

Study of Osteoporosis in Stroke Patients

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DESCRIPTION

Osteoporosis is a disease where bone strength decreases and the risk of bone fractures increases. As per the WHO, a Bone Mineral Density (BMD) T-score of -2.5 or below is a characterizing component of osteoporosis. Stroke patients are known to have created osteoporosis because of multiple factors, for example, restricted exercise and lack of nutrients. Bone loss starts immediately after stroke, go on until 3-4 months after beginning, and progresses at a slower rate until one year after beginning. Stroke patients fall frequently because of paralysis and loss of balance, and consequently, femur fractures are 2-4 times more.

Fractures because of osteoporosis in stroke patients are hard to treat and cause different complications, which can prompt death in serious cases. Prevention of fractures because of osteoporosis after stroke is crucial for comprehensive and intensive treatment in early stroke patients. Treatment of osteoporosis in stroke patients incorporates different osteoporosis treatment drugs, strength training, weight-bearing and gait training, and education for fall prevention. Bisphosphonate, the most generally involved drug for osteoporosis, is likewise known to be successful in the treatment of osteoporosis going with stroke. Together with osteoporosis, many stroke patients are likewise determined to have osteopenia. Osteopenia is characterized by a BMD T-score of -1 to -2.5 . The presence of osteopenia improves the probability of osteoporosis, which increases the risk of fractures. There are different reasons for osteoporosis in stroke patients, including exercise limitation and weight-bearing decrease because of paralysis, deficiency of nutrients intake because of eating disorders, intake of different medications, and vitamin D decrease because of deficient sunlight. Changes in BMD after stroke have apparently been connected with age, degree of paralysis, blood calcium level, vitamin D

concentration, and vitamin K concentration during the primary year. The risk of fractures increases after a stroke; specifically, FN fracture occurs 2-4 times higher in stroke patients than normal people of a similar age.

Accordingly, stroke patients mostly develop osteoporosis, which builds the incidence of the spine or FN fracture, which thus increases the length of emergency clinic stay and clinical costs. Thus, early detection and the management of osteoporosis are critical. Different techniques are known for the treatment of osteoporosis, including behavioral changes, diet, and medication treatment. Bisphosphonates, one of the medication treatment choices, are broadly utilized in stroke patients. Consequently, this study explored the change of BMD of the LS and FN after the organization of bisphosphonates in stroke patients with osteoporosis and in stroke patients with osteopenia at a 1-year follow-up assessment to assess the requirement for active rehabilitation treatment and management.

The connection between lack of vitamin D and the prevalence of osteoporosis in stroke patients isn't yet clear. In one review, deficiency of vitamin D was seen in 71% of stroke patients; therefore neither the presence nor absence of lack of vitamin D was confirmed to be fundamentally related to the prevalence of osteoporosis. This study showed a high prevalence of inadequate vitamin D levels in 73.1% of the patients, yet there was no difference between the osteoporosis and osteopenia groups at 71.5% and 76.5%, respectively. In stroke patients with osteoporosis, the organization of osteoporosis medication that suppresses bone absorption created a huge improvement in LS BMD however no massive change in FN BMD. In stroke patients with osteoporosis or osteopenia, early proper medication treatment is critical to prevent bone loss and reduce the risk of fractures, and exhaustive rehabilitation treatment.

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