ABSTRACT

Although total limb volume measurements are used to track the progress of lymphedema and its treatment, these measurements can be confounded by changes other than fluid excess namely muscle or fat gain. Bioelectrical impedance analysis (BIA) is a technique that specifically quantifies both total body fluid and extracellular fluid in extremities. Whereas BIA has potential as a quick, inexpensive, and quantitative technique to measure directly fluid gain or loss from lymphedema, it also has certain shortcomings that must be addressed before it can be validated. This paper examines the background that explains why measuring total limb volume is insufficient to quantify the extent of peripheral lymphedema and explores the advantages and drawbacks of using BIA for this purpose.