Neurorehabilitation Based on Brain Function Measurement in Takizawa Method

Toshiyuki Tanaka¹

¹ Department of Applied Physics and Physico-Informatics, Faculty of Science and Technology, Keio University, Japan
(Tel: +81-(0)45-566-1603; E-mail: tanaka@appi.keio.ac.jp)

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The number of stroke patients has increased in step with the aging of the population in many countries. We proposed a new rehabilitation system with easy devices that is so-called "Takizawa method". Although the Takizawa method is estimated as a method that reduces the burden of physical therapists (PT), the assessment is not sufficiently performed. Tanaka laboratory has some topics of analysis for the Takizawa method, such as an inverse problem analysis and a multiple classification analysis. We discuss what we can do for Takizawa method rehabilitation in the next step.

In our laboratory, we have measured the brain function by fNIRS, in order to check activation site in the brain. Although the fNIRS can measure the activation site near the cephalic surface, it cannot precisely obtain the activation site in the deep of brain. We have tried to obtain the position of activation site in the deep part of brain by using the mathematical method of inverse problem. As the matter of course, we will carry on the approach of measuring the precise activation site.

Here, we consider corroboration of the study for neurorehabilitation with the other universities. We can discuss using the other device such as the electroencephalograph