

Detecting the Medicine On/Off State in Parkinson's Disease Based on 3D acceleration data : Using Machine Learning

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One of the characteristics of Parkinson's patients is that they show abnormalities in gait. In particular, the medicine state, also termed the "On"/"Off" state, was observed to be significantly different. Therefore, the timing of taking medicine for patients is a very important factor in their lives. As time passes after taking the medicine, abnormalities in the patient's gait are observed. We would like to use this point to suggest the timing of taking the medicine to the patient.

First, 3D acceleration data were collected before and after taking the medicine to distinguish gait abnormalities. After developing a machine learning model to predict Freezing of Gait (FoG) by using this data, we will count the number of FoG and suggest the timing of medicine administration.



Figure 1 Differences in gait according to Medicine On/Off state

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References

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