SEQUENCE EFFECT IN DE NOVO PARKINSON’S DISEASE

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Introduction: Progressive slowness in speed or progressive decrease in amplitude of repetitive movements is a unique feature in Parkinson's disease (PD). It can be called sequence effect. It is a well-known feature of bradykinesia in PD. Until now, it has been well documented in advanced PD, but not in early, drug-naïve PD.

Aim: The aim of this study is to know whether the sequence effect can be measured in early, drug-naïve PD as well.

Methods: We reported the sequence effect in advanced PD with a computer-based, modified Purdue pegboard in previous study (peg movements). In the first experiment, we measured general slowness and the sequence effect separately in de novo PD with the same device. In the second experiment, we also measured those separately with another type of computer-based device (pentagon drawing).

Results: As in advanced PD, we observed progressive slowness during movement, that is, sequence effect, in both experiments.

Conclusions: These results show that the sequence effect can be identified in drug-naïve PD, as well as in advanced PD with objective measurements and support the idea that the sequence effect is a feature in PD observed from the early stage of the disease without medication.