e-ISSN: 2319-9865
p-ISSN: 2322-0104

Research and Reviews: Journal of Medical and Health Sciences

Analysis on Osteoporosis

Chaitanya M*

Department of Pharmaceutical sciences, Holy Mary college of Pharmacy, Hyderabad.

Short Commentary

Received: 14/03/2015
Revised: 27/03/2015
Accepted: 04/04/2015

*Chaitanya M
Department of Pharmaceutical sciences, HCOP, JNTUH, Hyderabad.

Keywords: Hepatitis, HBV, Vaccine, Hemodialysis

Introduction

Osteoporosis is the disease in the bones. It is the weakening of the bone, the loss of the mineralized bone will be more rather compared to the formation of the bone. This weakening may lead to the breakage of the bone even with very minute fractures or even with a simple cough or sneeze or even small bump. In an average 3million UK people and 54 million of American's suffer with osteoporosis. It is estimated that almost one in two women and one in four women suffer with this osteoporosis. At least 300,000 people take treatment for fragile fractures Bone lives tissue. Existing bone is consistently being replaced by new bone. Your entire skeleton is replaced concerning each ten years. pathology happens once the body fails to make enough new bone, once an excessive amount of existing bone is reabsorbed by the body, or both.

The most vital explanation for pathology is genetic. this suggests that you simply inherit the danger from your oldsters. alternative risks embody not having enough Ca to make new bone tissue. Ca is one among the vital minerals required by your body for bones to make. If you are doing not get enough Ca and calciferol, or your body doesn't absorb enough Ca from your diet, your bones could become brittle and a lot of seemingly to fracture. alternative risk factors embody smoking and numerous childhood and adult diseases.

What is Osteoporosis?

During the childhood the growth of the bone is fast and as the with the age it grows until 16 to 18 later the density of the bone increase in to the late 20's. Osteoporosis is the decreasing in the formation of the mineralized bone and the loss of the bone is increased thereby leading to the high possibility of fractures.

The exact definition of osteoporosis can be given as the bone with lower density and higher fracture risk.

Osteoporosis is usually identified of old age, and people having testosterone deficiency, heredity, very low levels of vitamin C and D, poor fitness, smoking, alcohol, eostergen deficiency, thyroid disorders, drugs use like (prednisolone, anti-epileptics, heparin), renal diseases.

Osteoporosis is evaluated by the following methods like

e-ISSN: 2319-9865
p-ISSN: 2322-0104

In the early stage the bone density and the loss of the mineralized bone is calculated by DEXA scan.
Quantitative computed tomography is an accurate process for measuring the bone density however it uses much of radiation and it can be used to scan anywhere in the body.
Quantitative ultrasonography is also used in the detection of bone loss

Osteoporosis Treatment:

Calcium and calciferol

Building durable associate degreed healthy bones wants associate adequate dietary intake of Ca beginning in childhood and adolescence for every sexes. most importantly, however, a high dietary Ca intake or taking Ca supplements alone is not good in treating pathology and will not be viewed as associate alternate to or substituted for fewer attackable prescription medications for pathology. among the initial a few years once climacteric, quick bone loss might occur albeit Ca supplements unit taken . In most of the adults metallic element and calciferol area unit given in treatment metallic element and calciferol supplementation shown to decrease risk of hip fracture in older adults a thousand mg/day is given in normal dose ; one500 mg/day in biological time women/osteoporosis and calciferol (25 and 1, 25): four hundred IU day at least;
An adequate intake of Ca and fat-soluble vitamin area unit necessary foundations for maintaining bone density and strength. However, Ca and fat-soluble vitamin alone aren't sufficient to treat pathology and will run in conjunction with different treatments. fat-soluble vitamin is very important in many respects:
Vitamin D helps the absorption of dietary Ca from the intestines.
The lack of fat-soluble vitamin alone will cause calcium-depleted bone (osteomalacia), that any weakens the bones and will increase the danger of fractures.
Vitamin D, in conjunction with adequate Ca (1,200 mg of elemental calcium), has been shown in some studies to extend bone density and reduce fractures in biological time girls however not in biological time or perimenopausal girls

