

Influence of a strengthening program with visual feedback on the condition of a patient with muscular dystrophy Emery triptych – a single case study

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Abstract

The aim of this study was to find out if the PIXFORMANCE Smart Trainer, a device to support independent training, is suitable for acquiring a homework program to improve strength by oneself accompanying physiotherapeutic interventions. Therefore such an exercise program was implemented in the framework of a single-case study according to the ABAB-principle with a 10-year old boy over a timeframe of eight months who suffers from Emery-Dreifuss muscular dystrophy, a very rare, x-linked genetic defect which is characterized by a progressive loss of strength of the striated muscles of the locomotor system and the myocardium.

The outcomes of the tests implemented at the beginning and at the end of each intervention phase including the 6MWT and the 10MWT hardly changed during the investigation period, which implies that the progression of the symptoms probably cannot be stopped by a regularly performed standardized exercise program. However, a positive trend as it appeared in the 6MWT rather than in the other tests indicates that it at least can be reduced. In addition a substantial improvement in stamina is very likely. The PIXFORMANCE Smart Trainer played a substantial role in this study as a motivator and means to improve exercise control.

Would you like to read the entire study?

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