Letter

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Letter to the Editor: Determinants of Functional Outcomes Using Clinical Pathways for Rehabilitation After Hip Fracture Surgery

I recently read the article by Kang et al.[1] with great interest. I appreciate the efforts made by the authors to evaluate the functional outcomes of well-designed clinical pathways after hip fracture surgery in older adults and to identify factors predictive of good recovery, in terms of ambulatory function. In my opinion, such research is meaningful and necessary, because few studies have reported functional outcomes using systematic clinical pathways for early rehabilitation after hip fracture surgery in older adults. Other studies demonstrated that the walking ability of patients is not maintained or does not improve after hip fracture than before.[2,3] Therefore, the identification of the main determinants of a favorable prognosis, in terms of ambulatory function at 6 months postoperatively, may facilitate the planning of rehabilitative strategies to improve ambulatory function soon after hip surgery. In general, I agree with the conclusion that cognitive function and balance control soon after hip fracture surgery are independent predictors of ambulatory function at 6 months postoperatively. In clinical practice, patients with impaired cognitive function at the time of initiation of rehabilitation treatment experience difficulties in physical therapy progression, which lead to a poor prognosis for ambulation.

However, some important issues should be discussed. First, there is a possible selection bias. Although the authors have already mentioned this, 41.5% (159 of 383) of patients were lost during the follow-up period. These patients may have not returned to the outpatient clinic for many reasons. For example, they may have not wished to return because their condition improved or failed to improve. Therefore, such a selection bias could not be avoided, because the results were based on the records of patients who had been followed up for 6 months. Second, there is an issue with regard to the methodology. The authors conducted a logistic regression analysis using seven representative variables (age, sex, bone mineral density, Mini-Mental Status Examination score, Berg Balance Scale score, premorbid ambulatory function, and length of hospital stay) to determine independent predictors of a good prognosis, in terms of ambulatory function. However, the univariate analysis reported in Table 3 reveals that the Mini-Mental Status Examination, Berg Balance Scale, and Geriatric Depression Scale scores significantly differed between the good recovery and poor recovery groups. Multivariate regression analyses are generally performed by selecting clinically meaningful variables that are statistically significant in univariate analyses. Therefore, a detailed description of how the 7 representative variables were selected should be provided to confirm the reliability of the results. Third, there is an issue with regard to the generalizability of the results. This is a retrospective cohort study of patients who underwent intensive and multidisciplinary rehabilitation, based on structured clinical pathways. Therefore, the finding that cognitive function and balance control soon after surgery significantly affected the improvement of ambulatory function at 6 months postoperatively cannot be generalized to all patients who undergo hip fracture surgery.

Despite these limitations, I think that the results of this study are very encouraging because 75.5% (166 of 220) of the patients who were rehabilitated according to clinical pathways achieved good ambulatory function. By contrast, only 36%–60% of patients in other studies could walk as well as they did prior to fracture.[2,3] A future comparative, randomized, controlled study that includes patients who undergo conventional rehabilitation and those who are not rehabilitated is required to improve the reliability and generalizability of these results.

Conflicts of Interest Disclosures: The researcher claims no conflicts of interest.

REFERENCES

1. Kang JH, Lee GP, Kim KE, Lee YK, Lim JY. Determinants of functional outcomes using clinical pathways for rehabilitation after hip

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fracture surgery. Ann Geriatr Med Res 2018;22:26-32.
2. Koot VC, Peeters PH, de Jong JR, Clevers GJ, van der Werken C. Functional results after treatment of hip fracture: a multicentre, prospective study in 215 patients. Eur J Surg 2000;166:480-5.
3. Magaziner J, Hawkes W, Hebel JR, Zimmerman SI, Fox KM, Dolan M, et al. Recovery from hip fracture in eight areas of function. J Gerontol A Biol Sci Med Sci 2000;55:M498-507.