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Bone Mineral Density in Newly Diagnosed Patients with Inflammatory Bowel Disease

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Background/Aims: The decrease of bone mineral density (BMD) has been reported in Western patients with inflammatory bowel disease (IBD). However, its prevalence and pathophysiology in Asian population have never been studied. The aim of this study was to investigate the prevalence and mechanism of osteopenia in Korean patients with newly diagnosed IBD. **Methods:** We studied 14 patients with Crohn's disease (CD) and 25 patients with ulcerative colitis (UC), all of whom had never used corticosteroids. BMD was measured in the lumbar spines and the femur by dual-energy X-ray absorptiometry. Biochemical parameters of bone metabolism, such as osteocalcine, iPTH, active and inactive vitamin D, were measured. **Results:** Reduced BMD (Z score<-1) at the spine was observed in 36% of the patients and there was no significant difference in lumbar Z scores in the patients with CD and the patients with UC. There was no significant difference in nutritional status or biochemical parameters of bone metabolism between the patients with normal BMD and those with decreased BMD. There was a significant correlation between the lumbar BMD and femoral neck BMD. **Conclusions:** Decreased trabecular bone density is a common feature in Korean patients with newly diagnosed IBD as well as in Western patients. The mechanism causing low bone mass is not related to ethnic difference. Malnutrition such as calcium or vitamin deficiency could possibly play a certain role in the pathogenesis of bone loss in patients with newly diagnosed IBD. (**Kor J Gastroenterol 2000;35:439 - 447**)

Key Words: Inflammatory bowel disease, Bone mineral density, Osteopenia, Crohn's disease, Ulcerative colitis

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(inflammatory bowel disease; IBD)

1.

가 ,

.1
mineral density; BMD)
29-59%

(bone

.24

(extraintestinal symptoms),

D ,

, 18 ,

.3

39 .

2.

가 ,

가 X- (dual energy X-ray absorptiometry, DEXA: Lunar DPX, the Lunar software version 3.1, Lunar Radiation Corporation, Madison, WI, U.S.A.) (g/cm²)

2

4

(trochanter), (shaft) Ward's triangle 4

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T-score (young adult

.57

Z-score) Z-score

. T-score

가

(-)/(

(homogenous)

) ,

(stable)

Z-score (-)/(

가

)

(WHO) T-score -1 ,

-2.5 ,