

Osteoporotic Hip Fracture in the Elderly Patients: Physicians' Views

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Osteoporotic hip fracture is a major healthcare problem, which is associated with a significant mortality, morbidity and socio-economic burden in elderly patients (1). Recently, this type of fracture affects about 20,000 adults annually in Korea (2). The incidence in 2008 was 139/100,000 men, and 286/100,000 women (3). The residual lifetime risk of osteoporosis-related fracture for individuals over age 50 was 23.8% in men and 59.5% in women. That risk of osteoporotic hip fracture was 5.3% in men and 12.3% in women (2,3). These rates in Korea are compatible with those in Japan; 5.6% in men and 20.0% in women (4). Unlike other developed countries (5), the incidence of osteoporotic hip fracture seems to increase in Korea (6).

Usually, the initial care of the hip fracture starts with a medical evaluation at the emergency room. Hip fractures almost always require a surgical intervention, which should be performed as early as possible, because delayed surgery is associated with excess mortality and prolonged hospitalization. However, a cautious medical evaluation and immediate clearance should be performed to reduce perioperative complications. Internal fixation and hip replacement arthroplasty are common surgical treatments. The proportion of hip replacement arthroplasty increased while that of internal fixation decreased annually during the 5 yr in Korea. The surgery usually is followed by a comprehensive multidisciplinary management including rehabilitation and/or nursing home care.

Pneumonia, urinary tract infection, and sore develop in more than 20% of patients after a hip fracture operation. To prevent these complications, the patients should ambulate as early as possible after the operation. The risk of complications increases especially in patients who have predisposing factors such as old age, malignancy, and previous history of venous thromboembolism. Additionally, venous thromboembolism is a life-threatening complication. In western countries, this complication is a common cause of death and medical prophylaxis is routinely recommended. However, the medication frequently causes a serious bleeding and infection. Korean patients have a low incidence of symptomatic venous thromboembolism and quite a few fatal pulmonary embolism. Thus, medical thromboprophylaxis should be done cautiously in patients at risk. In most pa-

tients, mechanical prophylaxis using intermittent pneumatic compression can prevent venous thromboembolism (7). Delirium is another frequent complication affecting 20% to 30% of elderly patients after hip fracture surgery (8), which is frequently undetected in clinical practice. The rate of non-detection ranges from 30% to 60%. Delirium may have serious consequences for the patient and the family members if not promptly diagnosed and treated. It is frequently prolonged or persistent, resulting in increased morbidity and mortality. Therefore, an early diagnosis by close monitoring and prompt treatment should be performed to reduce hospital stay and cost. Sufficient pain management is important to decrease the risk of delirium as well as to encourage early ambulation.

About 50% of senile patients, who experience a hip fracture, will have a second fracture within 3 to 5 yr. Immediate initiation of osteoporosis treatment and educational program decrease the risk of subsequent fracture. Therefore, osteoporosis treatment is important even after hip fracture treatment. However, only 25% to 33% of patients are prescribed for osteoporosis treatment after the first hip fracture. Internationally, a comprehensive systematic approach has been suggested to prevent the secondary fracture (9, 10). Physicians should check vitamin D-25 level and dual-energy X-ray absorptiometry (DXA) if these tests were not done in the last 2 yr. If the patient has osteoporosis, start the osteoporosis treatment immediately. Physicians should check and modify medications, which can make a patient more prone to falls, and discuss environmental modifications of poor lighting and trip hazards at home with patients and their family members. Although an interest on the secondary prevention has been increased in Korea (11), the preventive programs are not been activated well yet.

The 30-day mortality rate after hip fracture surgery is about 10%. Approximately 15% of patients die within 6 months and 20% within 1 yr, which are about 3.5 fold higher compared with those of general population (6). Moreover, the mortality rate increases far much higher, if the patient already had medical comorbidities or has postoperative complications.

In conclusion, Korean populations are rapidly aging and osteoporotic hip fractures are projected to increase drastically.

Osteoporotic hip fracture appears as a significant public health problem with serious socioeconomic burden. Physicians should aware that a comprehensive approach reduces incidence, morbidity and mortality of hip fractures.

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