Investigation of Factors Affecting the Ability for Gait Using a Cane and Walking Speed in Patients with Hip Fractures: Factors Determining the Ability for Gait Using a Cane are Different from those Determining Walking Speed

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**Purpose:** The purpose of this study was to clarify factors affecting the ability for gait using a cane and walking speed in patients with hip fractures.

**Methods:** The subjects were 104 patients with unilateral hip fractures. These included 61 patients who were able to independently walk using a cane and 43 patients who were unable to walk without any assistance. We investigated age, gender, standing height, fracture type, postoperative day, fractured and non-fractured isometric hip abductor strength, fractured and non-fractured isometric knee extensor strength, pain, leg length discrepancy, and 10-m walking speed.

**Results:** A multiple logistic regression analysis and a multiple regression analysis revealed that fractured isometric hip abductor strength and pain were significantly related to the ability for gait using a cane (corrected discriminate rate, 74.0%). In addition, fractured isometric knee extensor strength and age were significantly related to 10-m walking speed (coefficient of determination, 0.48).

**Conclusion:** The results suggest that factors determining the ability for gait using a cane are different from those determining 10-m walking speed. Improving fractured hip abductor strength and pain relief were important for the ability for gait using a cane. Our results suggest that improvement of fractured knee extensor strength is important for increasing 10-m walking speed.