



 Current Issue


 Browse Issues


 Search



 About this Journal

 Instruction to Authors

 Online Submission

 Subscription

 Contact Us



 RSS Feed

## Acta Medica Iranica

2009;47(4) : 16-22

### Original Article

#### Severity of Coronary Artery Involvement Correlates with Bone Turnover

\*M Jafar Mahmoodi<sup>1</sup>, H Saghafi<sup>2</sup>, F Karimi<sup>2</sup>, H Behzadi<sup>2</sup>, B Larjani<sup>2</sup>

<sup>1</sup>Dept. of Cardiology, Tehran University of Medical Sciences, Iran

<sup>2</sup>Endocrinology and Metabolism Research Center of Tehran University of Medical Sciences, Iran

#### Corresponding Author:

M Jafar Mahmoodi

Tel: +98 21 66703789, Fax: +98 21 66703789, E-mail: [mahmoodimj@yahoo.com](mailto:mahmoodimj@yahoo.com)

#### Abstract:

**Background:** To evaluate bone turnover in coronary artery disease patients by using biochemical markers of bone formation and resorption.

**Methods:** As a cross-sectional study, bone mineral density and serum osteocalcin and crosslaps were measured in 44 angiographically documented coronary artery disease patients and 30 people with normal angiography invited to Endocrinology and Metabolism Research Center.

**Results:** Bone mineral density of femur was significantly lower in patient with coronary artery disease ( $P= 0.04$ ). Prevalence of femur osteoporosis in patients with coronary artery disease was 43.2% whereas 14.8% of people with normal angiography had femur osteoporosis ( $P= 0.01$ , OR= 4.37; CI95%, 1.29-14, 77). Serum level of osteocalcin and crosslaps elevated significantly with increasing severity of coronary artery disease. A significantly positive correlation was found between coronary artery disease severity and serum level of osteocalcin ( $P= 0.008$ ,  $r= 0.320$ ). Crosslaps also showed similar correlation with number of diseased vessels ( $P= 0.02$ ,  $r= 0.268$ ). In multivariate analysis after adjustment of age, sex and BMI, severity of coronary artery disease was independently correlated with osteocalcin ( $P= 0.006$ ) and crosslaps ( $P= 0.003$ ).

**Conclusion:** It seems that coronary artery disease and severity of atherosclerosis may be as a bone turnover predictor. Thus recommendation of Bone density and turnover evaluation to patients with a coronary event may be valuable for earlier diagnosis and prevention of osteoporosis and fracture.

#### Keywords:

*Bone turnover* , *Coronary artery disease* , *Cross laps* , *Osteocalcin* , *Osteoporosis*

TUMS ID: 12885

Full Text HTML  Full Text PDF  161 KB

top ▲

[Home](#) - [About](#) - [Contact Us](#)

TUMS E. Journals 2004-2009  
Central Library & Documents Center  
Tehran University of Medical Sciences

Best view with Internet Explorer 6 or Later at 1024\*768 Resolutions