

THE ROLE OF CLINICAL METHODS IN THE DIAGNOSIS OF LYMPHEDEMA AND THE TRANSITION TO ADVANCED IMAGING TECHNIQUES

LENFÖDEM TANISINDA KLİNİK YÖNTEMLERİN ROLÜ VE İLERİ GÖRÜNTÜLEME TEKNİKLERİNE GEÇİŞ

İlhan Celil ÖZBEK¹ 

¹Health Sciences University, Kocaeli Derince Training Research Hospital, Department of Physical Medicine and Rehabilitation, Kocaeli, Türkiye

ORCID IDs of the authors: İ.C.Ö. 0000-0003-0508-8868

Cite this article as: Özbek İC. The role of clinical methods in the diagnosis of lymphedema and the transition to advanced imaging techniques. J Ist Faculty Med 2025;88(1):88-89. doi: 10.26650/IUITFD.1591795

Dear Editor,

I read with great interest the review titled 'Lymphedema and Peripheral Lymphoscintigraphy' by Mudun A. in Volume 87, Issue 3 of your journal dated July 19, 2024. I would like to thank the author for their valuable contribution to this important topic, which is highly relevant to physicians managing musculoskeletal disorders (1). While the review effectively highlights the significance of advanced imaging modalities, I would like to emphasise the fundamental role of clinical evaluation in the diagnosis of lymphedema from a physiatrist's perspective.

The diagnostic process begins with a detailed anamnesis, which remains indispensable. Key elements include the onset of swelling, symmetry, triggering factors such as surgery or infections, and family history. Additionally, medications and comorbidities should be thoroughly evaluated as they can provide crucial insights into the aetiology. For example, acute swelling may bring to mind conditions such as deep vein thrombosis, cellulitis, or trauma. In contrast, gradual, progressive swelling developing over weeks or months may point towards chronic venous insufficiency, lipoedema, renal disease, or heart failure (2, 3).

Clinical examination through inspection and palpation is equally essential. Features such as changes in skin colour, texture, pain, temperature, and the presence of Stemmer's sign provide important diagnostic clues. Stemmer's sign, assessed by attempting to lift the skin over the second toe or third finger, is positive when the skin cannot be pinched, showing at least stage 2 lymphedema due to fibrosis. However, a negative sign does not exclude the diagnosis (3, 4).

Volume measurement methods further enhance the clinical assessment, offering valuable information for diagnosis, treatment monitoring, and follow-up. Circumferential measurements, the most common method in daily practice, involve measuring the limb circumference at defined intervals. While practical, accuracy relies on consistent landmarks and proper technique. It is also important to consider normal physiological volume differences, such as the 8-9% variation between the dominant and non-dominant limbs (3, 4).

The water displacement method provides highly accurate limb volume measurements by collecting the displaced water when a limb is immersed. However, its use is limited due to hygiene concerns, water consumption, and challenges in accommodating larger limbs (3, 5). Modern alternatives such as perometry, which employs infrared

Corresponding author/İletişim kurulacak yazar: İlhan Celil ÖZBEK – ilhanozbek7@gmail.com

Submitted/Başvuru: 26.11.2024 • **Revision Requested/Revizyon Talebi:** 18.12.2024 •

Last Revision Received/Son Revizyon: 18.12.2024 • **Accepted/Kabul:** 19.12.2024 • **Published Online/Online Yayın:** 17.01.2025



Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

sensors for automated circumference measurements, offer speed and accuracy but are hindered by high costs. Bioimpedance spectrometry, a method that measures tissue resistance to electrical currents, stands out for its non-invasive, fast, and relatively affordable nature. It is particularly useful in detecting early-stage lymphedema, making it a valuable tool for timely intervention (5).

In conclusion, clinical methods remain the cornerstone of lymphedema diagnosis, offering a cost-effective, practical, and readily available approach. These methods not only guide diagnosis but also help in distinguishing lymphedema from other causes of swelling before resorting to advanced imaging techniques such as lymphoscintigraphy. A multidisciplinary approach that integrates clinical methods with imaging is essential for accurate diagnosis and effective management.

REFERENCES

1. Mudun A. Lymphedema and peripheral lymphoscintigraphy. *J Istanbul Faculty Med* 2024;87(3):253-60.
2. Sindel D, Şen Eİ. Meme ve jinekolojik kanserlerde rehabilitasyon ve lenfödem rehabilitasyonu. *Türkiye Klinikleri J PM&R-Special Topics* 2022;15(4):14-25.
3. Borman P. Lymphedema diagnosis, treatment, and follow-up from the viewpoint of physical medicine and rehabilitation specialists. *Turk J Phys Med Rehab* 2018;64(3):179. [\[CrossRef\]](#)
4. Turna İF. Lenfödem Tanı ve Tedavisine Güncel Bakış. *Acıbadem Univ Bilim Derg* 2020;(1):14-22. [\[CrossRef\]](#)
5. Brorson H, Svensson B, Ohlin K. Volume measurements and follow-up. In: Greene AK, Slavin SA, Brorson H, editors. *Lymphedema presentation, diagnosis and treatment*. Switzerland: Springer. 2015. pp. 115-22. [\[CrossRef\]](#)