

Journal of Bone and Mineral Metabolism Best Paper Award 2011

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The *Journal of Bone and Mineral Metabolism* Best Paper Award was established in 2008. **Candidates for the award must be members of the Japanese Society of Bone and Mineral Research**, and the winner is honored at the Society's Annual Meeting.

We are pleased to announce that the following article has received JBMM Best Paper Award.

“Nonenzymatic collagen cross-links induced by glycooxidation (pentosidine) predicts vertebral fractures”

by

Masataka Shiraki, Tatsuhiko Kuroda, Shiro Tanaka, Mitsuru Saito,
Masao Fukunaga, Toshitaka Nakamura
J Bone Miner Metab (2008) 26:93–100



Dr. Masataka Shiraki

Abstract Advanced glycation end products (AGE) in collagen have been reported to decrease the mechanical property of bone. However, there are no available data on the relation between fracture risk and levels of glycooxidative (nonenzymatic) cross-links of collagen in clinical samples. A total of 432 Japanese elderly women who were not receiving any drug treatment for osteoporosis were selected and followed for 5.2 ± 3.3 (mean \pm SD) years for this observational study. Vertebral fractures and bone mineral density were assessed at baseline and then at 1- to 2-year intervals or at indication of any symptom. Two types of collagen metabolites were measured at baseline: urinary N-terminal telopeptide of type I collagen (NTX), a marker of pyridinium cross-link, and urinary pentosidine, a nonenzymatic collagen cross-link produced by AGEs. A total of 97 incident vertebral fractures on 72 subjects were observed. Simple regression analysis using Cox's hazards model showed that log-transformed urinary NTX and pentosidine are significant risk factors for time-dependent incidence of vertebral fractures, in addition to the traditional risk factors (age, lumbar bone mineral density, and number of prevalent vertebral fractures). However, urinary excretion of pentosidine (hazard ratio, 1.33; 95 % CI, 1.01–1.76, $P = 0.04$) was a significant predictor of incident vertebral fracture after adjustment for other traditional risk factors. The present data suggest that AGE-related collagen cross-link is a novel risk for vertebral fracture.

We offer our sincere congratulations on behalf of the *Journal of Bone and Mineral Metabolism*, with best wishes for further development of the author's research.



Yoshiki Seino
Editor-in-Chief
Journal of Bone and Mineral Metabolism