



Technology Offer

Ref.-No. M2111

Salt provocation test (SPT)

Introduction

Nearly one billion people worldwide suffer from high blood pressure. Being a severe risk for heart attack and stroke, hypertension is a major global health problem and its prevalence is predicted to increase even more in the next years.

The main problem is that, so far, an early predictive diagnosis is not possible. When arterial hypertension is manifest, the cardiovascular system is often already irreversibly damaged.

It is generally understood that hypertension is related to high salt intake. Although the deleterious effects of high sodium intake are well described, the underlying mechanisms are not clear.

Invention

The SPT is based on the assumption that the functional condition of the endothelial Glycocalyx (eGC; a biopolymeric layer covering the inner wall of blood vessels) is a prognostic parameter for high blood pressure disposition. The sodium buffer capacity of the eGC is tested by salt intake under two specific conditions (\pm blocking cocktail). A transient difference between blood pressure in presence/absence of the blocking cocktail quantitatively reflects "vascular salt sensitivity" and discloses an increased disposition for high blood pressure.

For background information see Oberleithner (Two barriers for sodium in vascular epithelium? Annals of Medicine, in press).

Patent situation

A European patent application has been filed.

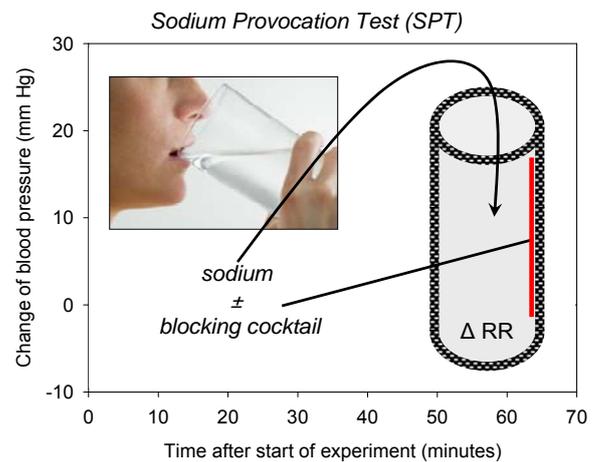
For further detailed information please contact:

Clinic Invent

Dr. Marion Willenborg
Albert-Schweitzer-Campus 1,
Gebäude D 3
D-48149 Muenster

Tel. +49-(0)251/83 58 904
Fax +49-(0)251/ 83 58 905

marion.willenborg@ukmuenster.de



Advantages of the invention

- Disposition for high blood pressure can be determined in just two one-hour sessions.
- No invasive methods are being used, just conventional measurements of blood pressure.
- The test is useful for any age
- Preventive actions (e.g. life style changes, phytotherapy, mild conventional therapy) to maintain normal blood pressure can be started if the test result is positive.
- Long-term damages of the blood vessels can be prevented.