

Survey on osteoporotic condition in menopausal women in Chennai

M. Rithanya, Dinesh Premavathy*

ABSTRACT

Introduction: Osteoporosis is a disorder where increased bone weakness increases the risk of a broken bone. Complications caused include chronic pain. Menopausal women are more prone to osteoporosis. It mostly occurs between 49 and 52 years of age. **Materials and Methods:** A total of 100 participants took part in this survey. A questionnaire containing 19 questions regarding awareness on osteoporosis was distributed among menopausal women. The data were collected through the Survey Planet and then analyzed. **Results:** The present survey observed that 40% of the participants unaware about estrogen deprivation, 43% felt some rare pains, 42% of the participants are suffering from very low vitamin D level, 23% from low Vitamin D level while 35% have normal level. **Conclusion:** From the survey, by the responses of the participants, it is clear that the people are aware that menopause influences osteoporosis.

KEY WORDS: Estrogen, Menopause, Osteoporosis

INTRODUCTION

Osteoporosis is the condition associated with derangement of the calcium metabolism followed by porosity of the bone due to menopause. Osteoporosis might be because of lower than ordinary extreme bone mass and more prominent than typical bone loss.^[1] Osteoporosis is characterized as a bone thickness of 2.5 standard deviations underneath that of a youthful adult. This is normally estimated by dual-energy X-ray absorptiometry.^[2] Bones that usually break are the vertebrae in the spine, the bones of the lower arm, and the hip.^[3] Bisphosphonate meds are valuable in those with the past broken bones because of osteoporosis.^[4,5] In those with osteoporosis yet no past broken bones, they are less effective.^[5] A number of other medications may also be useful.^[6]

“Osteoporosis” is from the Greek expressions for “permeable bones.”^[7] Osteoporosis itself has no symptoms; its primary outcome is the expanded danger of bone cracks. Osteoporotic cracks happen

in circumstances where solid individuals would not ordinarily break a bone; they are in this way viewed as delicacy cracks.^[8] Due to the lesser level of estrogen, bone loss elevates postmenopause.^[1]

Menopause, otherwise called the climacteric, is the time in most ladies’ lives when menstrual periods stop for all time, and they are never again ready to bear offsprings.^[9,10] At the physiological level, menopause happens as a result of a diminish in the ovaries’ generation of the hormones estrogen and progesterone.^[11] The most vital hazard factors for osteoporosis are propelled age and female sex; estrogen inadequacy following menopause or surgical evacuation of the ovaries is connected with a quick decrease in bone mineral density.^[12,13]

Osteoporosis is a skeletal disease described by a reduction in bone mass and microarchitectural changes in the bone, which prompts to an expanded bone fragility and an elevated risk of crack.^[14] The analysis of osteoporosis is regularly made by utilizing bone thickness estimations.^[15]

MATERIALS AND METHODS

This was a questionnaire-based study using an online survey portal called “Survey Planet.” A form with

Access this article online

Website: jprsolutions.info

ISSN: 0975-7619

Department of Anatomy, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

*Corresponding author: Dr. Dinesh Premavathy, Department of Anatomy, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, 160, Poonamallee High Road, Chennai - 600 077, Tamil Nadu, India. Phone: +91-8939307076. E-mail: dinesh801anatomy@gmail.com

