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강연제목: 한의학 진단기기 개발 및 정량적 진단기술 적용 동향 / Development of diagnostic devices in Korean medicine and trends in application of quantitative diagnostic technologies

Abstract:

The 4 diagnostic methods of Korean medicine (KM) consist of visual inspection, auscultation, palpation, and questionnaire. In order to quantify the methods, various techniques have been developed. Visual inspection consists of facial diagnosis, tongue diagnosis, analysis of body type and posture, and analysis of color and shape. Auscultation includes voice diagnosis, analysis of abdominal sound and respiration. Palpation refers to pulse diagnosis, abdominal stiffness, sensitivity, and coldness. Questionnaires include health status, constitution, and pattern identification (PI) questionnaires. With the 4 diagnostic methods, the PI and constitution of KM come out as a result, and the corresponding acupuncture points are stimulated with heat, light, and electromagnetic sources. The directions of making them wearable devices are introduced as well.

Brief Biosketch

He received his bachelor's, master's and doctoral degrees in Electrical and Electronic Engineering from KAIST. He worked as a post doctor at CMRR in University of Minnesota from 2001 to 2002, and he worked as a senior researcher at Computing Lab. in Samsung Advanced Institute of Technology (SAIT) from 2002 to 2007. Since May 2007, he has been working as a principal researcher in the Digital Health Research Division of the Korea Institute of Oriental Medicine (KIOM), and is a professor in the Department of Korean Convergence Medical Science at University of Science and Technology (UST). He received the certificate of a New Excellent Technology (NET) from the Ministry of Health and Welfare due to developing a computerized tongue image analysis system (CTIS). He also developed a voice diagnosis system, abdominal examination devices, and stimulation devices for healthcare. His research interests are image processing, bio-signal processing, medical systems, and quantification of KM.