Coffee Consumption may cut back the chance of Osteopenia/Osteoporosis in biological time

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Abstract

The health impact of pathology on people and also the population at giant is big and its impact on national economies is negative. The aim of this study was to analyze the association between occasional consumption and osteopenia/osteoporosis in biological time and biological time ladies. knowledge of 2929 ladies World Health Organization completed a form regarding their weekly occasional consumption and bone health were retrieved from the Li-Shin Hospital (2006-2011). occasional consumption was classified into zero, 1-4 and 5-7 cups per week (1 cup was cherish 400 mL). pathology and osteopenia were outlined victimization bone mineral densities measured by quantitative ultrasound (QUS). Multiple supply regression was accustomed confirm the association between occasional drinking and osteopenia/osteoporosis. once exclusions were created, a complete of 2533 participants were enclosed within the end. Adjusted confounders enclosed age, serum hepatitis surface matter (HBsAg), anti-Hepatitis C virus (HCV), waist-hip magnitude relation (WHR), body mass index (BMI), smoking, alcohol, tea, exercise, feeder diet, supplements, yogurt, education, and blood group. there have been 1336 biological time and 1593 biological time ladies at baseline. Among the biological time ladies, a rise within the weekly occasional consumption considerably shrivelled the percentages for pathology (P-trend = zero.0179). The consumption of 1-4 and 5-7 cups of occasional per week considerably reduced the danger of pathology/osteopenia (OR = zero.677; 95% C.I. = 0.469-0.978) and (OR = zero.607; 95% C.I. = 0.400-0.923), severally. Among biological time ladies, however, there was no important relationship between weekly occasional consumption and osteoporosis/osteopenia. it had been terminated that occasional drinking would possibly probably minimize the danger of osteoporosis/osteopenia in biological time Taiwanese ladies.

Keywords: climacteric, osteoporosis, osteopenia, coffee

1. Introduction

Osteoporosis is outlined as a progressive general skeletal malady characterised by reduced amount and quality of bones. during this condition, the number of bone (bone mineral density) is >2.5 customary deviations below the young adult's race/gender-adjusted mean. Osteopenia, on the opposite hand, may be a condition wherever the bone mineral density is between -1 and -2.5 customary deviations below the young adult's race/gender-adjusted mean. Osteopenia will cause pathology that successively will increase the danger of fractures. Most patients square measure typically diagnosed with pathology following bone fractures. In such cases, osteopenia may need become additional severe thereby resulting in additional bone quality deterioration and loss. Osteopenia and pathology square measure related to many modifiable/ non-modifiable risk factors [1,2]. Generally, each conditions square measure additional common within the older [3,4,5,6], particularly in females [7,8,9]. Some preventive modifiable factors for pathology and osteopenia embrace higher BMI [10,11,12,13,14], metallic element and ergocalciferol intake [15,16], among others. Currently, occasional is among the foremost consumed beverages and its consumption is world. many studies are disbursed to assess the connection between occasional drinking and osteopenia or pathology. nevertheless, the results are inconsistent [17,18,19,20]. for example, the consumption of 600 millilitre or additional of occasional per day was related to associate degree hyperbolic osteoporotic fracture risk in Swedish ladies [19]. However, higher amounts of occasional weren't related to hyperbolic risk of fractures in Swedish ladies [18]. Moreover, occasional drinking was shown to be preventive against pathology in biological time ladies [21]. Most previous studies failed to stratify their participants by biological time standing. This study so geared toward work the association between occasional consumption and osteopenia or pathology in biological time and biological time ladies.

2. Methods

A total of 2929 participants consisting of 1336 biological time and 1593 biological time ladies aged thirty years and on top of World Health Organization lived within the Pingzhen District of Taoyuan town from 2006 to 2011 were listed within the study. Their data was retrieved from the Li-Shin Hospital, a regional hospital in Northern Taiwan. They older a form regarding their weekly occasional consumption and alternative factors together with age, smoking, alcohol, tea, exercise, diet, malady history, academic level, and blood group. The BMI and WHR were additionally determined. occasional consumption was classified into zero, 1-4 and 5-7 cups per week. A cup of occasional was cherish four hundred millilitre. Bone mineral density was measured by quantitative ultrasound (QUS). Osteopenia and pathology were outlined as -2.5

