Tohoku Univ. Technology

Diagnostic device for Arteriosclerosis and Aneurysm
Can diagnose in a short time while sitting!!

Measurement principle

Diagnostic device

Overview

Causes of fatal diseases such as cerebral infarction and myocardial infarction include vessel diseases such as arteriosclerosis, vascular stenosis, or aneurysm. Early non-invasive detection of such vessel diseases can prevent the development of fatal diseases. Conventional PWV tests can only determine vascular stiffness. The present invention is a novel method that combines viscoelastic analysis of blood vessels and irregular vibration analysis of blood vessel walls.
It is a noninvasive diagnostic method that can cope with various causes of arteriosclerosis. Aneurysms in the trunk, which are distant from the measurement site, can also be determined.

★The software patent was filed jointly with Rise Corporation, and the software
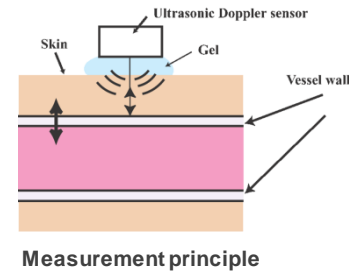 will be manufactured by the company.
★A prototype of the equipment has been completed, and it is available for loan upon request.

Features・Outstandings

a) Healthy example   b) Arteriosclerotic case   c) Case of aneurysm disease

a)   Healthy examples have an elliptical vessel wall pulsation trajectory.
b)   In arteriosclerotic cases, the shape of the ellipse is asymmetric and shows irregular trajectories.
c)   Aneurysms increase the appearance of small loops with biphasic waveforms and orbital irregularities.

Product Application

□ Diagnostic device for arteriosclerosis and aneurysm
□ Arteriosclerosis/Aneurysm progress monitoring device
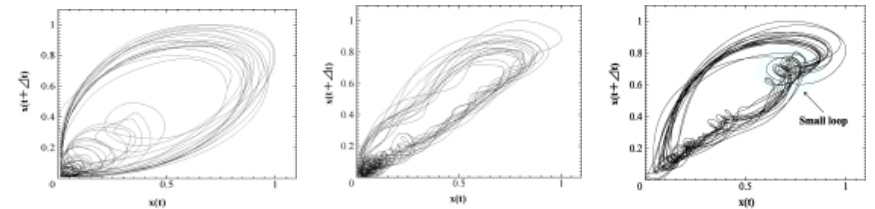□ Diagnostic device for other vessel diseases

IP Data

IP No.   : JP6867651
Inventor   : YOKOBORI Toshimitsu, SAIKI Yoshikatsu, ITO Masatoshi,
                  OTOMO Yuji
Admin No. : T10-020, T16-168

Related Works

[1] JST Tohoku University New Technology Briefing July 27, 2021
https://shingi.jst.go.jp/pdf/2021/2021_tohoku_1.pdf

Contact

Tohoku Techno Arch Co., Ltd.
Please visit CONTACT here