JAFES Journal of the ASEAN Federation of Endocrine Societies

FEATURE ARTICLE

Summary of the Consensus Statement on the Prevention, Diagnosis and Treatment of Postmenopausal Osteoporosis in the Philippines

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Abstract

Osteoporosis is an emerging public health threat to the aging population in Asia. In order to address this regional issue, most countries have their own published guidelines. A multispecialty organization of healthcare providers and stakeholders led by the Osteoporosis Society of the Philippines Foundation, Inc., convened this significant undertaking of formulating local guidelines on prevention, diagnosis, and treatment of osteoporosis among postmenopausal Filipino women based on applicable global evidence. The set of recommendations will serve as a manual to all concerned health workers. Revisions to certain issues will be considered as new updates are available.

Keywords: postmenopausal osteoporosis, Philippines, consensus statements

INTRODUCTION

The worldwide population is quickly aging, largely due to better healthcare delivery. This, in turn, results in a longer lifespan that leads to more pressing age-related health conditions. Osteoporosis is one of the emerging diseases that will ultimately lead to a substantial global economic burden. There has been staggering prevalence data reported on millions of individuals afflicted with osteoporosis. By 2050, the worldwide incidence of hip fractures is projected to increase by 240% in women and 310% in men. More than half of all osteoporotic hip fractures will occur in Asia.[1] Evidence suggests that most individuals who sustained fragility fractures were either not appropriately diagnosed or treated for osteoporosis.

In 2003, based on the National Nutrition Health Survey (NNHeS), the reported overall prevalence of osteoporosis in adult Filipinos 60 to 69 years of age was 0.8% while those older than 70 years old was 2.5%.[2] The overall prevalence of fractures was 11.3% in females and 9.0% in males. This translates to millions of individuals at risk for osteoporosis. In order to optimize utilization of health care resources in the community, there is no better way to do this than to initiate primary and secondary preventive measures among at risk individuals. Recognizing the potential economic impact of osteoporosis in the country very soon, the Clinical Practice Guidelines Task Force Committee of Osteoporosis Society of the Philippines Foundation Inc., (OSPFI) and Philippine Orthopedic Association (POA) undertook the project to publish evidence-based guidelines on key issues in osteoporosis and osteoporosis related fractures. These guidelines aim to assist healthcare practitioners in providing optimal care to postmenopausal individuals at risk of osteoporosis and fragility fractures in the local setting.

SUMMARY OF METHODOLOGY OF GUIDELINE DEVELOPMENT

The Technical Review Committee identified and drafted important concerns on preventive aspects, diagnosis and treatment of osteoporosis and osteoporosis related fractures. To avoid duplication of work and localize global evidence, a thorough search of practice guidelines/position statements by various international societies/committees published between 2000 and 2008 was retrieved and appraised using the Appraisal of Guidelines Research and Evaluation (AGREE) instrument. Up-to-date publications on randomized controlled trials on therapy and screening/diagnostic tools published between January to December 2009 were separately evaluated. A systematic

ISSN 0857-1074
Printed in the Philippines

Received October 4, 2012. Accepted October 29, 2012.

Full text of the consensus statement is published in the International Journal of Rheumatic Diseases (IJRD) 2011 vol 14 pages 223 – 238.

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method of validating quality of evidence and the level of recommendation was done using the Grades of Recommendation, Assessment, Development and Evaluation (GRADE) system. A multidisciplinary panel of experts and stakeholders including patient representative in an en banc meeting conferred and approved the recommendations.

The target population is postmenopausal women stratified into low, medium and high risk groups. Postmenopausal women with osteopenia in the absence of clinical risk factors are considered "low" risk; those who are osteoporotic with or without clinical risk factors are at "medium" risk; while "high" risk are those with severe or established osteoporosis.

The final recommendation to each statement is graded as high, moderate, low, and very low according to the quality of evidence (QoE). "High" grade of evidence is considered when further research will not likely change the estimate of effect; "moderate" if further research may change the estimate a little; "low" if further research very likely will change the estimate; and "very low" if estimate of effect is very uncertain.

The category of recommendation (CoR) is classified as "do it" or "don't do it;" "probably do it" or "probably don't do it." The categories "do it" and "don't do it" are based on judgments most well informed people will make; while "probably do it" and "probably don't do it" will be made by most of the well informed people but not by a substantial minority.

SUMMARY OF RECOMMENDATIONS

Issues on preventive aspects:

1. It is highly recommended that postmenopausal women receive calcium and vitamin D supplement for optimal bone health, following the 2002 Food and Nutrition Research Institute published guideline for recommended daily allowance (RDA) according to different age groups. Various food sources and food tips on calcium and vitamin D are likewise emphasized. *(QoE: Mod CoR: Do it)*
2. High intensity resistance exercise program is recommended *(QoE: Mod to Low CoR: Do it)* while *Tai Chi Chun* is suggested mainly for balance, muscle strength, and fall prevention. *(QoE: Mod CoR: Do it)*
3. It is suggested that individuals who need to lose weight should engage in weight bearing exercise and calcium supplementation *(QoE: Low CoR: Do it)*. Individuals are encouraged to stop smoking and limit alcohol consumption *(QoE: Low CoR: Do it)*.
4. Postmenopausal women should engage in moderate levels of walking *(QoE: Low CoR: Do it)*
5. Natural food supplements like isoflavones can help prevent bone loss in early postmenopausal period. *(QoE: Mod CoR: Do it)*

