

## عنوان مقاله:

Hybrid FES-Robotic System on Improvement of Foot Drop after Stroke: Case Report of Patient with Chronic Stroke

## محل انتشار:

هجدهمین کنفرانس بین المللی فناوری اطلاعات، کامپیوتر و مخابرات (سال: 1401)

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## خلاصه مقاله:

**Purpose:** The purpose of this case report is to present and to assess a new exercise therapy using an intelligent robotic system endowed by the functional electrical stimulation (FES) for gait improvement in a person with foot drop due to stroke. **Clinical Description:** The subject was a ۳۰-year-old man who had suffered a hemorrhagic stroke patient ۸ years ago. He had gotten all proper conventional physical therapies, yet suffered from right foot drop which affected significantly on the gait quality. **Intervention:** The patient wore the FES-robotic system on his impaired ankle and walked about ۵۰ strides in each therapy session. During each gait cycle, the subject voluntarily determined the starting times of the dorsiflexion and plantarflexion of the affected ankle through toughing a sensor. **Measure and Outcome:** Three clinical tests including Functional Ambulation Category (FAC), Fugl-Meyer Assessment (FMA), and Mini Balance Evaluation System Test (Mini-BESTest) were conducted. In addition, the kinematic analyses of the patient movement were carried out. All related quantitative indexes increased after four month exercise therapy. **Implications:** The gait quality in the patient improved after getting the proposed exercise therapy using the utilized FES-robotic system.

## کلمات کلیدی:

case report; stroke; functional electrical stimulation; exoskeleton; foot drop

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1636143>

