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Review Article and Clinical Experience: Recent Advances in The Treatment of Osteoporosis (The Roles of New Bisphosphonate)

Abstrak :

Osteoporosis (OST) is a condition characterized by low BMD of the spine (T-Score as values reduced less than –2.5 SD) and associated with micro-architectural deterioration of bone. The latter term refers to the development of loss of trabecular element, leading to enhanced bone fragility and increase in fracture risk. Osteoporosis-Type I = OST-Type I (Post Menopausal Osteoporosis = PMO), Osteoporosis-Type II = OST-Type II (Age Related Osteoporosis = ARO), and Osteoporosis-Type III = OST-Type III (Corticosteroid Induced Osteoporosis = CIO) are the most frequent types of osteoporosis in clinical practice. The cessation of estrogen secretion that coincides with menopause is now well accepted to have major role in the pathogenesis of post menopausal bone loss, and PMO may pursue. Evidence suggests that the influence of estrogen loss may be unequal in different parts of the skeleton, with bone loss occurring at an earlier age in spinal trabecular bone and cortical bone loss during post menopausal period. Declining Estrogen levels at menopause result in “High Bone Turnover” and a loss of bone mass, with subsequent increases in bone fragility and the fracture risk. It has been suggested that estrogen may play a role in regulating bone turnover in men as in women. Recent epidemiological study found that serum estradiol and Sex Hormone Binding Globulin (SHBG) but not testosterone levels were associated with BMD in healthy men over 65 years. SHBG is increased in middle-aged men with primary or secondary osteoporosis and well correlated with bone remodeling markers, hip bone mineral density and vertebral fracture risk. OSTEOPOROSIS-TYPE II (ARO) is best exemplified by hip fractures that occurs in older men (>70 years) and women, which are related more to the loss of cortical and trabecular bone through age-related mechanisms (decreased Bone Formation and reduced 1- alpha hydroxylase with its consequences: reduced 1.25 (OH)2 D3, reduced Ca++, increased PTH and then increased Bone Loss).

Keyword :

osteopororosis, biphosphonate

Daftar Pustaka :

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