

Effect of Multidisciplinary Treatment Approach for Geriatric Hip Fractures*Kenji Shigemoto; Takeshi Sawaguchi, MD, PhD; Kenichi Goshima, MD, PhD;**Shintaro Iwai, MD; Kenji Fujita, MD**Toyama Municipal Hospital, Toyama, Japan*

Purpose: We report the results of the multidisciplinary treatment approach for geriatric hip fractures and evaluate its effectiveness.

Methods: The multidisciplinary treatment approach has been applied in our hospital since 2014. Elderly patients who were admitted to the orthopaedic department with fragility hip fractures were included in the integrated pathway. 597 hip fracture patients were admitted with an acute hip fracture over a 4-year period. We excluded 69 patients: all those aged <65 years, those with pathological fractures, those undergoing conservative treatment, and those with multiple injuries. Time to surgery, hospital stay length, perioperative complications, osteoporosis treatment, and functional recovery were evaluated. The medical costs were compared with those in other acute phase hospitals every year.

Results: The average days from patient admission to surgery in 2014, 2015, 2016, and 2017 were 1.3 days, 1.5 days, 1.3 days, and 1.6 days, respectively; those were about 3 days shorter than the annual national average. The average duration of hospital stay was 18.4 days, 19.7 days, 20.0 days, and 21.1 days, respectively; those were more than 14 days shorter than the annual national average. The most frequent complication was deep venous thrombosis (17.0%), followed by dysuria (13.9%). In addition, as serious complications, pneumonia was 3%, heart failure 0.8%, and pulmonary embolism 0.8%, and the in-hospital mortality rate was 0.9%. The rate of patients who had antiosteoporosis pharmacotherapy at the time of admission was only 23%, but the rate at discharge was 88%, and the continuation rate of pharmacotherapy was 95% at 1-year follow-up thanks to the fracture liaison service. At the time of their discharge from rehabilitation hospital, the proportion of patients who recovered to preinjury functionality was increased to 47% from 35% before the multidisciplinary treatment approach. The total hospitalization medical cost per person for the multidisciplinary treatment was lower than other hospital costs every year.

Conclusion: We have organized a multidisciplinary team for geriatric hip fracture, and this approach resulted in shorter time to surgery and hospital stay than the national average. The multidisciplinary treatment has kept a high rate of osteoporosis treatment at discharge and at follow-up, and better functional recovery. Furthermore, the total medical cost per person was less than national average. Multidisciplinary treatment approach for geriatric hip fractures is possible to conduct in Japan and was effective.