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# The effect of the Fascial Distortion Model on Micrographia in Parkinsonism - a single system study

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# Abstract

**Introduction**
Patients with idiopathic Parkinson's disease typically suffer from a wide range of motor and non-motor problems. Besides the cardinal symptoms of akinesia, tremor and rigidity, micrographia, another common symptom in Parkinson's disease, is characterized by small handwriting with further progressive reduction in size. There is no proven theory that could explain the pathophysiology of micrographia exactly. The therapies described so far are time-consuming and involve a high risk of relapse. Until now, there exists no specific manual treatment for improving micrographia in neurorehabilitation.

**Methodology**
The method according to the fascial distortion model addresses local changes in the area of the forearm fascia. It is suited to reduce functional impairments associated with this symptom complex by applying targeted manual techniques.

**Main Outcome Measures**
One patient (male) participated in the study. A writing sample was used for the quantification of the writing skills. Subsequently four treatments of the forearm fascia were performed (once a week in four weeks). A follow-up measurement of four weeks was taken.

**Results**
Evident improvements of writing speed, letter height and surface area were achieved. Surprisingly, rigidity and diadochokinesia were improved as well. The long-term measurement showed no deterioration of the effects.

**Discussion**
The fascial distortion model is a potential effective and low-priced method for influencing writing skills in patients with idiopathic Parkinson's Disease. In order to change also neurological parameters, the treatment acts as a bottom-up therapy and changes even neurological pathways and the perspective of understanding the disease.

**Conclusion**
FDM probably fills in a current gap in neurorehabilitation. Therefore, more research on FDM is necessary in order to make reliable conclusions on its efficiency in long-term rehabilitation. Larger randomized studies are needed to confirm these results.



**Keywords**
Parkinson's Disease, Fascial Distortion Model, Micrographia and Handwriting