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REPRINT FROM THE MEDICAL JOURNAL OF
CAIRO UNIVERSITY, Vol. 63 No. 3, SEPTEMBER 1995

Diagnostic Accuracy of Planar, Single Photon Emission Computed Tomography (SPECT) Imaging and Conventional Radiography of Temporomandibular Joint (TMJ) Disorders

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CAIRO UNIVERSITY
FACULTY OF MEDICINE

CAIRO PRESS OFFICE
38, Abu Bakr El-Sadik St.,
Ahmed Essmat, Ain Shams

Med. J. Cairo Univ., Vol. 63, No. 3, September: 643 - 651, 1995

Diagnostic Accuracy of Planar, Single Photon Emission Computed Tomography (SPECT) Imaging and Conventional Radiography of Temporomandibular Joint (TMJ) Disorders

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Abstract

Planar and SPECT bone scintigraphy were performed on fifteen patients with different age and sex. They complained from various disorders in TMJ and they were selected from outpatients-dental clinic, Faculty of Oral and Dental Medicine, Cairo University SPECT imaging of TMJ pathosis confirmed by the clinical signs and symptoms and radiographic studies. From the result, it was found that 70% of the painful TMJ had positive SPECT scans for osseous changes while the other 30% were negative which can be detected by other modalities as arthrography and magnetic resonance imaging (MRI). It can be concluded that SPECT scintigraphy is a sensitive accurate indicator of the TMJ disorders that can detect and stage the metabolic disorders of the TMJ and can depict some organic changes of the joint that are not apparent radiographically. Also, can differentiate the active from arrested TMJ disease.

Introduction

DISTURBANCE of TMJ function due to various disorders often presents problems in the diagnosis and management and considered as one of the most perplexing and challenging difficulties facing clinician. TMJ pathosis may be due to organic alteration that causes morphological changes and associated with clinical signs and symptoms as pain, clicking, crepitus, limitation in opening of mouth, facial asymmetry and functional abnormalities of the masticatory system **[1,2]**.

There are various radiographic diagnostic techniques used for examination of TMJ disorders as conventional radiography, computed tomography, arthrography and scintigraphy as well as magnetic resonance imaging (MRI) **[3,4]**.

Radiographs of the TMJ especially transcranial and panoramic views are fre-

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