Osteoporosis Treatment: thyroid hormone

Likely not as effective as bisphosphonates it's given two hundred IU nasally/day (alternating nares).mostly accustomed bar of pain with acute or break

Osteoporosis Treatment: Bisphosphonates

Bisphosphonates helps within the decrease of and multiple studies demonstrate decrease in hip and os fracturesAlendronate, risodronate IV pamidronate, zolendronate (usually used for hypercalcaemia of cancer, cancer connected fractures, and myeloma connected osteopenia)
Bisphosphonate Associated Osteonecrosis (BON)
Jaw osteonecrosisUnderlying vital dental unwellness
Usually related to IV formulations
Oral formulations K study
Bisphosphonates usage has few contraindications like kidney failure, muscle system erosions
GERD, benign strictures, most benign GI issues aren't a reason
Concern for muscle system irritation/erosions recommendations to drink water once and not change posture a minimum of half-hour

Estrogen Replacement

Estrogen replacement will be useful in reducing the bone method|biological process} and it's a Food and Drug Administration approved processthis process is restricted as a result of some compilications like viscus risk and cancer downside

Osteoporosis Treatment: Selective oestrogen Receptor Modulators

Raloxifene

Osteoporosis Treatment: PTH
Teriparatide helps within the increase of density of the mineralized bone

e-ISSN: 2319-9865
p-ISSN: 2322-0104

Osteoporosis Medications

Osteoporosis treatments area unit offered in several forms. many have to be compelled to be started throughout childhood; others embody pharmaceuticals to treat pathology. Get an overview.

Osteopenia modus vivendi Treatments

Osteopenia might be a term used to describe bone density that is somewhat not up to ancient but not low enough to be diagnosed as pathology.

Osteoporosis Exercise

Weight-bearing exercise is usually associate chance for pathology patients, and it'd even facilitate your bones, as this text explains. seek advice from your doctor before starting a replacement fitness program.

Strontium Treatment for pathology

If you are concerned concerning the bone-thinning health problem pathology, one treatment you'll need detected of and regarded is number thirty eight.

Selective endocrine Receptor Modulators (SERMs)

Raloxifene (Evista) belongs to a class of medication referred to as selective endocrine receptor modulators (SERMs). it's FDA-approved for the hindrance and treatment of pathology in time ladies.

Forteo for pathology

Teriparatide (Forteo) is self-injected into the skin. as a results of semipermanent safety is not yet established, it's entirely FDA-approved for 24 months of use.

Discussion

Studies suggested that the bisphosphonate showed very effective action in the anti resorptive process of bone. However prolonged usage having many side effects, as these drugs are highly potent cannot be used in the case of women in all the cases.

Basically the activity osteogenic may be embroiled neighborhood instruments for example, the arrival of prostaglandin E2, changes in cell films what's more, reparative techniques that repay and surpass the microdanos delivered by the activity in skeletal tissue. Moreover, physical movement can include General hormonal impacts. An endocrine reaction to the exertion is the increment in emission of the Growth Hormone (GH), affected by the force, span, the work created and the measure of muscle mass included. On the other hand, this gainful impact happens you ought to work over the anaerobic edge.

Osteoporosis is induce with the alteration in hemostasis by factors like menopause period, physiological age, hormone deficiency, heredity, obesity, diabetes, inflammation. Functional food factors may help to prevent and treat bone loss and osteolysis. Among many functional food factors, essential trace element zinc, isoflavone genistein and vitamin K2 (menaquinon-7) has been shown to have stimulatory effects on osteoblastic bone formation and suppressive effects on osteoclastic bone resorption, thereby increasing bone mass.