Received on: 05-02-2018; Revised on: 07-03-2019; Accepted on: 09-04-2019

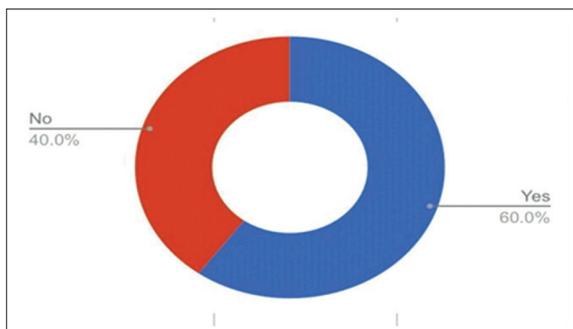


Figure 1: Awareness on oestrogen deprivation

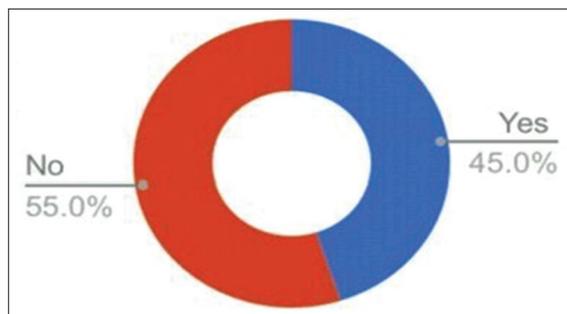


Figure 3: Genetic

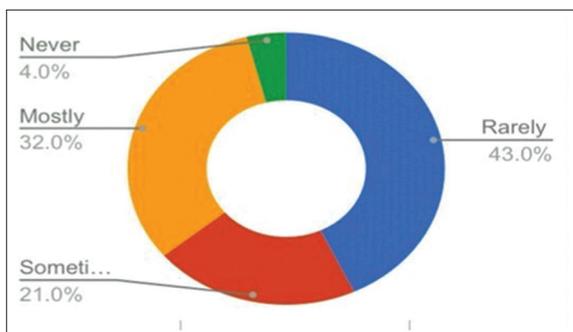


Figure 2: Feel of pain

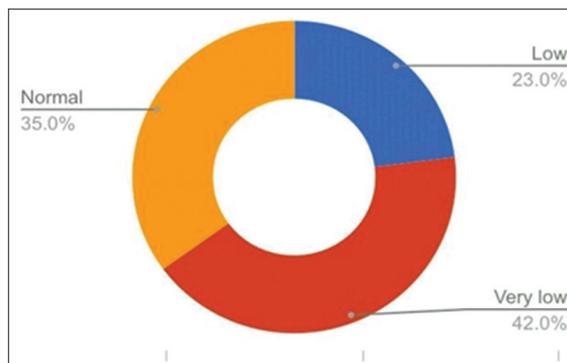


Figure 4: Vitamin D level

19 questions was circulated among 100 menopausal women, above the age of 49 years, which included questions regarding their awareness about what osteoporosis was, the causes of osteoporosis, its diagnosis, and how it is related to menopause. Results were obtained using proper statistical methods, and thus, the awareness on osteoporosis among menopausal women was studied.

DISCUSSION

As said in another article, by Pauline. M. Camacho, for some ladies, bone loss turns into a noteworthy issue in view of the critical drop in estrogen levels. Estrogen reinforces osteoblasts, which produce bone.^[16] At the point when estrogen levels drop, your body’s capacity to make new bone drops too. This procedure may in the long-run reason, a critical loss of bone mass or thickness, bringing about osteoporosis. Osteoporotic condition has become a common occurrence in menopausal women. This is could be prevented if there was proper awareness about the osteoporotic condition among middle-aged women. Only some are aware about natural phytoestrogens such as turmeric and flax seeds which have adverse effects on osteoporosis. Veld grape is also a very nourishing supplement. Exposure to sunlight is a good source of Vitamin D.

RESULTS

When the participants were asked if they were aware about estrogen deprivation, majority of 60% were aware and the remaining 40% were not aware

[Figure 1].^[16] When the participants were inquired if they felt any pain in the bone or joints, 43% felt some rare pains, whereas a large number of people (32%) felt pain mostly and 21% participants felt pain sometimes [Figure 2]. The remaining 4% of the participants did not feel any pain. To know if the participants had any genetic trait, they were asked if their parents or grandparents had osteoporotic condition. While 45% of the participant’s parents or grandparents had osteoporotic condition, 55% did not have [Figure 3]. To check the possibility of the participants acquiring osteoporosis, the level of Vitamin D of the patients were checked. 42% of the participants are suffering from very low vitamin D level, 23% from low Vitamin D level while 35% have normal level [Figure 4].

