seca mBCA

Case report: cardiac insufficiency
Medical field: cardiology

1 Patient data

Age: 65 years
Gender: male
Height: 1.81 m

Initial weight: 102.85 kg
Initial BMI: 31.40 kg/m²

2 Medical history / diagnosis

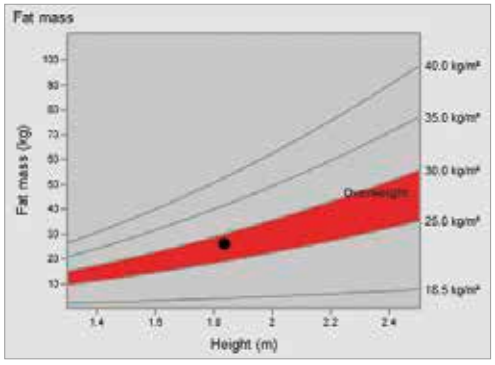
A 65 year-old obese man is suffering from cardiac insufficiency which is being treated with medication. The insufficiency arose as a result of a cardiac infarction which, in turn, was a consequence of coronary heart disease. At 31.40 kg/m², BMI is in the obese range, which is rated a risk factor. In the course of a routine examination, the determination of body composition is intended to provide further information about the patient's condition.

3 Graphs of measuring results

Fat mass

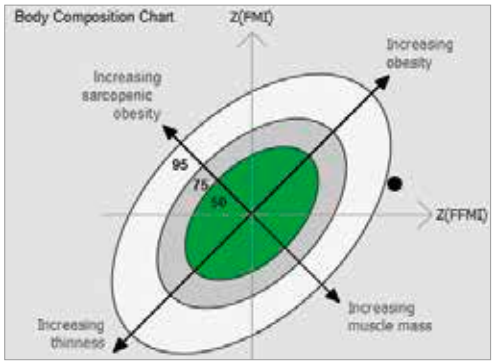
Looking at fat mass, it is noticeable that at 25.90 kg, this makes up just 25.00 % of total weight and is thus in the normal range.

- Fat mass (FM): 25.90 kg
- Fat percentage (FM %): 25.00 %
- Fat mass index (FMI): 7.91 kg/m²



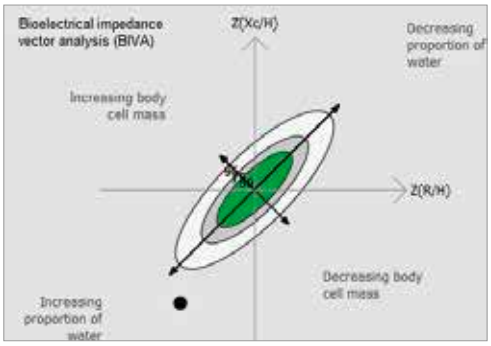
Body composition chart (BCC)

The BCC shows the reason for the low fat mass compared to the high BMI. The measuring point is outside the normal range, fat-free mass is increased. Normally this would be deduced to indicate increased muscle mass.



Bioelectrical impedance vector analysis (BIVA)

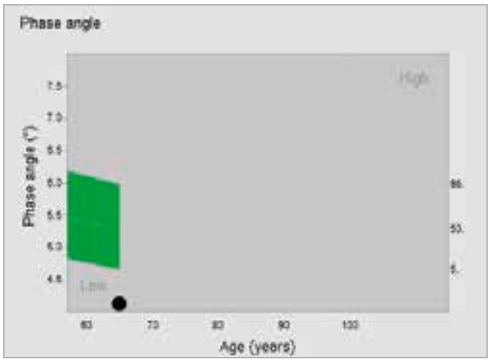
Bioelectrical impedance vector analysis, on the other hand, provides information about the elevated fat-free mass: muscle mass is not the influencing factor here, but increased water retention. This can be seen from the fact that the measuring point is not in the high cell mass area. This in turn confirms the clinical picture: cardiac insufficiency with water retention.



Phase angle

This is finally also confirmed by the phase angle. The more muscle mass and less fat mass, the higher the phase angle. Edemas, on the other hand, cause low phase angle values.

- Phase angle φ: 4.1°



4 Summary

The severe overweight is attributable in particular to increased retention of extracellular water caused by the cardiac insufficiency. Treatment with diuretic medication, for example, might reduce water retention, the progress of which can be monitored using the seca mBCA.

The patient has a very high BMI which is not attributable to an elevated fat mass, however, but to elevated extracellular water retention as a consequence of cardiac insufficiency, which needs to be reduced.

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