References

1. Ahmad S, Siddiqui Z . Protein Glycation: A Firm Link to Cause Metabolic Disease and their Complications. J Glycomics Lipidomics. 2015; 4:127.
2. Anna Abraham, Fawaz Pullishery . The Effect of Menopause on the Periodontium- A Review . J Interdiscipl Med Dent Sci. 2015;3:170.
3. Bondi CD, Khairnar R, Kamal KM, Witt-Enderby P. An Early Development Budget Impact Model for the use of Melatonin in the Treatment and Prevention of Osteoporosis. Clin Pharmacol Biopharm. 2015; 4: 132

4. Ishii Y, Noguchi H, Sato J, Takeshi Yamamoto RN, Shin-Ichi Toyabe. Effects of Whole-Body Vibration and High-Impact Aerobic Training on Bone Metabolism and Body Balance in Premenopausal Women. J Osteopor Phys Act. 2015 3:127
5. Piccirilli E, Gasbarra E, Baldi J, Pistillo P and Tarantino U. Can Muscular Impairment be the â€œKeyâ€□ for Femoral Fracture?. J Gerontol Geriatr Res. 2014;3:183.
6. Mermerkaya MU, Karaaslan F, Alkan E, Ayvaz M, Bekmez S. Evaluation of External Fixation Results in High-risk Older Patients with Intertrochanteric Femur Fractures. Journal of Surgery [Jurnalul de chirurgie]. 2014; 10(3):217-219
7. Arpadi SM, Shiau S, Arpadi CM, Yin MT. Bone Health in HIV-Infected Children, Adolescents and Young Adults: A Systematic Review. 2014.
8. Tezuka M, Tatehara S, Imamura T, Tachibana R, Takebe Y, et al. Possible Involvement of Leptin in the Elevated Osteoblastic Activity Observed in High Turnover Type Osteoporosis of Ovariectomized Mice. J Autacoids. 2014;3:105.
9. Volgyi E, Wheless JW. Osteoporosis and Obesity in Epilepsy Patients. J Osteopor Phys Act. 2014; 2:e111.
10. KrÃ¶kki O, Bloigu R, Remes AM. High Frequency of Fractures in an Early Stage of MS . J Mult Scler. 2014; 1:109.
11. Touyz LZG. Osteoporosis and Oral Implications. J Osteopor Phys Act. 2:119.
12. Plapler PG, Saron TRP, De Rezende MU (2014) Education and Physical Activity in Osteoporosis. J Osteopor Phys Act. 2014; 2:118.
13. Iversen MD, Rekedal LR, Solomon DH. Development and Results of a Motivational Interviewing Program for Health Education to Facilitate Osteoporosis Self-Management. J Osteopor Phys Act. 2014; 2:116.
14. Moroni A An Overview on the Approaches to Osteoporotic Vertebral Fractures Management. J Osteopor Phys. 2014;
15. Litwic A, Lekarz, Warwick D, Dennison E. Distal radius fracture: Cinderella of the Osteoporotic Fractures. Orthopedic Muscul Syst. 2014; 3:162
16. Sobral MB, Pereira RM, Faintuch J, Marzinotto MAN, Teixeira AC, et al. High Frequency of Osteopenia and Osteoporosis in Alcoholic Chronic Pancreatitis Patients: Preliminary Results. J Nutr Disorders Ther. 2014; 4:139.
17. Handono K, Sari TL, Adam AA. Homocysteine, Folic Acid, Vitamin B6, Vitamin B12, and Biochemical Parameters of Bone Metabolism in Female Patients with Systemic Lupus Erythematosus. J Clin Cell Immunol. 2014; 5:217
18. Leung PC. Osteoporosis and the Orthopedist. Orthopedic Muscul Sys. S2:006.
19. Zhang Y, Dusad A and Ren K (2014) Drug Delivery Strategies for Treating Osteoporosis. Orthopedic Muscul Sys. 2014; S2:003.
20. Gray M. Exercise and Osteoporosis Prevention. Orthopedic Muscul Sys 2014; S2:001.
21. Babatunde OO. Primary Prevention of Osteoporosis: Time to Redefine the Wheel? J Osteopor Phys Act. 2013; 2:e107
22. Kemper EHCG. The Impact of Body Weight for Bone Mineral Density: A One Year Longitudinal Study in a Young Woman who changed her Lifestyle. J Osteopor Phys Act. 2014; 2:112.
23. Ceroni D, Martin XE, Salvo D, Farpour-Lambert NJ, Maurice B, et al. Measure of Vigorous Physical Activity in a Paediatric Population. J Osteopor Phys Act. 2014; 2:111.

