

**For the Better Outcome for Hip Fracture Patients:
The First Orthogeriatric Co-management in Japan**

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Purpose: Although the prognosis of hip fracture has improved over recent decades, mortality following hip fracture is still high. Hip fracture patients are often frail, with several comorbidities. Therefore, the fracture often represents only one of a number of medical problems. These problems are often beyond the scope and expertise of orthopaedic surgeons. To better deal with the special needs of these patients, models for collaborative care of patients with fragility fractures have been developed in which orthopaedic surgeons and geriatricians work together, called orthogeriatric comanagement (OGCM). Recently, some studies have reported lower mortality rates among the patients with OGCM. However, there are no hospitals to provide OGCM to hip fracture patients in Japan. Therefore, general physicians and orthopaedic surgeons in our hospital have collaborated and established a hip fracture center since 2019; furthermore, we started to provide the first OGCM in Japan in 2020. The purpose of this study was to investigate the effectiveness of OGCM in Japan.

Methods: There were 165, 211, and 219 cases of proximal femur fractures operated during 2018 (management by orthopaedic surgeon alone), 2019 (transitional period), and 2020 (OGCM by general physicians and orthopaedic surgeons), respectively. In these 3 groups, 46, 48, and 41 patients were treated during the 3 months from April to June. We compared the waiting time for the surgery, length of hospital stays, and mortality rate of 30 days, 3 months, and 6 months after operation among these 3 groups. We also investigated the osteoporosis treatment intervention (secondary prevention) rate in this study.

Results: The waiting time for surgery was 0.89 days in 2018, 1.5 days in 2019, and 1.56 days in 2020, and the delay of the surgery was found after the collaboration with general physicians. There was no significant difference in the 30-day, 3-month, and 6-month mortality rates among these 3 groups. On the other hand, the length of hospital stay was shortened every year (2018, 20.4 days; 2019, 17.7 days; 2020, 16.1 days). The osteoporosis treatment intervention (secondary prevention) rate improved from 88% in 2018, to 98% in 2019, and 100% in 2020.

Conclusion: There was no significant difference of the postoperative mortality rate among non-OGCM period, transitional period, and OGCM period in this study. It may be partly because the postoperative mortality rate following hip fracture is lower in Japan than in Europe and the United States. Actually, mortality rates 3 months and 6 months after operation in 2018 (non-OGCM period) were 4.3% and 11% in this study. However, an improvement in the osteoporosis treatment intervention rate and a reduction in the length of hospital stays were observed. We concluded that OGCM was considered to be effective in Japan as well as in Europe and the United States.