



MTHFR C677T polymorphism and osteoporotic fracture in postmenopausal women: a meta-analysis

J.Z. Guan, M. Wu, Y.Z. Xiao, J.S. Zhou and Z.D. Wang

Anhui Key Laboratory of Tissue Transplantation,
Institute of Orthopaedics & Traumatology,
The First Affiliated Hospital of Bengbu Medical College, Bengbu, China

Corresponding author: J.S. Zhou
E-mail: zhoujs12399@yahoo.com.cn

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ABSTRACT. Numerous studies have evaluated the association between MTHFR C677T polymorphism and osteoporotic fracture risk in postmenopausal women. However, the results have been inconsistent. We performed a meta-analysis of the association between MTHFR C677T polymorphism and osteoporotic fracture risk in postmenopausal women. Only seven case-control studies were retrieved, with a total of 4258 patients and 3454 healthy controls. Meta-analysis results showed no significant association between MTHFR C677T polymorphism and osteoporotic fracture risk in postmenopausal women for all genetic models (for TT vs CC: OR = 0.99, 95%CI = 0.72-1.39; for TT vs TC: OR = 1.02, 95%CI = 0.87-1.20; for CC+TC vs TT: OR = 0.96, 95%CI = 0.71-1.28; for TT+TC vs CC: OR = 0.93, 95%CI = 0.84-1.03). In the subgroup analysis by ethnicity, the results also showed no significant association between MTHFR C677T polymorphism and susceptibility to osteoporotic

fracture in postmenopausal women in both Caucasian and Asian populations. In conclusion, this meta-analysis suggests that MTHFR C677T polymorphism may not be associated with susceptibility to osteoporotic fracture in postmenopausal women.

Key words: C677T; Meta-analysis; Gene polymorphism; Postmenopausal women