

L25 PREVENTION AND TREATMENT OF OSTEOPOROTIC VERTEBRAL FRACTURES

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Vertebral fracture is the most frequent complication of postmenopausal osteoporosis. Vertebral fracture is associated with substantial morbidity and to an increase in mortality. After vertebral fracture, patients are often plagued with chronic back pain.

Several therapeutic classes have been developed over the last 15 years, to prevent vertebral fracture in women with low bone mineral density (BMD) and in those with prevalent fracture. The bisphosphonates are antiresorptive compounds shown to reduce vertebral fracture risk by about 50% in women with prevalent vertebral fractures and in those with low BMD. Alendronate and risedronate are given weekly, whereas oral ibandronate is a monthly regimen. Ibandronate can also be administered every 3 months IV, and yearly IV zoledronic acid can reduce the risk of vertebral fracture by about 65%. Raloxifene is a selective estrogen receptor modulator that can diminish the risk of vertebral fracture by 30% in women with prevalent fracture and by 50% in those with low BMD. Teriparatide – a recombinant parathyroid hormone (PTH) 1-34 peptide with a bone anabolic effect – reduces the risk of vertebral fracture by 65%, whereas the intact PTH is

associated with a 50% fracture risk reduction. Strontium ranelate is a compound acting through both increased bone formation and decreased bone resorption. It can halve vertebral fracture risk, even in women over 80 years. Two recent randomized trials have shown that vertebroplasty is not significantly superior to conventional management to reduce back pain after vertebral fracture. Balloon kyphoplasty may improve back pain more than conventional therapy in the short term, but the difference fades after one year of follow-up.

In conclusion, there is a large choice of effective drugs to prevent vertebral fracture. The choice relies on the severity of the disease, but also on the safety profile of these drugs. Persisting back pain after vertebral fracture remains a challenge.