CONCLUSION

Osteoporosis is decrease of mass of the bones. Osteoporosis can be caused because of lack of Vitamin D. Treatment of this ailment can be done by utilizing calcium, Vitamin D with high dose normally, or as enhancements. As per late insights from the International Osteoporosis Foundation, around the world, 1 of every 3 ladies beyond 50 years and 1 in 5 men will encounter osteoporotic cracks in their lifetime. The intake of phytoestrogens such as turmeric and the likes greatly helps in osteoporotic condition and also helps in preventing osteoporosis. This survey has helped many by spreading awareness about the influences of estrogen level which may lead to osteoporosis.

REFERENCES

- H. Osteoporosis National Institute of Arthritis and Musculoskeletal and Skin Diseases; 2019. Available from: <https://www.niams.nih.gov/health-topics/osteoporosis>. [Last accessed on 2019 Mar 01].
- WHO Scientific Group on the Prevention and Management of Osteoporosis. Prevention and Management of Osteoporosis: Report of a WHO Scientific Group (PDF) (2000). Geneva, Switzerland: World Health Organization; 2003. p. 7, 31.
- Golob AL, Laya MB. Osteoporosis: Screening, prevention, and management. *Med Clin North Am* 2015;99:587-606.
- Wells G, Cranney A, Peterson J, Boucher M, Shea B, Robinson V, *et al.* Risedronate for the primary and secondary prevention of osteoporotic fractures in postmenopausal women. *Cochrane Database Syst Rev* 2008;1:CD004523.
- Wells GA, Cranney A, Peterson J, Boucher M, Shea B, Robinson V, *et al.* Etidronate for the primary and secondary prevention of osteoporotic fractures in postmenopausal women. *Cochrane Database Syst Rev* 2008;1:CD003376.
- Nelson HD, Haney EM, Chou R, Dana T, Fu R, Bougatsos C. Screening for Osteoporosis: Systematic Review to Update the 2002 US Preventive Services Task Force Recommendation. Rockville (MD): Agency for Healthcare Research and Quality (US); 2010.
- Brucker MC, King TL. *Pharmacology for Women's Health* eBook. Boston, MA: Jones and Bartlett Learning; 2015.
- Braunwald E, Fauci AS, Kasper DL, Hauser SL, Longo DL, Jameson JL. *Harrison's Principles of Internal Medicine*. New York: McGraw Hill; 2001.
- Lethaby A, Marjoribanks J, Kronenberg F, Roberts H, Eden J, Brown J, *et al.* Phytoestrogens for menopausal vasomotor symptoms. *Cochrane Database Syst Rev* 2013;12:CD001395.
- Embola JJ. Quantification of the Polyphenolic Compounds and Antioxidant Properties of Mauby Bark (*Colubrina arborescens*). A Thesis. Long Beach: California State University; 2018.
- Wang L, Song Y, Manson JE, Pilz S, März W, Michaëlsson K, *et al.* Circulating 25-hydroxy-Vitamin D and risk of cardiovascular disease: A meta-analysis of prospective studies. *Circ Cardiovasc Qual Outcomes* 2012;5:819-29.
- Sinnesael M, Claessens F, Boonen S, Vanderschueren D. Novel insights in the regulation and mechanism of androgen action on bone. *Curr Opin Endocrinol Diabetes Obes* 2013;20:240-4.
- Sinnesael M, Boonen S, Claessens F, Gielen E, Vanderschueren D. Testosterone and the male skeleton: A dual mode of action. *J Osteoporos* 2011;2011:240328.
- Basha N. Osteoporosis and periodontitis. *OA Dent* 2014;2:2.
- Menon A, Sengottaiyan V, Ganapathy D. Osteoporosis and its dental impact. *Drug Invent Today* 2019;11:282-5.
- Pauline M Camacho MD, FACE, reviewed by Daniel J Toft MD, PhD on 05/03/17. Available from: <https://www.endocrineweb.com/conditions/osteoporosis/role-calcium-vitamin-d-bone-health>.

Source of support: Nil; Conflict of interest: None Declared