ESPEN 2011 - Abstract Submission

Abs Title: BIOIMPEDANCE ANALYSIS IN A WEIGHT-LOSS PROGRAMME DURING CARDIAC REHABILITATION

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Rationale: Bioimpedance is a quick, non-invasive method to assess body composition, to track changes in fat proportion during a weight-loss programme and to follow-up changes in body water proportion and shift between extra- and intracellular spaces. These parameters are of interest in a cardiac rehabilitation unit.

Methods: Patients were selected based on their willingness to participate in a weight-loss programme during their rehabilitation. Quadscan4000 was used to measure body composition. We used a balanced, low-fat diet based on the measured Basal Metabolic Rate. Beside the routine physical training, patients were advised to walk an extra 5 km, monitored with a pedometer. Data were analysed with Student's paired T-test.

Results: Ten patients undertook the programme. Their mean age was 57 ± 11 years. The mean BMI was proved to be 38.6 at the start. The average weight-loss was 4% (p=0.01). The measured initial fat proportion was 46.8%, that declined significantly (p=0.01) to 44.5%. The lean body mass did not changed significantly, even a slight increase could be detected (52.2 kg to 52.4 kg). The BMI decreased significantly (p=0.01) to 37.3. The BFMI decreased from 18.3 to 16.5 (p=0.007), meanwhile the FFMI was stable. Patients daily walked on average 4 km. They reached or exceeded the 5 km limit in 30% of the days (min: 1.14 km, max: 13.7 km).

Conclusion: Patients who intended to loose weight could succeed with the help of professionals in a controlled environment. This initial change is crucial, because it demonstrates the result of efforts and it is a fix point that can be referred to in the later phase of weight-loss programmes. Bioimpedance analysis serves as control in adherence to the programme and raises the compliance of the patients.

Disclosure of Interest: None Declared

Keywords: body composition, Obesity