seca|mBCA

Medical background of the
medical field **nephrology**

1 Definition

Chronic kidney disease (CKD) is a condition characterized by a gradual and progressive loss of the kidney function over a period of months or years. The damage to the kidneys must persist over a period of more than 3 months and must be associated with structural renal damage or an alteration of the blood and urine markers. In the end stage, the kidney function has decreased to less than 15 %. As the kidney is no longer able to clean toxins and waste products from the blood, the body is gradually poisoned by the urea that cannot be excreted. This results in water retention in the entire body.

2 Prevalence

In Germany, the frequency of CKD cases is approx. 1,050 per million inhabitants. Since 1995, the number of dialysis patients has increased by more than 50 %, while the number of patients with a kidney transplant has risen by more than 70 %. The growth in the number of cases is derived exclusively from the age group of over 65 years. In the younger age groups, the frequency of chronic kidney disease has been largely stable.

In the United States, more than 20 million people suffer from chronic kidney disease. This means that more than 10 % of adults are affected. The risk of having CKD rises with age of over 50.

3 Diagnosis

Water retention, increased blood pressure.

4 Therapy

Treatment of the underlying disease and secondary disorders; dialysis treatment or transplantation in the more advanced stages.

Apart from excreting toxic products, the kidneys also have to maintain a stable balance of the body's fluids. If the kidneys are no longer able to fulfil their function, excess fluids and waste products have to be removed artificially by dialysis treatment.

seca ®
Precision for health

5 Benefits offered by the seca mBCA

The seca mBCA can determine and assess the dry weight by means of the bioelectrical impedance vector analysis (BIVA) method. It also allows the condition before and after dialysis to be compared. The example shows a patient with a well-controlled disease.

Bioelectrical impedance vector analysis (BIVA)

Increasing body cell mass

Decreasing proportion of water

$Z(Xc/H)$

$Z(R/H)$

Decreasing body cell mass

Increasing proportion of water

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