

Diagnosis of Internal Derangement  
of Temporomandibular Joints by  
Ultrasonography comparison with  
Magnetic Resonance Imaging

**Thesis**

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**By**

**HAMEED HASSAN EISA AL-AMERY  
B.D.S.**

**Supervised by**

**Prof. RAJA K. KUMMOONA  
B.D.S. , F. D. S. R. C. S. , F. I. C. D.**

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# Abstract

This study was carried on (46) patients (46 joints) with TMJ disorders , all the patients have pain and many of them have clicking , cripetation , and / or locking. Those patients were examined in the consultation clinic of oral maxillofacial surgery department in Al-Kadhemia Teaching Hospital from April – 2004 to November 2004 .

All the patients were examined by means of MRI and ultrasonography (US), all (46) patients with symptoms of disk internal derangement (I.D.) the results of (US) were compared with these of volunteer (18 joints) without symptoms (D.I.D.) .

Analysis of (64) joints showed clicking was detected in 22 patients , popping in 4 patients , reciprocal clicking only in 2 patients , no TMJ sound in 34 patients , 32 patients have pain in the muscles of mastication , 32 patients have no pain and 36 patients had limitation of mouth opening .

MRI & US were used for imaging and diagnosis of D.I.D. of TMJ. US provides an image of the TMJ in the coronal (plane in which the disk becomes more obvious in the open – mouth position in both normal and displaced joints .

US may help in the confirmation of normal disk position in subjects presenting symptoms of normal disk position . In subjects presenting symptoms of D.I.D. TMJ Examiner experience is very important to use of US . With an experienced radiologist , images obtained by US will be interpreted more accurately . US will also help in the identification of disk position in subject with signs and symptoms of internal derangement of TMJ .

The results of our study showed perfect agreement between MRI and US in all the cases , and this considered a big advantage since US , is more available in our hospitals than MRI, more simple , easily done than MRI and also more accepted by the patients than MRI , so it can be used as an ulternative method to MRI in diagnosis of D.I.D. of TMJ .