References

1. Abrahamsen B, Brask-Lindemann D, Rubin KH, Schwarz P. A review of lifestyle, smoking and other modifiable risk factors for osteoporotic fractures. Bonekey reports. 2014;3.
2. Snelling AM, Crespo CJ, Schaeffer M, Smith S, Walbourn L. Modifiable and nonmodifiable factors associated with osteoporosis in postmenopausal women: results from the Third National Health and Nutrition Examination Survey, 1988-1994. Journal of women's health & gender-based medicine. 2001; 10(1): 57-65.
3. Compston JE, Papapoulos S, Blanchard F. Report on osteoporosis in the European community: current status and recommendations for the future. Osteoporosis international. 1998; 8(6): 531-4.
4. Guggenbuhl P. Osteoporosis in males and females: Is there really a difference? Joint Bone Spine. 2009; 76(6): 595-601.
5. Woolf AD, Pfleger B. Burden of major musculoskeletal conditions. Bulletin of the World Health Organization. 2003; 81(9): 646-56.
6. MacLaughlin EJ, Sleeper RB, McNatty D, Raehl CL. Management of age-related osteoporosis and prevention of associated fractures. Therapeutics and clinical risk management. 2006; 2(3): 281.
7. Cawthon PM. Gender differences in osteoporosis and fractures. Clinical Orthopaedics and Related Research®. 2011; 469(7):

1900-5.

8. Melton LJ, Chrischilles EA, Cooper C, Lane AW, Riggs BL. How many women have osteoporosis? Journal of bone and mineral research. 2005; 20(5): 886-92.

9. Pietschmann P, Rauner M, Sipos W, Kerschan-Schindl K. Osteoporosis: an age-related and gender-specific disease–a mini- review. Gerontology. 2009; 55(1): 3-12.

10. Aggarwal N, Raveendran A, Khandelwal N, Sen RK, Thakur J, Dhaliwal LK, et al. Prevalence and related risk factors of osteoporosis in peri-and postmenopausal Indian women. Journal of mid-life health. 2011; 2(2): 81.

11. Asomaning K, Bertone-Johnson ER, Nasca PC, Hooven F, Pekow PS. The association between body mass index and osteoporosis in patients referred for a bone mineral density examination. Journal of Women's Health. 2006; 15(9): 1028-34.

12. De Laet C, Kanis J, Odén A, Johanson H, Johnell O, Delmas P, et al. Body mass index as a predictor of fracture risk: a meta-analysis. Osteoporosis international. 2005; 16(11): 1330-8.

13. Jain V, Agrawal B, Varshney A, Biswas S. Prediction of bone mineral density by age, body mass index and menopausal status in middle socioeconomic status women of urban Kolar region of Bhopal. IOSR Journal of Dental and Medical Sciences. 2013; 12(3): 17-21.

14. Oldroyd A, Mitchell K, Bukhari M. The prevalence of osteoporosis in an older population with very high body mass index: evidence for an association. International journal of clinical practice. 2014; 68(6): 771-4.

15. Chapuy M, Schott A, Garnero P, Hans D, Delmas P, Meunier P. Healthy elderly French women living at home have secondary hyperparathyroidism and high bone turnover in winter. EPIDOS Study Group. The Journal of Clinical Endocrinology & Metabolism. 1996; 81(3):1129-33.

16. Kim SY. Coffee consumption and risk of osteoporosis. Korean journal of family medicine. 2014; 35(1): 1.

17. Choi E-J, Kim K-H, Koh Y-J, Lee J-S, Lee D-R, Park SM. Coffee consumption and bone mineral density in Korean premenopausal women. Korean journal of family medicine. 2014; 35(1): 11-8.

18. Hallström H, Byberg L, Glynn A, Lemming EW, Wolk A, Michaëlsson K. Long-term coffee consumption in relation to fracture risk and bone mineral density in women. American journal of epidemiology. 2013:kwt062.

19. Hallström H, Wolk A, Glynn A, Michaëlsson K. Coffee, tea and caffeine consumption in relation to osteoporotic fracture risk in a cohort of Swedish women. Osteoporosis international. 2006; 17(7): 1055-64.

20. Lacerda SA, Matuoka RI, Macedo RM, Petenusci SO, Campos AA, Brentegani LG. Bone quality associated with daily intake of coffee: a biochemical, radiographic and histometric study. Brazilian dental journal. 2010; 21(3):199-204.

21. Choi E, Choi K-H, Park SM, Shin D, Joh H-K, Cho E. The Benefit of Bone Health by Drinking Coffee among Korean Postmenopausal Women: A Cross-Sectional Analysis of the Fourth & Fifth Korea National Health and Nutrition Examination Surveys. PloS one. 2016; 11(1): e0147762.

22. Cheng ML, Gupta V. Premenopausal osteoporosis. Indian journal of endocrinology and metabolism. 2013; 17(2): 240.

23. [23]   Kapetanovic A, Avdic D. Influence of coffee consumption on bone mineral density in postmenopausal women with estrogen deficiency in menstrual history. Journal of Health Sciences. 2014; 4(2).

24. Demirbag D, Ozdemir F, Ture M. Effects of coffee consumption and smoking habit on bone mineral density. Rheumatology international. 2006; 26(6): 530-5.

25. Akkus Z, Camdeviren H, Celik F, Gur A, Nas K. Determination of osteoporosis risk factors using a multiple logistic regression model in postmenopausal Turkish women. Saudi medical journal. 2005; 26(9): 1351-9.