MAGNETIC RESONANCE IMAGING (MRI) FOR DISC DYSFUNCTION OF THE TEMPOROMANDIBULAR JOINT

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ABSTRACT

MRI is a new imaging technique that has been adapted to evaluate the T.M.J. disorder and aid in the plane of treatment presurgically. In this study ten T.M.Js of twenty patients suffering from disc dysfunction and subjected for surgical treatment were selected from Oral Surgery Department. The affected sides were imaged by MRI technique care 1.5 Telsa magnet and using surface coil which provide a high resolution of tissues contrast. the results revealed that MRI provide an accurate modality in detection of disc displacement with or without reduction comparing with the normal joint which act as control. MRI can be visualized all soft tissue components of TMJ than do radiographic methods. Also, patients are not exposed to ionizing radiation and there are no biological hazards effect.

REVIEW OF LITERATURE :

Radiographic imaging is the most common method used for screening and evaluating the painful T.M.J. Unique characters of this joint and its small size of peculiar location within dense craniofacial structures and complex anatomy render it a radiographic quiz (Delfino and Eppley, 1986 and Thompson, 1989).

The computed tomography was a significant advance in revealing superior qualities for bony anatomy of the T.M.J. articulation without superimposition of the adjacent osseous structures. So, C.T. is generally limited to hard tissues without causing significant shadows on the joint soft tissues especially the aticular disc (Dolwick et al., 1983, Donlon et al., 1987, Dunn et al., 1981 and Stanson & Baker, 1976).

Thompson (1989) reported that MRI is a fairly new method for producing high quality images that have much better soft tissue resolution. MRI is conceptually a different modility from the previous imaging radiographic techniques. It has no ionizing radiation and produces no known biologic hazard (Helms et al, 1984).

التصوير بالرنين المغناطيسى لبيان اختلال وظيفة قرص المفصل الفكى الصدغى

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يعتبر التصوير بالرنين المغناطيسى من أحدث الطرق المتبعة فى تشخيص الحالات المصابة بإختلال وظيفة قرص المفصل الفكى الصدغى ، وذلك لبيان الأنسجة الرخوة بالمفصل بصورة غاية فى الدقة من التوضيح والتى لا تظهر بالأشعة العادية .

وفى هذه الدراسة تم اختيار عشرون حالة تعانى من اضطراب فى المفصل الفكى الصدغى ، وتم التصوير بالرنين المغناطيسى وقورن الجانب المصاب بالآخر الطبيعى فى حالتى غلق وفتح الفم لبيان درجة الاختلال فى قرص المفصل ولقد كانت نتيجة البحث تدل على أن اختلال وظيفة قرص المفصل الفكى ناتجة عن تمزق أو إزاحة القرص عن وضعه الطبيعى والتى ظهرت بدقة فى صور الرنين المغناطيسى .