ABSTRACT

Accurate assessment of the swollen limb is crucial to effective management, and usually consists of measurement of volume and assessment of skin condition. Here, we review the different methods available to measure volume, and their accuracy, together with other non-invasive methods available to assess the characteristics of the swelling. These include the measurement of fluid mobility by recording deformation of tissue by a mass (tonometry) and the step compression method; the measurement of truncal swelling by skinfold calipers; imaging techniques (magnetic resonance imaging, computed tomography, ultrasound) which provide information on size and other characteristics of the different tissue compartments; and measurement of impedance (amount of extracellular water and total water content). The varying quality of swelling, as well as its extent and distribution, indicates the need for objective methods of assessment other than simple limb volume measurement. Such detailed information should improve the understanding of peripheral lymphedema.