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강연제목: 뇌졸중 환자의 고유수용성 감각 재활/
Proprioceptive sense rehabilitation in stroke patients

Abstract:

Recent studies have reported that the effectiveness of robotic rehabilitation for patients with brain lesions, including strokes, may not significantly differ from traditional therapies. Several studies are actively underway to improve the effects of rehabilitation robots, highlighting the importance of proprioceptive—understanding joint movement after brain lesions. It has been found that the level of proprioception damage significantly correlates with clinical outcomes, emphasizing the significance of sensory rehabilitation for patients with brain lesions. However, the impact of proprioception on joint control and the development of specific rehabilitation systems remains under-explored. This study analyzed the effect of proprioceptive damage on voluntary control in 13 chronic stroke patients and aimed to develop a targeted rehabilitation system. The study found that lower levels of proprioception significantly affected the accuracy of movement direction early on. This suggests a potential impairment in unconscious joint position sensing and predictive control capabilities when proprioception is damaged. Previous research developed a system designed to enhance proprioception through kinesthetic illusions, which demonstrated significant motor improvements in patients with chronic stroke. However, whether these improvements are directly due to enhanced proprioception remains unclear, necessitating further investigation. This study suggests a new, safe approach for self-directed rehabilitation training for patients with brain lesions, with potential application in future sensory rehabilitation systems.

Brief Biosketch

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