

Measuring body composition in Huntington's disease

Paul de Vreede¹, Fleur Veldkamp¹, Wilco Achterberg^{1,2}

1. Huntington Centre Topaz, Nachtegaallaan 5, 2225 SX Katwijk, The Netherlands

2. Department of Public Health and Primary Care, Leiden University Medical Center, 2300 RC Leiden, The Netherlands

Background

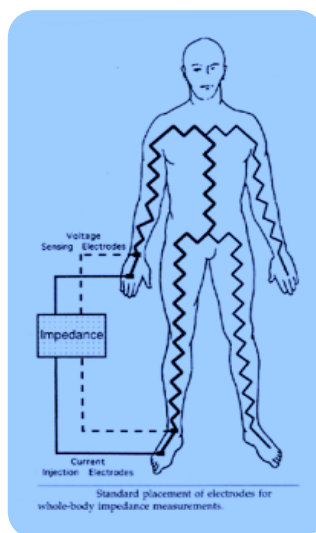
Involuntary weight loss and malnutrition is a well-known and dreaded outcome in patients with HD. In long-term care, patients are usually weighed once a month, and the malnutrition status is explored by using the Body Mass Index (BMI). The reference BMI value for a healthy population is between 18.5-25. In patients with HD in LTC, this is between 23-28 (Veldkamp, 2013). However, BMI does not include the body composition, that takes into account the relative percentage of fat and non-fat tissue, which is generally seen as a more precise measure of malnutrition.

Aim

To gain a better insight in the nutritional status and changes of body composition (fat mass and fat free mass) in patients with HD, a new measurement protocol was explored, based both on a literature search and expert opinion.

Methodes

Literature was explored and experts were consulted to reach consensus on the best measurement protocol to be used in patients with HD in LTC. Instruments evaluated included: standard weighing, standard BMI, measuring BMI with measurement of knee-height, hand-grip strength and bioelectric impedance analysis (BIA).



Results

International literature and experts concluded that including new measurements to improve the assessment of malnutrition in HD, such as hand-grip strength and BIA are promising, because they have the possibility to assess the nutritional status more precisely. However, these new procedures warrant testing and establishing of normal values in the HD population. These studies have until now not been performed. Normal values are based on healthy individuals (Kyle et al. 2001) (Dodds et al. 2014). Also, no data are available on feasibility and costs.

Conclusion

A new measurement protocol to assess the nutritional status of patients with HD could not be effectuated. First, studies on the normal values of both hand-grip strength and BIA should be performed, next to studies on costs and feasibility.

