عنوان مقاله:

Concomitance of Obesity and Overweight with Disc Height and Disc Herniation in Lumbar Spine

محل انتشار:

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خلاصه مقاله:

Background & Aim: Low back pain is the most debilitating condition, and can lead to decreased physical function, compromised quality of life, and psychological distress. Several studies have been conducted to recognize the risk factors of low back pain, but despite of strong relationship between obesity and low back pain, the underlying mechanisms are unclear. The aim of this study was to evaluate the association between obesity/overweight and disc height and disc bulging at each level and total levels in lumbar vertebra, considering occupational risk factors. Methods & Materials/Patients: This is a cross-sectional study on 102 patients with low back pain referring to MRI department in Poursina hospital in Rasht. Body mass index (kg/m2) categories modified for Asian populations based on World Health Organization guidelines were used. Disc height and disc herniation were evaluated in sagittal T1, sagittal T2 and axial T2 MRI images. We used four risk factors agreed by US-NIOSH (USA-National Institute for Occupational Safety and Health), to evaluate the occupational risk factors. Regression test was used for statistical analysis. Results: Of the 102 patients, 36.3% were men and 63.7% were women. The age range was 15 to 75 years. Results showed that 26.5% of patients had normal body mass index, 39.2% were overweight and 34.3% were obese. Low, moderate, and high level of occupational risk factors were distributed as 36.3%, 17.6%, and 46.1%, respectively. Analysis with regression test showed that the relationship between obesity and overweight and disc height was negative at total levels and all levels, unless L5-S1. At L5-S1 level, there was no association. There was a positive relationship between obesity and total score of disc herniation at L1-S1. There was no association between overweight and total score at this level. At L1-L2, L2-L3 and L5-S1, there were no association between obesity and overweight and disc herniation, and at L3-L4 and L4-L5, there were negative relationships between obesity and disc herniation. Conclusion: Our study noted the positive and significant association between obesity/overweight and disc degenerative changes in lumbar spine. Since there is abundant evidence in the literature demonstrating the strong association of disc degeneration on MRI with low back pain, prevention and treatment of being overweight or obese must be a public health priority.

کلمات کلیدی:

Body Mass Index; Intervertebral Disc; Spine