomfort, swelling, easy bruising, increased capillary permeability, and protein leakage [16].

LITERATURE GAP AND CLINICAL IMPLICATIONS

There is a dearth of information from South Asia, and the majority of the literature on lipedema is from North America and Europe [14]. This underscores the importance of early diagnosis, psychological support, and clinician awareness. In Pakistan, epidemiological research is required to elucidate prevalence and results.

One crucial element is the necessity of prompt diagnosis, since patients frequently experience physical and psychological suffering when misdiagnosed [15]. This is corroborated by the fact that our patient was referred again and again before she presented to the study's authors and was not diagnosed for several years. Underreporting is also a result of ignorance; therefore, it is crucial to increase awareness among primary care physicians.

CONCLUSION

This case highlights the diagnostic challenges associated with lipedema and emphasizes the importance of early recognition of the disease. It gives us insight into

considering lipedema as a differential if the patient presents with atypical fat distribution and weight gain.

CONSENT FOR PUBLICATION

Written informed consent was obtained from the patient for publication of this case report.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

The authors used ChatGPT for language editing and manuscript refinement. The authors take full responsibility for the content of the manuscript.

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