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Concept of a Low Cost Gait Rehabilitation Robot for Children with Neurological Dysfunction

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Abstract : Restoration of gait ability is an important task in the rehabilitation of people with neurological disorders presenting a great impact in the quality of life of an individual. Based on the motor learning concept, robotic assisted treadmill training has been introduced and found to be a feasible and promising therapeutic option in neurological rehabilitation but unfortunately it is not available for most patients in developing countries due to the high cost. This paper presents the concept of a low cost rehabilitation robot to help consolidate the robotic-assisted gait training as a reality in clinical practice in most countries. This work indicates that it is possible to build a simpler rehabilitation device respecting the physiological trajectory of the ankle.

Keywords : bioengineering, gait therapy, low cost rehabilitation robot, rehabilitation robotics
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