24. Picazo DR, Villaescusa JR, ArnaÃz JM. Management of Nontraumatic Thoracics Vertebral Fractures in Elderly Female with Previous Malignant Tumor. J Osteopor Phys Act. 2014 2:109.
25. Matsui Y, Harada A, Takemura M, Terabe Y, Hida T. Falls in Hip Fracture Patients: Relation between Fall Situations and ADL Capability before Injury. J Osteopor Phys Act. 2014; 2:108.
26. Yamaguchi M. Osteoporosis Treatment with New Osteogenic Factors. J Mol Genet Med. 2013; 7:66.
27. McCarthy AD, Molinuevo MS, Cortizo AM. Ages and Bone Ageing in Diabetes Mellitus. J Diabetes Metab. 2013; 4:276.
28. Hamdy RC. Osteoporosis: Translating State of the Art Knowledge into Daily Practice. J Gerontol Geriat Res. 2013; 2:e120.
29. Yamaguchi M. New Development in Osteoporosis Treatment: The Synergistical Osteogenic Effects with Vitamin D3, Menaquinone-7, Genistein and Zinc. Vitam Miner. 2013; S6:e001
30. Tan CO, Battaglino RA, Morse LR. Spinal Cord Injury and Osteoporosis: Causes, Mechanisms, and Rehabilitation Strategies. Int J Phys Med Rehabil 2013; 1:127.
31. Dewilde T, Putzeys G. Pregnancy and Lactation Related Bilateral Stress Fracture of the Distal Fibula in a Young Woman. J Osteopor Phys Act. 2014; 2:1000115.
32. De Martinis M, Ginaldi L. Rethinking the â€œSunshineâ€□ Vitamin. J Osteopor Phys Act. 2014; 2:e110.
33. Sobral MB, Pereira RM, Faintuch J, Marzinotto MAN, Teixeira AC, et al. High Frequency of Osteopenia and Osteoporosis in Alcoholic Chronic Pancreatitis Patients: Preliminary Results. J Nutr Disorders Ther. 2014; 4:139.
34. Lassila H, Johns NP, O'Neil CK, Johns JR, Balk JL, et al. Alternative Options to Manage Menopausal Symptoms with a Focus on Melatonin and Osteoporosis. Clin Pharmacol Biopharm. 2014 3:115.
35. Chen JY. Recalcitrant Hyperkalaemia Associated with a Single Dose Administration of Zoledronic Acid for Treatment of Post-Menopausal Osteoporosis . J Osteopor Phys Act. 2013;1:105.
36. Famili P. Oral Bisphosphonates and Relationship to ONJ and Dental Implants. Dentistry. 2013; 4:188.
37. Bayray A, Enquselassie F. The Effect of Parity on Bone Mineral Density in Postmenopausal Women: A Systematic Review. J Osteopor Phys Act. 2013; 1:104.
38. Yamaguchi M. Osteoporosis: Development of New Osteogenic Factor. J Osteopor Phys Act. 2013; 1:e106.
39. Iwamoto J. Effects of Jumping Exercise and Nutritional Management on Bone Mineral Density and Bone Turnover Markers in a Young Man. J Osteopor Phys Act. 2013; 1:e105.
40. Yamaguchi M. Osteoporosis Treatment with New Osteogenic Factors. J Mol Genet Med. 2013; 7:66.