

## عنوان مقاله:

Cone Beam CT Evaluation of the Bony Changes in the Temporomandibular Joint and the Association with the Clinical Symptoms of Temporomandibular Joint Disorders

## محل انتشار:

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## خلاصه مقاله:

Introduction: Temporomandibular joint (TMJ) disorders are among the most prevalent abnormalities of the jaw, which affect the masticatory system, including the muscles, TMJ, and tendons. Clinical examination alone cannot determine the cause of temporomandibular disorder (TMD). In most cases, the cause of TMD and a proper treatment plan are determined based on imaging modalities. The present study aimed to investigate the bone changes in the patients with TMD symptoms using cone beam computed tomography (CBCT). Methods: This retrospective, cross-sectional study was conducted through recording data on the pain caused by TMJ (upon touching, using the TMJ, and maximum mouth opening), clicking, and crepitus using a checklist of clinical symptoms. CBCT images were examined for the associated bone changes, including sclerosis, flattening, erosion, and osteophyte. Data analysis was performed in SPSS version 21 using Chi-square and logistic regression analysis. Results: In total, 160 joint images were examined, including 132 cases of flattening (82.5%), 45 cases of sclerosis (28.12%), 41 cases of osteophytes (25.62%), and 66 cases of erosion (41.25%). A significant association was observed between pain and flattening, and sclerosis and osteophytes. Moreover, a significant correlation was observed between flattening and clicking ( $P < 0.05$ ). Conclusion: According to the results, flattening was the most common bone change in the patients with TMD. In addition, sclerosis had the most significant association with pain, while sclerosis, osteophytes, and erosion were significantly correlated with joint crepitation.

## کلمات کلیدی:

Temporomandibular joint, Cone Beam CT, Bone Changes

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