Issues on screening/diagnostics:

6. It is recommended to use Osteoporosis Screening Tool for Asians (OSTA) to stratify risk of an individual for osteoporosis when central DXA is not available. *(QoE: Mod CoR: Do it)*
7. All postmenopausal women with at least one clinical risk factor for osteoporosis should undergo Fracture Risk Assessment Tool (FRAX tool) before undergoing central DXA. *(QoE: High CoR: Do it)*
8. Spine radiograph should not be used for the diagnosis of osteoporosis. Incidental findings of fractures on chest radiograph should be confirmed using thoracic and/or lumbar radiograph or vertebral fracture assessment (VFA) using DXA. *(QoE: High CoR: Do it)*
9. VFA using Genant's visual semi-quantitative method in the identification of vertebral fractures is recommended. *(QoE: High CoR: Do it)*
10. Diagnosis of osteoporosis should be based on World Health Organization (WHO) classification of bone mass using dual energy x-ray absorptiometry. *(QoE: High CoR: Do it)* Presence of vertebral fractures by radiograph or VFA confirms clinical diagnosis of osteoporosis. *(QoE: Mod CoR: Do it)*
11. Peripheral BMD technologies should not be used in the diagnosis of osteoporosis. *(QoE: High CoR: Do it)*
12. Femoral neck BMD or total femur and/or lumbar spine BMD are considered regions of interest in the diagnosis of osteoporosis. *(QoE: High CoR: Do it)*

Issues on therapy:

13. Treatment should be started if:
    a. BMD T-score is ≤-2.5 or evidence of confirmed vertebral compression fracture/s. *(QoE: High CoR: Do it)*
    b. BMD T-score between -1 and 2.5 (low bone mass) in the presence of previous fracture*(QoE: Hig CoR: Do it)*, secondary causes associated with high risk of fracture*(QoE: High CoR: Do it)*, 10-year probability of hip fracture at 3% and/or major osteoporotic fracture at 20% based on FRAX. *(QoE: Mod CoR: Do it)*
    c. In the absence of central DXA, treatment can be started in the following:
        1. High risk category using OSTA tool *(QoE: Low CoR: Do it)*

2. 10-year probability of hip fracture at 3% and/or major osteoporotic fracture at 20% based on FRAX. *(QoE: Mod CoR: Do it)*

14. Calcium, in combination with vitamin D supplements, is necessary for patients with osteoporosis. *(QoE: High CoR: Do it)*
15. Low to intermediate risk PMW should be given pharmacologic options (i.e., bisphosphonates, selective estrogen receptor modulator (SERMs), strontium ranelate, hormonal replacement therapy, calcitonin, or tibolone) to increase BMD and reduce fracture risks. *(QoE: High CoR: Do it)*

Issues on osteoporosis related fragility fractures:

Fragility fracture is defined as fracture that occurs spontaneously or following a minor trauma. Thorough history and physical examination complemented by laboratory parameters or other diagnostics as necessary should be pursued in a patient with suspected fragility fracture. In cases of secondary causes of osteoporosis, further workup to establish cause should be pursued.

16. Hip protector can serve as a preventive measure to reduce incidence of hip fracture. *(QoE: Low CoR: Probably do it)*
17. Nutritional supplements for elderly patients with hip fractures are suggested on a case-to-case basis. *(QoE: Low CoR: Probably do it)*
18. No evidence that special nutrition or diet can reduce risk of future fracture in high-risk patients.
19. A regular exercise program among housebound individuals as well as those in the community is suggested for fracture prevention. *(QoE: Low CoR: Do it)*
20. High risk postmenopausal women should be given treatment options (ie. bisphosphonates, SERs, strontium ranelate, calcitonin, tibolone, parathyroid hormone) to increase BMD and reduce fracture risks. *(QoE: High CoR: Do it)*
21. It is not routinely recommended to give combination therapy or sequential therapy. *(QoE:Mod CoR: Probably do it)*

Issues appraised by experts from Philippine Orthopedic Association (POA):

22. Arthroplasty is recommended for displaced femoral neck fracture. *(QoE: High CoR: Do it)*
23. Extracapsular hip fracture is treated with either arthroplasty or internal fixation, depending on the discretion of the surgeon. *(QoE: Mod CoR: Do it)*
24. For extracapsular trochanteric fracture, a sliding hip screw should be used. *(QoE: Mod CoR: Do it)*
25. Bisphosphonate is recommended for patients with distal radial and ankle fractures. *(QoE:Mod CoR: Do it)*. Alendronate should be given to patients undergoing hip arthroplasty following fragility fractures. *(QoE: Mod CoR: Do it)*

CONCLUSION

The set of consensus statements was formulated in consideration to a practical view point that needs to be cascaded to general care practitioners caring for patients at risk for osteoporosis, catering to the resources available in a developing country. These should be interpreted with the optimal goal of rendering evidence-based patient care but should not overrule the best clinical judgment of the clinician. Reappraisal of evidence will be done as more data is published on innovative approach to address the public health issue of osteoporosis.

Acknowledgments
This project was fully supported through a research grant by OSPFI.

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