

Bone Health Special Interest Group Research Update

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Greetings!

Thank you for your membership in the Bone Health SIG! Welcome to our newest feature- the Research Update. This month's issue features the newly-published and topical study investigating atypical femoral shaft fractures associated with use of bisphosphonates, as well as a study reporting the patient characteristics associated with the diagnosis and treatment of osteoporosis. We hope this information will give you new ideas for optimal management of our current or potential clients.



Bisphosphonates and fractures of the subtrochanteric or diaphyseal femur

Black DM, Kelly MP, Genant HK, Palermo L, Eastell R, Bucci-Rechtweg C, Cauley J, Leung PC, Boonen S, Santora A, de Papp A, Bauer DC; the Fracture Intervention Trial and HORIZON Pivotal Fracture Trial Steering Committees. Bisphosphonates and Fractures of the Subtrochanteric or Diaphyseal Femur. *New Engl J Med*. 2010 March 24.

[Bisphosphonates and fractures of the subtrochanteric or diaphyseal femur.](#)

BACKGROUND: A number of recent case reports and series have identified a subgroup of atypical fractures of the femoral shaft associated with bisphosphonate use. A population-based study did not support this association. Such a relationship has not been examined in randomized trials.

METHODS: We performed secondary analyses using the results of three large, randomized bisphosphonate trials: the Fracture Intervention Trial (FIT), the FIT Long-Term Extension (FLEX) trial, and the Health Outcomes and Reduced Incidence with Zoledronic Acid Once Yearly (HORIZON) Pivotal Fracture Trial (PFT). We reviewed fracture records and radiographs (when available) from all hip and femur fractures to identify those below the lesser trochanter and above the distal metaphyseal flare (subtrochanteric and diaphyseal femur fractures) and to assess atypical features. We calculated the relative hazards for subtrochanteric and diaphyseal fractures for each study. **RESULTS:** We reviewed 284 records for hip or femur fractures among 14,195 women in these trials. A total of 12 fractures in 10 patients were classified as occurring in the subtrochanteric or diaphyseal femur, a combined rate of 2.3 per 10,000 patient-years. As compared with placebo, the relative hazard was 1.03 (95% confidence interval [CI], 0.06 to 16.46) for alendronate use in the FIT trial, 1.50 (95% CI, 0.25 to 9.00) for zoledronic acid use in the HORIZON-PFT trial, and 1.33 (95% CI, 0.12 to 14.67) for continued alendronate use in the FLEX trial. Although increases in risk were not significant, confidence intervals were wide. **CONCLUSIONS:** The occurrence of fracture of the subtrochanteric or diaphyseal femur was very rare, even among women who had been treated with bisphosphonates for as long as 10 years. There was no significant increase in risk associated with bisphosphonate use, but the study was underpowered for definitive conclusions. Copyright

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PMID: 20335571 [PubMed - as supplied by publisher]Free Article

Factors associated with diagnosis and treatment of osteoporosis in older adults

Nayak S, Roberts MS, Greenspan SL. Factors associated with diagnosis and treatment of osteoporosis in older adults. *Osteoporos Int*. 2009;20:1963-1967.

[Factors associated with diagnosis and treatment of osteoporosis in older adults.](#)

Osteoporosis is often undiagnosed and untreated. We surveyed 1,830 adults and identified factors associated with osteoporosis diagnosis and treatment. Individuals with several risk factors, including older age, were not more likely to be diagnosed or treated. Measures should be taken to improve osteoporosis identification and treatment in high-risk patients. **INTRODUCTION:** We aimed to identify patient characteristics associated with osteoporosis diagnosis and treatment. **METHODS:** Survey was mailed to 1,830 women and men > or =60 years old in Pennsylvania. Multivariable logistic regression analyses were performed to determine odds ratios for osteoporosis diagnosis and treatment for individuals with established osteoporosis risk factors. **RESULTS:** Surveys were completed by 1,268 adults (69.3%). Osteoporosis diagnosis was more commonly reported by participants with risk factors of female sex (OR, 3.60; 95% CI 2.31-5.61), prolonged oral steroid use (OR, 3.76, 95% CI 2.06-6.84), low-trauma fracture (OR, 2.14, 95% CI 1.44-3.17), height loss (OR, 1.83, 95% CI 1.28-2.64), and lower weight (OR, 1.35 per 11.4 kg decrease in weight; 95% CI, 1.16-1.56). Age and family history of osteoporosis were not predictive of osteoporosis diagnosis, when adjusting for other risk factors. Osteoporosis treatment was more commonly reported by participants with risk factors of female sex (OR, 5.19; 95% CI, 3.31-8.13), family history (OR, 2.18; 95% CI, 1.55-3.06), height loss (OR, 1.79; 95% CI 1.29-2.49), low-trauma fracture (OR, 1.66; 95% CI, 1.14-2.42), and lower weight (OR, 1.45 per 11.4 kg decrease in weight; 95% CI, 1.27-1.67). Osteoporosis treatment was not significantly associated with age or prolonged oral steroid use. **CONCLUSIONS:** Individuals with several established osteoporosis risk factors are more likely to be underdiagnosed or undertreated.

PMID: 19151910 [PubMed - in process]PMCID: PMC2765627Free PMC Article

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:

May 5 - 8, 2010

World Congress on Osteoporosis

IOF WCO - ECCEO10

Fortezza da Basso

Florence, Florence, Italy

<http://www.iofwco-ecceo10.org>

July 15-16, 2010

Osteoporosis :New Insights in Research, Diagnosis, and Clinical Care

University of California

San Francisco, CA

<http://www.cme.ucsf.edu/cme/CourseDetail.aspx>

October 15 - 19, 2010

ASBMR 2010 Annual Meeting

Toronto, Ontario, Canada

<http://www.asbmr.org>

November 28 - December 1, 2010

Osteoporosis Conference 2010
Arena & Convention Centre Liverpool
Liverpool, Merseyside, United Kingdom
www.nos.org.uk/conference

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