Osteoporosis is Associated with Colorectal Adenoma in Women

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Background: Recently, it was reported that postmenopausal women with lower Bone mineral density (BMD) have an increased risk of colorectal cancer. Association between lower BMD and colorectal cancer may suggest that colorectal adenoma which is precursor lesions of colorectal cancer may be associated with lower BMD. The aim of this study was to determine the association between colorectal adenoma and bone mineral density.

Methods: We conducted a retrospective, cross sectional study with a case-control analysis. Between January 2006 and May 2011, Female patients who underwent dual-energy X-ray absorptiometry for bone mineral density and total colonoscopy at Kyung Hee University Hospital at Gangdong in Korea for routine health check were eligible for this study. We reviewed the BMD, colonoscopy and pathology reports.

Results: After univariate analysis, multivariate analysis adjusted alcohol consumption, current smoking, regular aspirin use, calcium supplement use (≥1 year), menopause, diabetes mellitus, hypertension, metabolic syndrome, waist circumference >80 cm, BMI >30 (kg/m²), total cholesterol >240 (mg/dL), LDL cholesterol >160 (mg/dL), triglyceride >150 (mg/dL), HDL cholesterol <50 (mg/dL) was performed. In this analysis, osteoporosis (OR=1.668, 95%CI=1.095-2.539, p=0.017) was found to be an independent risk factor of colorectal adenoma.

Conclusions: Osteoporosis is associated with an increased risk of colorectal adenoma in women.

Key Words: Osteoporosis; Colorectal adenoma; Bone mineral density