

Bone Health Special Interest Group Research Update

September, 2010-Issue 7

In This Issue

Screening for osteoporosis: an update for the U.S. Preventive Services Task Force

The prevalence of osteoporosis in patients with severe hip and knee osteoarthritis awaiting joint arthroplasty

Bone Health Meetings and Symposia

Resources

[Section on Geriatrics](#)

[Bone Health SIG](#)

[National Osteoporosis Foundation](#)

Greetings!

Thank you for your membership in the Bone Health SIG! We hope this information will give you new ideas for optimal management of our current or potential clients. In this issue, we focus on identification of individuals with osteoporosis. Nelson and colleagues provide an update on osteoporosis screening from the U.S. Preventive Services Task Force that provides quick and useful information. In an interesting study by Lingard and colleagues, they report the prevalence of osteoporosis in individuals preparing to undergo knee or hip replacement. These results should provide food for thought as we manage these patients post-surgery.



Screening for osteoporosis: an update for the U.S. Preventive Services Task Force.

Nelson HD, Haney EM, Dana T, Bougatsos C, Chou R. Screening for osteoporosis: an update for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2010 Jul 20;153(2): 99-111.

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[Screening for osteoporosis: an update for the U.S. Preventive Services Task Force](#)

Abstract

BACKGROUND: This review updates evidence since the 2002 U.S. Preventive Services Task Force recommendation on osteoporosis screening.

PURPOSE: To determine the effectiveness and harms of osteoporosis screening in reducing fractures for men and postmenopausal women without known previous fractures; the performance of risk-assessment instruments and bone measurement tests in identifying persons with osteoporosis; optimal screening intervals; and the efficacy and harms of medications to reduce primary fractures.

DATA SOURCES: Cochrane Central Register of Controlled Trials and Cochrane Database of Systematic Reviews (through the fourth quarter of 2009), MEDLINE (January 2001 to December 2009), reference lists, and Web of Science.

STUDY SELECTION: Randomized, controlled trials of screening or medications with fracture outcomes published in English; performance studies of validated risk-assessment instruments; and systematic reviews and population-based studies of bone measurement tests or medication harms.

DATA EXTRACTION: Data on patient populations, study design, analysis, follow-up, and results

were abstracted, and study quality was rated by using established criteria.

DATA SYNTHESIS: Risk-assessment instruments are modest predictors of low bone density (area under the curve, 0.13 to 0.87; 14 instruments) and fractures (area under the curve, 0.48 to 0.89; 11 instruments); simple and complex instruments perform similarly. Dual-energy x-ray absorptiometry predicts fractures similarly for men and women; calcaneal quantitative ultrasonography also predicts fractures, but correlation with dual-energy x-ray absorptiometry is low. For postmenopausal women, bisphosphonates, parathyroid hormone, raloxifene, and estrogen reduce primary vertebral fractures. Trials are lacking for men. Bisphosphonates are not consistently associated with serious adverse events; raloxifene and estrogen increase thromboembolic events; and estrogen causes additional adverse events.

LIMITATION: Trials of screening with fracture outcomes, screening intervals, and medications to reduce primary fractures, particularly those enrolling men, are lacking.

CONCLUSION: Although methods to identify risk for osteoporotic fractures are available and medications to reduce fractures are effective, no trials directly evaluate screening effectiveness, harms, and intervals.

PRIMARY FUNDING SOURCE: Agency for Healthcare Research and Quality.

PMID: 20621892 [PubMed - indexed for MEDLINE]

The prevalence of osteoporosis in patients with severe hip and knee osteoarthritis awaiting joint arthroplasty.

Lingard EA, Mitchell SY, Francis RM, Rawlings D, Peaston R, Birrell FN, McCaskie AW. The prevalence of osteoporosis in patients with severe hip and knee osteoarthritis awaiting joint arthroplasty. *Age Ageing*. 2010;39(2): 234-9.

[The prevalence of osteoporosis in patients with severe hip and knee osteoarthritis awaiting joint arthroplasty.](#)

Abstract

BACKGROUND: the presence of osteoporosis in patients with hip and knee osteoarthritis (OA) has important implications for understanding disease progression and providing optimal surgical and medical management.

OBJECTIVE: to determine the prevalence of osteoporosis among patients with osteoarthritis awaiting total knee arthroplasty or total hip arthroplasty aged between 65 and 80 years.

DESIGN: cross-sectional observational study.

SETTING: tertiary referral centre in Newcastle upon Tyne, UK.

SUBJECTS: patients with osteoarthritis awaiting total knee hip arthroplasty aged between 65 and 80 years.

METHODS: lumbar spine, bilateral femoral and forearm bone mineral density (BMD) measurements were obtained using dual-energy X-ray absorptiometry.

RESULTS: the cohort consisted of 199 patients with a mean age of 72 years (SD 4), and 113 (57%) were women. The overall rate of osteoporosis at any site was 23% (46/199) and a further 43% (85/199) of patients would have been classified as osteopaenic according to World Health Organization criteria. Osteoporosis was more commonly detected in the forearm (14%) than the lumbar spine (8.5%) and proximal femur of the index side (8.2%).

CONCLUSIONS: in summary, a significant proportion of patients with end-stage OA have osteoporosis but this diagnosis may be missed unless BMD measurements are performed at sites distant from joints affected by OA.

PMID: 20032523 [PubMed - indexed for MEDLINE]

Bone Health Meetings and Symposia

We will keep you informed of current bone health research and collaborations through the year. If you are aware of any bone health related meetings and conferences, please let us know so we can share this in future communications.

Coming up are the following:

October 15 - 19, 2010
ASBMR 2010 Annual Meeting

Toronto, Ontario, Canada
<http://www.asbmr.org>
Email: asbmr@asbmr.org

November 7 - 12, 2010
10th International Conference of the Chemistry and Biology of Mineralized Tissues
10th ICCBMT
Carefree (Scottsdale), Arizona, USA
Website: www.iccbmt.org
Email: hagoldbe@uwo.ca

November 28 - December 1, 2010
Osteoporosis Conference 2010
Arena & Convention Centre Liverpool
Liverpool, Merseyside, United Kingdom
www.nos.org.uk/conference

December 11 - 15, 2010
ASCB 50th Annual Meeting
Philadelphia, Pennsylvania, USA
Website: www.ascb.org
Email: ascbinfo@ascb.org

January 20 - 23, 2011
World Congress On Controversies In Bone & Joint Diseases (C-BONE)
Barcelona, Spain
Website: <http://www.comtecmed.com/cbone/2011/>
Email: ruthi@comtecmed.com

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